NEW PATHWAYS IN LINGUISTICS

Acknowledgments

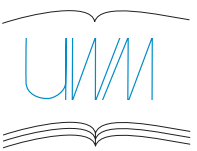
The editors of the book wish to thank Professor Aleksander Kiklewicz, Vice Dean of the Faculty of Humanities UWM, for open-mindedly accepting this publishing initiative, and for the financial support which has enabled issuing to date three volumes of *New Pathways in Linguistics.*

Department of English Philology

University of Warmia and Mazury, Olsztyn

NEW PATHWAYS IN LINGUISTICS

edited by
Stanisław Puppel and
Marta Bogusławska-Tafelska



Olsztyn 2010

ISBN 978-83-927141-5-6

Recenzent tomu: Prof. dr hab. Henryk Kardela

Tom sfinansowany przez Prorektora ds. Nauki UWM
i Prodziekana ds. Nauki Wydziału Humanistycznego UWM

Projekt okładki:
Maciej Drążczyk

Skład i redakcja techniczna: Bogdan Orzeszkowski

Wydawca:
Katedra Filologii Angielskiej
Uniwersytetu Warmińsko-Mazurskiego w Olsztynie
ul. K. Obitza 1
10-725 Olsztyn

Druk i oprawa:
Zakład Poligraficzny Spręcograf s.c.
www.sprecograf.pl

Dystrybucja:
Uniwersytet Warmińsko-Mazurski w Olsztynie
Katedra Filologii Angielskiej
ul. K. Obitza 1, 10-725 Olsztyn
Tel. +48 89 524 63 27
email: filang.human@uwm.edu.pl

Contents

Preface

The present volume of *New Pathways in Linguistics* introduces the ecolinguistic paradigm into the considerations over language and communication. The ecological stance in the language studies is not novel; however, the recent years have brought a resurrection and, probably, new insights into the ecological considerations over the language processes. It seems that contemporary linguistics, in its most progressive stream, has reached the point when the interdisciplinary and multilayer analyses have to be organized along the ecological, holistic paradigm.

It has to be noted that the nonlinear, dynamic and emergent language processes pose a difficulty for those scholars who seek structural order and formalism. However, as Peter Mühlhäusler (2003) notices, linguists have to be careful when trying to encapsulate multidimensional and complex phenomena by means of two-dimensional, static models. Natural language, while having a dual design, which is both mental and physical by nature, is essentially a dynamic, multilayer and momentary process, fed by and co-existing with other life processes within the macroscale of the global ecosystem, as well as within the microscale of the individual communicator's biological-mental constitution.

The present volume is a hallmark of a growing scientific interest and passion among Polish academics to explore 'the life of language'. The group of scholars from *Department of Ecocommunication*, Adam Mickiewicz University, pioneers of the current ecological perspective in Polish linguistic research, together with linguists from newly-born *Ecolinguistic Studies Program* in Department of English Philology, University of Warmia and Mazury, propose in their scholarly work this re-introduction and re-vision of ecological views within modern

language studies. The task sometimes becomes quite an audacious exploration of not only linguistic phenomena, but the study of humans being and acting in the world.

Stanisław Puppel

Marta Bogusławska-Tafelska

Olsztyn, November 2010

Anna Bączkowska

Constructivism and constructionism in language and cognition

The paper discusses two notions – constructivism and constructionism – which sound similar but in fact designate two distinct areas of research. While the former flows from psychology (J. Piaget, L. Vygotsky, J. Bruner) and is primarily interested in cognition and language acquisition/learning, the latter is more language-oriented and deals with a linguistic analysis of language units, which are believed to be constructions, i.e. form-meaning pairing (C. Fillmore, A. Goldberg, W. Croft). The aim of the discussion, however, is not only to argue that the two programmes belong in separate fields of knowledge, but also to demonstrate that there are psychological and linguistic approaches on which they express similar views (behaviourism, cognitivism).

Keywords: constructivism, constructive grammar, cognition, language learning, usage-based model

1.Introduction

The present paper deals with two concepts that sound similar, yet are preoccupied with issues explored by distinct disciplines. One is a question of psychology, the other is a question pursued by linguistics. In simple terms, constructivism is more concerned with how language is learned while constructionism, or construction grammar, concentrates primarily on language as a system. There is a point of convergence which links the two theories: they share similar views on theses voiced by Chomskyan or Langackerian cognitivism. Our discussion will thus revolve around two axes, one connected with the structure of language and the other with cognition. The overall aim

will be to demonstrate common commitments and divergent sources that underlie the two programmes.

2. Constructivism

The beginnings of constructivism may be traced back to John Dewey, who promoted an educational approach of learning through doing. This pragmatic view assessed learning effects against a practical benchmark, such as problem solving in the context of a school environment. The father of constructive thought is traditionally claimed to be Jean F. Piaget. His constructive theory of the mind and how it acquires language speaks of language in terms of constructions. A child is believed to map the real world in his mind in an imperfect way, namely by creating (constructing) some approximations (constructions). This assumption reveals not only how the world is conceptualised by the human being, but also the fact that it is the human factor that determines actively the nature of these constructions. A child is thus seen as an active constructor of his knowledge about the world, and he achieves it through actions (experiential basis of constructions). As we can learn about the world only indirectly, through logical operations, our image of the world is its imperfect reflection and an approximation of what is out there.

The actions a learner engages in while experiencing the world are, according to Piaget, adaptation and accommodation. As Piaget was a biologist, while considering these processes he harks back to the mechanisms of learning typical of the animal realm to account for reactions occurring between the human being and his environment, and to show how living organisms adapt to it given all conditions and constraints. In particular, he describes the case of a Great Pond Snail (*Limnaea stagnalis*) located in still and tranquil waters, mildly disturbed waters, or severely disturbed waters (i.e. with high waves and strong winds). Interestingly, a snail exposed to the last conditions, in order to stabilize its position and keep in place, attaches itself to a strong support, which results in dilation of the opening and adhering to the

support. This makes the snail curve its spine which, in the long run, shortens it. The consequence of such adaptive behaviour is visible in the snail's changing shape: it is more curved and globular, as compared with the first two conditions wherein a snail tends to develop a more elongated shape. However, these changes are not permanent. When placed in tranquil waters (aquarium), the offspring of globular snails are elongated. This speaks for the high adaptive skills of the Great Pond Snail. A child adapts to his environment in a similar manner, as changes taking place in the environment trigger shifts in the behaviour of living organisms. In line with Piaget, two processes are responsible for such shifts: accommodation and assimilation. Whilst the former is concerned with generalisation of existing categories allowing for new categories, the latter posits that new knowledge builds upon what is already known.

Lev Vygotsky is also associated with constructivism, yet rather than seeing the source of learning mechanisms in logical operations of an active constructor (a child), he gives priority to social environment; that is to say to other people who, while interacting with a child, mediate between the environment and the constructed world. Communication with adults does not only allow the trying out of internalised knowledge, it is also supportive in terms of error correction. On the other hand, another scholar associated with constructivism, Jerome Bruner, posits, just like Piaget, that learning is an active process whereby a learner hypothesises, solves problems, makes decisions and reorganises his knowledge.

To summarise what has been said thus far let us cite Fosnot (2005), who characterises constructivism as "knowing", and the process of "coming to know" as a process that emerges. These key points are juxtaposed with transmitted or discovered truths. The truths tethered to constructivism are believed to be "developmental, nonobjective" that require involvement in "meaning-making in cultural and social communities of discourse", and that trigger the "self-regulatory process of struggling with the conflict between existing personal models of the world and discrepant new insights". The final results of these processes are "new representations and models of reality", which are seen "as a human meaning-making venture with culturally

developed tools and symbols, and further negotiating such meaning through cooperative social activity, discourse, and debate in communities of practice" (Fosnot, 2005: ix). A learner, then, constructs individual meanings by reflecting the image of the world. These constructions are not stable, however, and they undergo a process of restructuring and rediscovering.

All the above-mentioned theories share an interest in problem solving strategies and mechanisms of learning that promote the adaptive skills of the learner, knowledge modification (re-construction), and focusing on external factors which have an impact on learning. In the remainder of this section we shall compare constructivism with behaviourism and with the first and second generation of cognitivism.

A problem solving approach to learning is typical of constructivism, whereas teaching abstract constructs was promoted by behaviourism. Accordingly, reflection and remembering are the notions associated with constructivism and behaviourism respectively. Naturally, learning through problem solving is experience-based, experimental, subjective and creative. It arises out of a need to solve real-life problems encountered in the vicinity, i.e. in a familiar environment. Cause-and-effect and linear reasoning, on the other hand, were pursued by behaviourism, with the learning process focused on a classroom, i.e. in an environment which is artificial and separated from reality. Constructivism shows how to learn rather than what to learn, the latter being so typical of behaviourism, and learning results are measured through self-evaluation and collaborative work rather than a yes-no test fashion as well as through measuring of individual progress.

Juxtaposing cognitivism with constructivism should be discussed along different lines. Cognitivism, its first generation to be more precise (i.e. Chomskyan cognitivism), maintained that some knowledge is innate, which is not the case in constructivism. Piaget was of the opinion that a child was born with an empty slate (*tabula rasa*) and all knowledge was gained through experience during his life. It was thus externally-driven. As a result, rules emerge out of inborn

data for a nativist, and are discovered through interaction with the external world for a constructivist. While it was absent in behaviourism, creativity was advocated by both constructivism and first generation cognitivism. As for second generation cognitivism, the Lakoffian model permits some form of innateness as image-schemas are believed to develop in the pre-natal stage (for example, the concept of inclusion is claimed to emerge in the` second month of the feotus). The Langackerian version is not in favour of this thesis, as language is assumed to be gained through interaction with a language community, culture and the environment. The approach towards this issue is not unified within cognitive linguistics.

Putting this unresolved question aside, constructivism (Cv) seems to share a lot with cognitive linguistics (CL). Both programmes look at learning as an active process, wherein a learner is truly engaged in meaning construal. As a consequence, knowledge is subjective and relative, which is also a claim associated with both Cv and CL. Vygotsky stresses the role of social interaction; CL, too, admits the impact of social aspects on language. The role of environment in knowledge acquisition (through experience) is given priority in constructivism and second generation cognitivism. It must be remembered that Piaget's theory was concerned with general cognitive abilities, language competences included, so it was not a theory concerned specifically with language learning. Likewise, although CL deals largely with linguistic matters it is also interested in general language faculties, as knowledge is domain-general not domain-specific. Both theories combine research on language with research on general cognitive abilities. Finally, biological adaptation noticed by Piaget, on the other hand, bears strong resemblance to enactment theory offered by CL (Varela et al. 1992).

3. Constructionism

Grammar of construction, which we will also call constructionism in this paper, is not a single coherent theory. It engulfs a number of 'schools'. The most frequently cited authors associated with this theory

are Fillmore, Croft and Goldberg. Constructionism is also discernible in Langacker, Tomasello, Bowerman and Choi, although with some reservations. Created as a reaction against componential analysis (which treated syntax, phonology and semantics as separate elements of language) and as a theory to grapple with the analysis of idioms (which were particularly problematic for componential models), constructionism sees these components of language as unified entities that bind language into a single construction (a symbolic unit).

We shall start the discussion of this model of grammar with a definition of construction. Constructions are "theoretical entities" and "form-meaning correspondences" which "themselves carry meaning, independently of the words in the sentence" (Goldberg, 1995: 1). They operate in abstraction from the lexical items which compose and initiate them; therefore, the meaning of a construction cannot be predicted by studying solely the meaning of its components. This thesis is expressed as follows (Goldberg, 1995: 4):

> C is a CONSTRUCTION iff$_{def}$ C is a form-meaning pair <F_i, S_i> such that some aspect of F_i or some aspect of S_i is not strictly predictable from C's component parts or from other previously established constructions.

The form-meaning pairing is understood in Langackerian terms as a symbolic relation (predicate-form) which is largely semantically motivated. A construction is thus a symbolic unit wherein the predicate is accounted for by conceptual metaphors, image-schemas, prototypes, etc. A construction, unlike in Chomskyan linguistics, is noncompositional, just like symbolic units in Langackerian linguistics. The relations between form and meaning are internal in the case of symbolic units, while they remain external for componential models (Croft, 2007: 472). This means that composite elements of a construction (semantic and syntactic structures) are merged into one monolith - a symbolic unit - while in componential models a syntactic structure is separate from a semantic structure.

Grammar consists of constructions rather than syntactic units, which enjoy the status of "basic units of language" (Goldberg, 1995: 5).

While syntactic units, favoured by Chomskyan generative-transformation grammar, are treated in an atomistic fashion, constructions span groups of syntactic units and transgress traditional division into morphology, syntax, phonology, semantics, and pragmatics. Being form-meaning pairing, constructions involve both notions typical of (cognitive) semantics as well as pragmatics on the one hand, and morphology, syntax and phonology on the other. Thus, a construction stands for any notion, be it an idiom, a syntactic sequence, a word or a morpheme. Words, morphemes, idioms and phrases are all constructions which integrate elements of varying length and complexity, all of which are of equal importance. That is to say, for example, that the preposition is not ancillary and servile relative to other 'more important' parts of speech, such as the verb or the noun, as the verb together with the preposition constitute one construction. This continuum often makes it difficult to pinpoint a borderline between lexicon and grammar; in particular the boundary is blurred in the case of verb-particle constructions (Goldberg, 1995: 7). In sum, this model of grammar denies a clear-cut borderline between lexicon, syntax, morphology, phraseology, etc. and promotes a "syntax-lexicon continuum" (Croft, 2007: 471).

Now, sentences with the same words but placed in different order with slight grammatical modifications render different meanings, as in the following examples cited by Goldberg (1995: 2) from other scholars:

(1) a. Bees are swarming in the garden.
    b. The garden is swarming with bees. (Fillmore, 1968, fn. 49)
(2) a. I loaded the hay onto the truck.
    b. I loaded the truck with the hay. (Anderson, 1971)

While in (1a.) and (2b.) the garden and the truck are full of the entities expressed by the second noun (bees, hay), in (1b.) and (2a.) only a part of the entity encoded by the first nouns (garden, truck) is probably occupied. These interesting and simple examples prove that we are dealing here with two different constructions in each pair of sentences, although the words used to describe the scene are similar. Syntactic

forms impose the meaning of the whole construction. We have just illustrated what Goldberg dubbed the 'Principle of No Synonymy of Grammatical Forms' (1995: 3).

Along with purely linguistic matters, construction grammar is also interested in how language is processed, i.e. in psycholinguistic matters. It is one of the fundamental claims of constructionism that "there is a uniform representation of all grammatical knowledge in the speaker's mind in the form of generalized construction" (Croft, 2007: 471). These generalizations arise from stored exemplars. Generalizations are, according to Goldberg (2006: 46), not complete abstractions insulated from their concrete progenitors but partial abstractions, as they encode selective properties of exemplars. That means that exemplar-based categories coexist with item-specific instances. On the basis of exemplars, extensions are also generated. The process is conducted with relative ease, as maintained by Tomasello (2003). Goldberg (2006: 126) posits that children tend to make generalisations based on the verb, because there is a high clue validity as the meaning of the whole construction (argument frame) builds on the meaning of the verb.

Constructions are conventionalised, and they are learned as one chunk in a bottom-up fashion, just as it is claimed in the Lexical Approach to learning/teaching[1] (Lewis, 1997). In line with Langackerian cognitive grammar, the bottom-up paradigm assigns a fundamental role to concrete samples of language used in real context, i.e. it is concerned with language usage rather than language use (abstract rules and decontextualised examples). Constructions are learned, assimilated and stored whenever input data permit. This thesis obviously underestimates the role of innate language voiced by generativism. Language usage is given priority over language use. Constructions are not only learned but also stored as one unit; this means that a learner does not put together separate elements on the

[1] An interesting discussion on construction grammar in language teaching has been presented by A. Kaleta (2009)

fly, i.e. while speaking, but retrieves ready-made chunks (Goldberg, 2006: 4). A similar view is maintained by the Lexical Approach to learning/teaching. Of course, the capacity of a learner's memory is limited, thus not all chunks heard or seen join the mental lexicon, the selection of constructions being constrained largely by the parameter of frequency of occurrence. Regardless of the internal complexity of a construction, therefore, the chunks which one encounters most often are more likely to get entrenched. Interestingly, the degree of meaning predictability of a construction on the basis of its composite elements is not seen as a crucial condition of memorability (Goldberg, 2006: 5).

From the above it transpires that constructionism is strongly affiliated with a usage-based approach to language analysis and learning, which sees language actually used by language users as the most appropriate data for a linguistic analysis. De-emphasising the role of reflection and speculation of a single linguist and underestimating the value of prescriptive grammars based on data extracted from a linguist's mind and, in lieu of these, advocating descriptive grammars, *a posteriori* examination, extracted typically from large language data, such as language corpora is the crucial shift in linguistic accounts observable in recent decades. By relying on linguistic evidence rather than speculation, pragmatics is given greater priority than in the past, and is often merged with semantics. In constructionism, as already mentioned, a continuum between pragmatics and semantics is also voiced.

In construction grammar, grammatical patterning is not only believed to reside in linguistic expressions (evidenced in language usage as opposed to use); it is also claimed to be semantically motivated. As in Langacker's notion of a symbolic unit, in other incarnations of construction grammar it is the symbolic nature of language that is put to the fore. In other words, language consists of constructions of varying length and complexity with the constant property of combing form and meaning; that is to say semantics and syntax being merged into one indivisible symbol/construction.

While constructionism is completely at odds with generative-transformation linguistics developed by Chomsky, there is a point of convergence for construction grammar and Chomsky's proposal. It is

actually only the first part of the name of his theory that appeals to constructionism – generative. Goldberg (1995: 7) says that "Construction Grammar is generative in the sense that it tries to account for the infinite number of expressions that are allowed by the grammar while attempting to account for the fact that an infinite number of other expressions are ruled out or disallowed". Furthermore, in constructionism language productivity is interpreted as resulting from language creativity. Creativity is thus the point of convergence which links construction grammar with Chomsky's generative approach (Goldberg, 2006: 22). Finally, constructive grammar and generativism agree that language should be viewed as a cognitive, i.e. mental, faculty (Goldberg 2006: 4).

On the other hand, as already signalled, construction grammar shares a lot with cognitive grammar. Actually, cognitive grammar is believed to be an example of construction grammar (Croft, 2007). To sum up what has been said thus far, both programmes (CL and constructionism) assume that language consists of indivisible constructions. These constructions span single morphemes as well as complex syntactic units. The units are symbolic; their internal structures are permanently merged and form a single configuration. Their view is also similar when it comes to issues concerned with language acquisition: both models have a similar approach to categorization (exemplar-based) as well as language learning and language analysis (usage-based model).

4. Concluding remarks

Constructivism and constructivism remain two separate domains of knowledge, with different sources of origin and aims pursued, as well as distinct methodological tools employed in research. Nevertheless, it has been the purpose of this paper to demonstrate, along with the differences, some points of convergence existing between the two programmes. While the theories definitely disagree with theses expounded by behaviourism and the symbolic in nature, first

generation cognitivism, they both subscribe to the views voiced by second generation cognitivism (constructivist or even connectionist in nature). It is true that constructivism and constructionism stem from and are primarily interested in areas of research which remain parallel, yet some crisscrossing is discernible, notably in the way they approach language as being a part of more general cognitive processes.

REFERENCES

Anderson, S. R. 1971. 'On the role of deep structure on semantic interpretation'. **Foundations of Language**, v. 6.187-219.

Bowerman, M. and Choi, S. 2001.'Shaping meanings for language: universal and language-specific in the acquisition of spatial semantic categories. In Bowerman, M. and Levinson, S. C. (eds). **Language Acquisition and Conceptual Development**. Cambridge: CUP.

Bruner, J. 1986. **Actual Minds, Possible Worlds**. Cambridge, Mass.: Harvard University Press.

Croft, W. 2007. 'Construction Grammar'. In Geeraerts, D. and Cuyckens, H. (eds). **The Oxford Handbook of Cognitive Linguistics**. Oxford: OUP.

Fillmore, C. 1968. 'The case for case'. In Bach, E. and Harms, R. T. (eds). **Universals in Linguistic Theory**. New York: Holt, Rinehart and Winston.

Fillmore, C. and Kay, P. 1993. **Construction Grammar Coursebook.** Berkeley: University of California at Berkeley.

Fosnot, C. T. 2005. **Constructivism: Theory, Perspectives, and Practice.** New York: Teachers College, Columbia University.

Goldberg, A. 1995. **Constructions: A Construction Grammar Approach to Argument Structure**. Chicago: University of Chicago Press.

Goldberg, A. 2006. **Constructions at Work**: **The Nature of Generalization in Language**. Oxford: OUP.

Kaleta, A. 2009. Cognitive approaches to grammar and L2 grammar teaching. **Linguistics Applied**, v. I. 70-83.

Langacker, R. 1987. **Foundations of Cognitive Linguistics**. Stanford: Stanford Unviersity Press.

Lewis, M. 1997. **The Lexical Approach**. Hove: LTP.

Piaget, J. 1977. **The Development of Thought: Equilibration of Cognitive Structures.** New York: Viking.

Piaget, J. 1987. **Possibility and Necessity.** Vol. I and II. Minneapolis: University of Minesota Press.

Tomasello, M. 2003. **Constructing a Language: A Usage-Based Theory of Language Acquisition**. Cambridge, Mass.: Harvard University Press.

Varela, F. J., Thompson, E. T. and Rosch, E. 1991. **The Embodied Mind: Cognitive Science and Human Experience.** Cambridge, Mass.: MIT Press.

Vygotsky, L. [1962]1986. **Language and Thought**. Cambridge, Mass.: CUP.

Marta Bogusławska-Tafelska,
Sabina Świderska, Katarzyna Wiśniewska

The ecolinguistics of interpersonal communication

This paper presents our preliminary, 'warm-up' research the general idea of which is to apply the ecolinguistic frame in the empirical work over the language process. The philosophy of language that ecolinguistics has at its methodological base, contains several assumptions which are central in the present analysis; the starting point assumption is that natural language is one of the life processes, within the continuum of the ecosphere; as such, language is to be looked at and studied within the multilayer context it naturally occurs. For us the immediate consequence of this general prerequisite is that language and any communicative undertakings are dynamic, non-linear, situation-specific/ecosystem-specific, emergent/momentary and chaotic. The empirical study, which is reported on in the second part of the paper, was aimed to trace these parameters of language and communication in the studied ecosystem.

Keywords: ecolinguistics, language ecosystem, chaotic language, nonlinear language, ecolinguistic homeostasis, ego-centrism of the language process

1. Introduction

The aim of the present paper is twofold; firstly, we intend to outline the ecolinguistic paradigm as our methodological choice for the current study. The ecological approach allows for the investigation into language behavior in its local, momentary and nonlinear nature. Hence Möhlhäusler's position is supported here, according to which the ecolinguistic perspective in the language studies, parameter-rich as it is, constitutes a promising methodological ground for a more applicable linguistics (2003:1). This applicational potential, in turn, brings the scientific efforts closer to 'what is' rather than 'what should be', or to 'what model can encapsulate it'. It seems that linguistics today, with its interdisciplinary ambitions and dynamic prerequisites, becomes the

study of 'man being and acting in the world'. Furthermore, natural language is treated as one of the life processes, within the continuum of the ecosphere; as such, it is to be looked at and studied within the multilayer context it naturally occurs.

A brief theoretical introduction of the conceptual-terminological domain will be complemented by the report from the research undertaken to analyse chosen ecolinguistic aspects of human communication. In the study, the educational ecosystem of the Faculty of Humanities, UWM, Olsztyn, is our ecosystem of choice.

2. The ecology of language

Ecology studies life processes from the perspective of the relations of organisms to their environment. One's relations with the environment naturally include the relations with other people around who constitute a part of the environment. Hence, communication processes within ever-changing, multilayer grid of life processes become an object of investigation of ecolinguistics.

2.1. Ecolinguistics vs. cognitive linguistics

Ecolinguistics is by all means closely related to and cooperating with contemporary cognitive linguistics[1]. It seems that the primary methodological diversity between these two paradigms is founded on the difference in stress distribution: cognitive linguistics is relating all human behaviors - linguistic activity included - to the mind structures. The architecture and processing of the human mind becomes a main point of reference in cognitive analyses. In the meantime, ecolinguistics notices the need to shift the focal point from the cognitive system onto the momentary, dynamic links between the cognitive system and the rest of the intraorganism, interorganism and environmental context.

[1] Cognitive linguistics is not to be miscomprehended as Cognitive Grammar model or Cognitive Semantics model. Cognitivism is here understood as the multidimensional, complex study of the human condition, aiming at interdisciplinary, however, not reductionist studies into the language process as related to the mind.

In the cognitive literature on human mind and language the conjecture has been expressed that modern linguistics with the interdisciplinary ambitions makes its way towards the higher-level scientific awareness which can one day be realized in one interdisciplinary scientific paradigm, universal for natural and social sciences; such a unifying paradigm, the metamodel, could function as the key to understand man as a mental-physiological organism being and acting in the world (cf. Bogusławska-Tafelska, 2008a, 2008b; Cat, 2007; Penrose, 1995). The metamodel would have to be process-oriented rather than structure-oriented; it would have to define the mechanisms governing the ever-evolving, parameter-sensitive mental and non-mental stuff, rather than rigid structures, regardless their conventionalized content and time-bound and time-limited truth conditions. While such linguistic models as Cognitive Grammar model that helps to investigate the mental content participating in linguistic processes; or cultural linguistics model which studies the collective mind's structures and processes with reference to language, the ecolinguistic paradigm offers an essential macroview, a methodological bond which, on the one hand, ascertains the value of complementary 'local' efforts to investigate human language; on the other hand, transcends time-conditioned constraints of the language process as studied by means of other theoretical models.

There is a methodological and practical need to notice the aspects of time-limitedness in modern linguistic research about human language; it seems that all linguists have learned about human language, its lexicon, grammar, mental unfolding or cultural colouring is to be verified by time. 'Local' linguistic analyses focus on inputs, structures and outcomes, which are pre-marked for their temporary accuracy; they are temporary, fleeting, subject to natural mutations and undergoing constant fluctuation. In this sense, a lot of work done in the area of the language studies can be described as a chronicler's work. To illustrate, in spoken, informal Polish a subjectless construction 'w gazecie pisze, że ..', 'na opakowaniu pisze, że..' (instead the formal grammatical form 'w gazecie, na opakowaniu jest napisane, że..')[2] has long been regarded by normativists as incorrect

[2] Eng. 'In the news paper it is written that..'; 'On the box, it is written that..'

and out-of–date. In the online Polish Language Guide of Jagiellonian University one can find the information that for the time being the controversial, subjectless construction, used by speakers and opposed to by some linguistics, is going to be accepted as the norm, due to its popular usage. There are voices among best recognized Polish language specialists which announce it correct and acceptable already. This example shows grammatical and lexical dynamics of the language process; if one considers other levels of the language process like cognitive links between language and mind, one would also notice a particular internal fluctuation. Bearing this in mind, Möhlhäusler's concern seems well-grounded; the scholar criticizez efforts to build two dimetional models for multidimentional phenomena like language (1995). Patton happily observes that the process studies approach is very 'threatening to our need for order' (2002:124). Thus we have the inclination towards capturing the fleeting and momentary phenomena in 'a stop frame' of the scientific model, theory or definition. Ecolinguistics transcends time limits and points to the mechanisms which navigate the language processes, nonlinear and 'chaotic' as they actually are.

2.2. Nonlinear and chaotic nature of human language

In the studies on communication processes, the ecolinguistic paradigm makes it possible to account for the dynamic, nonlinear, one can say 'chaotic' (cf. Gleick, 1998; Patton, 2002:118-128) nature of the language process. The ecolinguistic perspective in the language studies embraces an essentially wide context for language and all communication events, in order to make the scientific investigation functionally potent. In this effort to embrace the optimal language context, one touches upon language issues which can be nicely described by Gleick's words: '(..) a pattern with disturbances. An orderly disorder' (1998:15). Thus, chaotic phenomena are not to be perceived as negative, dysfunctional or disorderly. Rather, the metaphor of chaos denotes complexity and nonlinear dynamics of the language process, which, naturally, has its internal logic (cf. Patton, 2002:123). This process embraces the cognitive patterns and processes of the communicators' minds, momentary and constantly rearranging

as they are, together with interacting patterns and processes of the collective, ideal cognitive system (culture), and the situational, sociopolitical, geographical and environmental co-participating phenomena; together, this multidimensional, multithematic context co-creates the meaning and outcome of any communicative act. In the ecolinguistic paradigm, meaning is not a property of the portion of language; rather, it is a dynamic compromise, the here-and-now effect of a given communication process (cf. Möhlhäusler, 2003:9).

As regards the accusation of languge being nonrational, which appears when linguists venture to consider this instantaneous and transient nature of language processes, we would like to accept this label; the feature of language nonrationality is simply the result of:

a. language being a process generated by communicators' cognitive systems, which are never uniform in content, constantly rearrainging themselves, and which selectively absorb the information awailable to them – this is the cognitive phenomenon of bounded awareness (cf. Chugh and Bazerman, 2007). The selected input of the stimulation/information is, again, individual; thus, theoretically speaking, each of the communicators can pick up and focus on different aspects of the shared communication context (ibid.). What is rational for one mind, can be non-rational from the prespective of the other mind.

b. communication scenario and outcome are subject to internal and external/environmental 'ad hoc' shifts and turns - small disturbances which ultimately can change the communication direction altogether;

c. language, being a cognitive process, is a cultural process at the same time, hence language non-rationality may be the result of cross-cultural ineffective communication, i.e. one's low awareness of the interlocutor's culture.

2.3. The direction of creative processes

The ecolinguistic methodology proposes creative processes to be top-down processes, where higher order phenomena generate lower order phenomena, according to a happy analogy proposed by Dennett: it's not the pot that makes the potter, but the potter that makes the pot (Dennett in Blackmore, 2009:83). Contrary to formal linguistic analyses starting from the portion of language and preoccupied with the systemic study, ecolinguistics starts from and always relates all language investigations to the essential human and environmental contexts.

3. The research

3.1. The objectives

The purpose of the ecolinguistic experiment that is reported in the present paper was to examine a communicator's linguistic response in the process of communication in correlation to (i) intrapersonal factors such as a person's physical condition, emotions, optimistic versus pessimistic approach and personal experience, as well as (ii) interpersonal factors such as social and environmental influence or the phenomenon of the collective mind. In the study we intend to point to the parameter-sensitive and, as a result, momentary, local and transient nature of linguistic behavior.

3.2. The procedure

The experiment included 20 randomly selected students of the Faculty of Humanities at the University of Warmia and Mazury in Olsztyn. The respondents were asked for their opinion on the functioning of the Faculty and on their general perception of the faculty accommodation conditions. The questionnaire used to test the respondents comprised of 5 closed questions with 4 possible answers to choose from for each question. The questionnaire was written in Polish so as to adapt the

tool of the experiment to the environment it was performed in, and consequently, to conduct the research in the respondents' mother tongue. Chart 1 and 2 present Polish and English versions of the questionnaire:

BADANIE OPINII STUDENTÓW WYDZIAŁU HUMANISTYCZNEGO UNIWESYTETU WARMIŃSKO-MAZURSKIEGO W OLSZTYNIE DOTYCZĄCE FUNKCJONOWANIA WYDZIAŁU ORAZ FUNKCJONALNOŚCI BUDYNKU WYDZIAŁU

Ankieta składa się z pięciu pytań zamkniętych. Do każdego z pytań wybierz jedną odpowiedź, która jest odzwierciedleniem Twojej opinii:

1. Jak oceniłbyś/oceniłabyś efektywność pracy administracji tego wydziału? (np. dziekanatu, sekretariatów)

a) wysoka b) zadowalająca c) niska d) niedopuszczalna

2. Jak oceniłbyś/oceniłabyś funkcjonalność budynku tego wydziału? (np. korytarze, sale, schody, winda)

a) wysoka b) zadowalająca c) niska d) niedopuszczalna

3. Jak oceniłbyś/oceniłabyś użyteczność sprzętu znajdującego się w salach? (np. multimedia, tablice, ławki)

a) wysoka b) zadowalająca c) niska d) niedopuszczalna

4. Jak oceniłbyś/oceniłabyś poziom zaplecza usługowo - gastronomicznego oferowanego w budynku Wydziału Humanistycznego? (np. bar, usługi ksero)

a) wysoka b) zadowalająca c) niska d) niedopuszczalna

5. Jak oceniłbyś/oceniłabyś funkcjonalność terenów wokół budynku? (np. schody, parking)
a) wysoka b) zadowalająca c) niska d) niedopuszczalna

Dziękujemy za udział w badaniu.

Chart 1. Polish version of the questionnaire used in the research

THE SURVEY OF STUDENTS' OPINION CONCERNING THE FUNCTIONING OF THE FACULTY AND THE FUNCTIONALITY OF THE BUILDING IT IS SITUATED IN; THE FACULTY OF HUMANITIES AT THE UNIVERSITY OF WARMIA AND MAZURY IN OLSZTYN

The questionnaire consists of 5 questions. For each of the question choose one answer which reflects your opinion:

1. How would you evaluate the effectiveness of the administration of the faculty? (e.g. the dean's room, the front offices)

a) high b) satisfactory c) low d) unacceptable

2. How would you evaluate the functionality of the building of the faculty? (e.g. the corridors, the rooms, the stairs, the elevator)

a) high b) satisfactory c) low d) unacceptable

3. How would you evaluate the usefulness of the equipment in the rooms and lecture halls in the building? (e.g. the multimedia, the boards, the desks)

a) high b) satisfactory c) low d) unacceptable

4. How would you evaluate the level of the catering facilities and services offered in the building of the Faculty of Humanities? (e.g. the bar, the Xerox services)

a) high b) satisfactory c) low d) unacceptable

5. How would you evaluate the functionality of the building grounds? (e.g. the stairs, the car park)

a) high b) satisfactory c) low d) unacceptable

Thank you for taking part in the survey.

Chart 2. English translation of the questionnaire

However, what is essential in this research procedure, the researchers decided to vary their emotional-behavioural attitude acted out during the process of questioning. In other words, they approached the respondents either very optimistically - while conversing with one half of the respondents (10 people) - or pessimistically – in conversation with the other half of the respondents. The optimistic approach included lots of smiles, general joy expressed by the body language, and the positive tone of speaking on the part of the researchers. The pessimistic approach included indifferent or a bit bitter tone, and the body language expressing general uneasiness and dissatisfaction. The aim of the abovementioned emotion manifestation, based on the conversation tone mediation, was to examine whether the change of the emotions expressed and conversation tone would have an influence on the respondents' answers in the questionnaire. That is,

whether they choose positive or negative adjectives to evaluate the faculty and the building facilities depending on the way they were approached by the researchers.

3.3. The results

3.3.1. Ecolinguistic homeostasis in communication

The results of the experiment appeared to be even more interesting and complex than expected. To begin with, all of the 4 adjectives (2 negative ones: 'unacceptable', 'low'; and 2 positive ones: 'satisfactory', 'high') appeared in the respondents' answers evaluating the Faculty of Humanities and its building. Chart 3 presents the percentages of different adjectives chosen in the two groups of the respondents approached optimistically or pessimistically:

Conversation held in an optimistic tone (10 students)	Conversation held in a pessimistic tone (10 students)
The choice of the negative adjectives: – 'unacceptable' – 4% of the responses – 'low' – 34% of the responses The choice of the positive adjectives: – 'satisfactory' – 50% of the responses – 'high' – 12% of the responses	The choice of the negative adjectives: – 'unacceptable' – 0% of the responses – 'low' – 26% of the responses The choice of the positive adjectives: – 'satisfactory' – 58% of the responses – 'high' – 16% of the responses

Chart 3. The percentages of adjectives chosen by the respondents approached optimistically and pessimistically

The ecolinguistic experiment aimed at verifying the assumption that a pessimistic or an optimistic way of approaching the respondents during the survey may influence their responses in the questionnaire, that is, determine their choices of given adjectives. The research hypothesis had it that the researchers' emotions and attitude may be infectious and may affect the respondents' attitude, and consequently, their answers. However, analyzing the outcome of the experiment, the working hypothesis turned to be too narrow since the respondents' answers and the observation of the whole procedure of the survey shed new light onto the investigated matter. Firstly, the main assumption of the experiment that the state of psychological optimism or pessimism of one communicator (the researcher in the present study) may influence the emotional state and response of the other communicator (the respondent in the present study) proved to be correct. However, the pessimistic or optimistic tone of the conversation imparted by the researchers, interestingly, turned out not to be infectious for the respondents. On the contrary, those respondents who noticed the pessimistic tone of the conversation tended to give more positive answers than the optimistically approached group (see chart 3). Consequently, the negative adjective 'unacceptable' appeared in 0% of their responses whereas in the optimistically approached group it was noted in 4% of the responses. A similar tendency may be observed in all the remaining answers (see chart 3). As a result, it may be hypothesized that the researchers did influence the respondents in a way that the subjects tended to behave in a more optimistic way and thus used more positive adjectives so as to comfort the pessimistic interlocutor/researcher. The preliminary conclusion is that one of the intrapersonal factors, specifically, emotions of a communicator and especially the feeling of empathy, operated in this part of the experiment. Furthermore, the subjects in the experiment seemed to direct the conversation towards a particular emotional-linguistic level of balance, which, in turn, could have an impact on the collective/community perception on the questionnaire issue. So, we decided to label the observed mechanism the ecolinguistic homeostasis. The interactants in the communication showed a particular inclination to balance negative emotions and judgments by back-communicating counterpoint views and emotions.

3.3.2. The group psychology and the conversational outcome

Secondly, during the experiment, the researchers noticed that the choice of the presented adjectives was dependent on many different factors apart from the researchers' optimistic or pessimistic approach to the conversation with the respondents. For instance, when the respondents standing in a group of two or three people were to give answers to the questions, they tended to choose similar or even the same adjectives. Chart 4 presents the choice of adjectives in 4 groups of the respondents; 2 groups of two students and 2 groups of three students answering the questions:

Group 1 (two people)	Group 2 (two people)	Group 3 (three people)	Group 4 (three people)
The choice of adjectives:	The choice of adjectives:	The choice of adjectives:	The choice of adjectives:
1st person's answers: 'unacceptable' 0% 'low'40% 'satisfactory' 40% 'high' 20%	**1st person's answers:** 'unacceptable' 20% 'low'40% 'satisfactory' 40% 'high' 0%	**1st person's answers:** 'unacceptable' 0% 'low'20% 'satisfactory' 80% 'high' 0%	**1st person's answers:** 'unacceptable' 0% 'low'40% 'satisfactory' 40% 'high' 20%
2nd person's answers: 'unacceptable' 0% 'low'60% 'satisfactory' 20% 'high' 20%	**2nd person's answers:** 'unacceptable' 20% 'low'40% 'satisfactory' 40% 'high' 0%	**2nd person's answers:** 'unacceptable' 0% 'low'20% 'satisfactory' 40% 'high' 40%	**2nd person's answers:** 'unacceptable' 0% 'low'40% 'satisfactory' 40% 'high' 20%

		3rd person's answers: 'unacceptable' 0% 'low'0% 'satisfactory' 100% 'high' 0%	**3rd person's answers:** 'unacceptable' 0% 'low'20% 'satisfactory' 80% 'high' 0%

Chart 4. The choice of adjectives by the respondents in groups of 2 and 3 people

The respondents answering in a group tended to give similar or even the same answers as they felt the sense of belonging to one particular group in the education ecosystem under observation (See chart 4) Additionally, it could be noticed that group members were very reluctant to be the first to answer the questions, since they did not want to manifest their different views and risk exclusion from the group. They hesitated, their answers were very tentative and became more confident and final only after the approval of the whole group could be sensed and observed, which was demonstrated, for instance, by head nodding. Consequently, it might be observed that the interpersonal factors of the collective mind or group mentality may hugely influence a communicator's responses.

The next category of the respondents, whose answers need to be more carefully looked into, are the first year students. The research results show that the first year students of the faculty did not use the negative adjective 'unacceptable' at all. Adjective 'low' appeared in 26% of their answers, positive adjective 'satisfactory' appeared in 40% of their answers and adjective 'high' was chosen in the 34% of the answers. All the freshmen were prone to give more positive adjectives in their responses. The reason may be their limited experience in being a part of the university ecosystem, and therefore not having reasons for negative evaluation of the above. Moreover, they demonstrated a tendency toward having an optimistic approach to the future. The concluding hypothesis is that the lack of experience of a

communicator in being a part of the educational ecosystem determines a more positive approach to the future of being a member of the ecosystem and has great impact on the ultimate general evaluation.

3.3.3. The ego-centric aspects of the language process

During the research, some of the respondents mentioned positive or negative events from their past experience as students of the Faculty of Humanities, which influenced their more positive or more negative opinion on the faculty and the building, regardless of whether they were approached positively or negatively by the researchers. Events such as a positively remembered visit in the dean's room, a negative memory of a long queue in front of the dean's room or even a well written test a minute ago had great influence on the approach of the respondents and their choice of adjectives in questions corresponding to the events or even in all of the questions. Chart 5 presents the percentages of adjectives chosen by the 3 respondents who recalled the abovementioned events:

Respondent 1 Personal experience: a positively remembered visit in the dean's room	Respondent 2 Personal experience: a negative memory of a queue in front of the dean's room	Respondent 3 Personal experience: a well written test a minute ago
Question no 1: How would you evaluate the effectiveness of the administration of the faculty? (e.g. the dean's room, the front offices) Answer: 'satisfactory'	Question no 1: How would you evaluate the effectiveness of the administration of the faculty? (e.g. the dean's room, the front offices) Answer: 'low'	Questions no 1, 2, 3, 4 and 5 (all of them) Answer: 'satisfactory' in 100% of the responses

Chart 5. Answers of the respondents who mentioned a positive or negative event from their past personal experience

One of the respondents had visible health problems; the person was walking on crutches, which, as was visible also in the student's behaviour, influenced the person's answers to the questions which apply to the functionality of the building of the faculty. Chart 6 presents the person's answers to the abovementioned questions:

A person walking on crutches
Question no 2: How would you evaluate the functionality of the building of the faculty? (e.g. the corridors, the rooms, the stairs, the elevator) Answer: 'low' Question no 5: How would you evaluate the functionality of the building grounds? (e.g. the stairs, the car park) Answer: 'low'

Chart 6. Answers of a respondent with visible physical health problems

Although the person on crutches was approached very joyfully, and seemed to be good-natured herself, when asked about the functionality of the building of the faculty, her good mood did not have impact on the answers in this area of investigation. Her poor physical condition evoked negative emotions, which manifested in the choice of adjective 'low' in the two questions which applied to the functionality of the building (see chart 6). Thus, it can be hypothesized that one of the intrapersonal factors, specifically physical condition of the organism, may play considerable role in a communicator's response in the process of communication.

4. Conclusions

The present analysis, preliminary as it is, belongs to the methodological category of the qualitative studies, as it aims at ecosystem exploration and hypothesis formulation rather than statistical analysis. Hence, the assumptions which have been presented here need further elaboration and verification. The research conclusions are synthesized into the following points for further consideration:

a. Human communication is to be studied 'locally', within the particular communicative situation context, as the dynamic rearrangements of each communicative situation parameters bring about shifts fundamental for the communicative outcome.

b. Meaning is an inherent mechanism within the dynamic language process, thus it is subject to situationally-determined, momentary shifts and changes within the communicative situation, the language process being integral to it.

c. The emotions of the communicator influence the co-participants in communication, however, the emotional infectiousness constitutes but one of possible mechanisms involved; in the experiment discussed, the phenomenon of ecolinguistic homeostasis has been identified, where the reading of the interlocutor's emotions led to the comforting, balance-preserving counteremotional behavior on the part of the other communication interactants.

d. The language process is ego-centric in the sense of a communicator's self-being (with his/her health state, mood, autobiographical memories, ect.) dominating other emotional-cognitive-linguistic motivations in communication.

REFERENCES

Bogusławska-Tafelska, M. 2008. 'Cognitivism in linguistics. Why sciences are to fall into one interdisciplinary paradigm'. W: Puppel, S. and M. Bogusławska-Tafelska (red.). 45-60.

Chugh, D. and M.H. Bazerman. 2007. 'Bounded awareness: what you fail to see can hurt you'. In: **Mind and society** 6. 1-18.

Ekman, P. and R. J. Davidson (eds.). 1994. **The nature of emotion.** New York, Oxford: Oxford University Press.

Fill, A. i P. Möhlhäusler. (red.). 2001. **The ecolinguistic reader**. London/New York: Continuum.

Gleick, J. 1998. **Chaos.** London: Vintage Books.

Möhlhäusler, P. 2003. **Language of Environment. Environment of Language**. London: Battlebridge Publications.

Patton, M. 2002. **Qualitative research and evaluation methods**. London: Sage Publications.

Puppel, S. (red.). 2007. **Społeczeństwo — kultura — język**. Poznań: Katedra Ekokomunikacji UAM.

Puppel, S. 2008. 'Communicology: remarks on the reemergence of a paradigm in communication studies'. W: Puppel, S. and M. Bogusławska-Tafelska (red.). 11-22.

Puppel, S. i M. Bogusławska-Tafelska (red.). 2008. **New Pathways in Linguistics**. Olsztyn: Instytut Neofilologii UWM.

Monika Cichmińska

Sadness and fear
A study into the language of negative emotions

The aim of the present article is to study phrases consisting of two nouns signifying negative emotions in English linked with the conjunction *and*. In cognitive linguistics it is believed that the study of the language used by everyday users of English reveals the so-called folk or naïve knowledge on a given subject. The analysis of the data in the present study seems to show that in the folk model of negative emotions as revealed in everyday language, we may feel one or two emotions at the same time, that emotions may appear in different varieties, that they are accompanied by physical symptoms, and that they may be caused by different factors and result in different behaviours and moods. While there is a lot of psychological truth in the folk model discussed above, there are elements which are not consistent with the dominant scientific psychological models (like the simultaneous appearance of two emotions). Those may, however, reflect those aspects of our emotions which are beyond our conscious perception.

Keywords: emotions, folk model, scientific model, conceptualisation

1. Introduction

As Kövecses explains, emotion language can be divided into three groups: "expressive terms, terms literally denoting particular kinds of emotions, and figurative expressions denoting particular aspects of emotions" (Kövecses 2000: 5), for example, *wow!, fear* and *burning with desire*, respectively. He also noticed that although the group of figurative expressions is the largest, it does not receive proper attention.

Since the publication of Lakoff's and Kövecses' research on the conceptual nature of emotions (Lakoff 1987, Kövecses 1986, 1990 a, b, 2000, 2008), and their analysis of the concept of anger, it is widely accepted, at least in cognitive linguistics, that emotions have an

extremely complex conceptual structure. According to Lakoff (1987), we are able to uncover the nature of emotion concepts by studying the language that is used by native speakers of a given language to talk about those concepts.

It has been demonstrated that concepts of emotions can be studied with the methodology proposed by Kövecses (1986, 1990a, b, 2000) and Lakoff (1987) in a number of case studies (cf. ANGER, PRIDE, LOVE, FEAR, JOY; Nowakowska-Kempna 1985 on the language of emotions in Polish).

As the analysis of the language of anger revealed, there is a coherent conceptual organization behind our folk understanding of anger, which involves a number of conceptual metaphors, the most central of those being ANGER IS FIRE, and the common metonymic understanding that PHYSIOLOGICAL EFFECTS OF AN EMOTION STAND FOR THE EMOTION. It also appears that anger has a temporal dimension and can be analysed in the form of a scenario, more or less prototypical, consisting of a number of stages.

Lakoff and Kövecses' (1987) analysis of anger led them to the conclusion that the folk theory of anger – common people's understanding as revealed in everyday language – has its own unique conceptual structure and correlates with the views of one of the psychological theories of emotion (e.g. Ekman 2007, LeDoux 1994), according to which there exists a set of basic emotions, each of which is distinct from others and has its own unique characteristics.

According to Lakoff (1987), all emotional concepts are embodied, and the conceptual metaphors we use to talk about emotions have a basis in bodily experience.

The conceptual metaphors and metonymies used in the comprehension of anger are based on the physiology of anger "which corresponds remarkably well with the actual physiology: when people experience anger their skin temperature and pulse rate rises" (Lakoff 1987: 407).

However, not everything in the emotion language is metaphorical. The aim of the present article is to study phrases consisting of two nouns signifying negative emotions in English, in order to arrive at the folk understanding of how these emotion concepts work, and check it against the theory of emotion mentioned above. The validity of the so-

called folk or naive knowledge versus scientific or expert knowledge will also be discussed.

The present article will focus on phrases in which two nouns are put together with the conjunction *and*. The linguistic data came from widely available language corpora of contemporary English (both written and spoken). The data consisted of short pieces of text (1-2 sentences), both written and spoken, such as: *I was filled with anger and fear; Our hearts were full of terror and fear; They (…) burst into mingled excitement and anger; Alicia felt her tension and anger fade; They wailed in panic and fear.*

2. Psychology of emotion – an overview

Various psychological theories of emotion which have developed since Darwin's times (1872) deal with the subject from a plethora of perspectives. Different researchers – whether philosophers, psychologists or neurobiologists – have difficulty agreeing on even the simplest concepts, such as what the definition of emotion is, what triggers an emotion, what the defining criteria are, how many emotions there are, and many others.

As this is not a psychological, but a linguistic study, only the most necessary terms will be discussed briefly, that is: criteria for establishing what constitutes an emotion, and the differences between basic and negative emotions, and emotions versus moods.

Ekman, a leading psychologist in the field of emotions, (1992, 1994, 2007), proposes the following list of the necessary criteria for emotions: automatic appraisal, commonalities in antecedent events, presence in other primates, quick onset, brief duration, unbidden occurrence, and distinctive physiology. Some emotions also possess a *distinctive universal signal;* seven emotions have a distinct, universal facial expression (2007). It is worth mentioning that the appraisal as discussed by Ekman is automatic and can be best described as our ability to respond to a situation with great speed, often without awareness.

In the past two decades one of the most active areas of research on emotion is on brain mechanisms which stand behind emotions, represented, among others, by Damasio (1994) and

LeDoux (1996), who produced extensive evidence for emotion-specific physiological activity in the brain. According to LeDoux, different brain systems are responsible for different emotions. Some emotions are automatic, independent of thought or interpretation; for example fear appears as a result of activating amygdala as some kind of "emotional reflex". Some emotions, like guilt, appear as a result of cognitive interpretation and memories of similar situations.

According to Kosslyn and Rosenberg (2004), although there is a grain of truth in all the major theories of emotion, empirical data prove LeDoux' cognitive theory of emotion which combines automatic reactions of the brain and body with interpretations and memories connected with certain situations. However, as LeDoux (1994) points out, a subjective experience of emotions is possible only after we become aware that a certain emotional system has become activated in the brain.

3. Basic emotions, negative emotions and moods

The question of whether there is anything such as basic, primary or fundamental emotion, together with a possible number of these basic emotions, has been a matter of discussion and controversy. Some scientists argue against the notion of basic emotions, like Ortony, Clore and Collins (1988), who reject the notion of basic emotions and claim that all emotions are a more or less differentiated form of positive or negative reaction to something or other. Mandler (1976) argues that we construct emotions from our life experiences, emotions being products of culture, social experience and learning; thus, we can learn or construct as many emotions as are needed.

According to Barrett (2006), there is no hard evidence for emotions as natural-kind entities. Thus, she claims, emotions are not biologically given, but are constructed as a result of the process of categorization: the experience of emotion involves a core affect and conceptual knowledge about emotion. Hence there is no anger prototype, nor a single conceptualization of anger.

Most scientists, however, agree that there are basic, or fundamental emotions, although there is a lot of controversy regarding their number.

According to Izard (1991) and his criteria determining which emotions are fundamental, the list of basic emotions includes interest, enjoyment, surprise, sadness, anger, disgust, contempt and fear. He also adds guilt, shame and shyness, which lack distinct facial expressions, but have distinct body movements.

Ekman (1994, 2007) allows that there are basic emotions, and on the basis of emotion characteristics mentioned above he proposes the following list of emotions: amusement, anger, awe, contempt, contentment, disgust, embarrassment, excitement, fear, guilt, interest, pride in achievement, relief, sadness, satisfaction, sensory pleasure and shame.

To Plutchik (1980), the basis for selection of basic emotions is their relation to adaptive biological processes and his list includes acceptance, anger, anticipation, disgust, joy, fear, sadness and surprise. Frijda (1986) sees emotions as forms of action readiness; his list includes desire, joy, pride, surprise, distress, anger, aversion, contempt, fear and shame.

All human emotions are commonly divided into positive and negative. However, this division is very simplistic. No emotion can be considered categorically as good or bad. Common sense tells us that there are instances of "positive" fear or anger – when they lead to desirable consequences, for example survival. Love, which is commonly considered positive, can also be destructive.

Izard (1991) suggests that it is more accurate to say that some emotions tend to lead to "psychological entropy and others tend to facilitate constructive behaviour, or the converse of entropy" (1991: 20). Nevertheless, for convenience the terms positive and negative are used to divide emotion into classes which are less likely and more likely, respectively, to have undesirable consequences.

Ekman (2007) also discusses the controversy around positive/negative emotions dichotomy. First of all, he claims, putting all negative emotions in one bin of negative emotions ignores important differences between them, and secondly, so-called negative

emotions can be experienced as pleasant, and vice versa: "for some people an angry argument is enjoyable, and many people enjoy a good cry when seeing a sad movie" (Ekman 2007: 59).

The prototypical emotion has a temporal aspect; it has an onset and typically ends with some action. However, emotions have very limited duration; they typically last seconds, minutes (Ekman 1994), or at most hours (Izard 1991). Emotions contrast subtly with related states and processes such as moods.

Moods have a number of features which distinguish them from emotions, like duration, threshold, and the presence of absence of unique facial expression, intentionality, causes, and focus on objects (Ekman 1994, Frijda 1994).

Emotions and moods represent different categories, or processes. However, these processes do not have to represent different states. Emotions may fade into moods or entail mood changes; moods may give rise to emotions; different emotions or moods can come and go at overlapping periods or simultaneously (Frijda 1994; Izard 1991).

4. Folk knowledge versus expert knowledge

We all use cognitive models in order to understand the world around us (Lakoff 1987). When ordinary people make theories about any important aspect of their lives, such theories are called folk theories or folk models, unlike expert models which are created by professionals in a given field. Cognitive anthropologists and philosophers agree on common characteristics of folk theories, also called naive theories or models:

- Folk model is an attempt to combine naive realism with elements of rationalism and magic. The human mind has a tendency to be guided by feelings, wishes, intuitions, ambitions and interests (Hołówka 1986). Thus every folk model is based on observations of reality – the world is what it looks like – but it also tries to explain its nature in the belief that everything has its reason, and that there is a purpose and order in the surrounding world (Maćkiewicz 2000).

- Folk or naive knowledge is far from being a coherent system, and consists of elements which often contradict each other, unlike expert models which present a globally consistent whole (Anusiewicz 1992). Quinn and Holland highlight "the co-existence of alternative, often conflicting cultural renditions of this world (…) we find it easy to entertain different theories, to abandon one theory for another" (1987:10).
- Folk or naive theories of reality should not be perceived as a contradiction to scientific or expert theories, they should rather be regarded as two different ways of conceptualizing reality (Anusiewicz 1992).
- Interpretations made on the basis of folk models are treated as if they were obvious facts about the reality; on the other hand, in the case of many cultural models people often do not have "an organized view of the entire model. They *use* the model but they cannot reproduce a reasonable *description* of the model" (D'Andrade 1987: 114).
- Folk or cultural knowledge – organized in schemas called cultural models - can be reconstructed from everyday language (Anusiewicz 1992).

In his studies on conceptual metaphor and emotion, Kövecses (2000, 2008) suggests that cultural models of emotions in different languages and cultures have their roots in actual physiology of emotions, which may be universal. The conceptualised experiential basis, often in the form of conceptual metonymies, and "emerging conceptual metaphors contribute to the basic schematic structure of the cultural model" (Kövecses 2008: 392); cultural contexts further fill out the details in the basic structure of the models. He also argues that scientific or expert theories of emotion should be distinguished from folk, or commonsense theories, as "a scientific theory is scientific because it rejects what ordinary people "merely believe" "(Kövecses 2000: 127).

5. Negative emotions in English

While analyzing the way English and Polish people speak about emotions, we encountered numerous occurrences when speakers use two or different emotion words together, in one phrase, linked with the conjunction *and*. As such word combinations are quite common in both in English and Polish, it seemed interesting to attempt to answer the following question: what do these fragments of language tell us about how people feel about emotions? Is their understanding of what they feel, how they behave, how they experience the so-called negative emotions, true in the light of what psychology has to say on emotions? If Lakoff is right (1987), we should be able to find that at least some part of our folk understanding of emotions agrees with expert knowledge of the subject.

For the purposes of this research, we have collected instances where two or more English emotion nouns were used in one phrase and linked with the conjunction *and*. We have included examples which made it clear that the speakers were talking about two or more emotions happening more or less simultaneously, rather than happening in a sequence.

As might be expected, the most frequent occurrences are phrases consisting of two emotion nouns, although cases with three or more words are not as seldom as it might seem. We use the term "emotion nouns" as not always do the words in question refer to emotions, sometimes they refer to behaviors, attitudes, moods, symptoms or other phenomena, as will be explained later.

We have chosen to study three basic negative emotion words and the concepts corresponding to them, that it: *fear, sadness* and *anger*. The quantitative analysis of the collected data revealed two interesting facts: first of all, there is a wide variety of emotion nouns that occur together linked with *and*; secondly, the distribution of these words is different in the three basic emotion concepts selected for the present study.

For the sake of ordering the data, we have proposed the following classification of the nouns which occur with *fear, sadness* and *anger.*The classification is not a psychological taxonomy, it is supposed merely to serve the purpose of organizing and analyzing the language data. In some cases the decision how to classify a certain phenomenon was not an obvious one, and may be open to discussion.

1. Other negative emotions.

The list below includes nouns denoting other negative emotions, both basic as proposed by researchers mentioned above, and their less basic variants. As the table shows, *anger* and *fear* appear in emotion clusters more often than *sadness*. *Guilt* seems to be the only emotion that can accompany all the studied emotions.

	Fear	*Sadness*	*Anger*
Anger	*V*		-
Contempt			*V*
Disgust	*V*		*V*
Embarrassment	*V*		
Fear	-	*V*	
Grief		*V*	*V*
Guilt	*V*	*V*	*V*
Humiliation	*V*		*V*
Revulsion	*V*		
Sadness	*V*	-	*V*
Shame	*V*	*V*	

2. Opposite (positive) emotions and feelings.

As can be noticed from the data, *sadness* seems to go together with positive emotions and feelings much more often than *anger* and *fear.*

	Fear	*Sadness*	*Anger*
Excitement		*V*	*V*
Exhilaration		*V*	
Gladness	*V*		
Happiness		*V*	
Hope	*V*		
Joy		*V*	
Pleasure		*V*	*V*
Relief		*V*	

3. More specific types of basic emotions, or connected moods and feelings.

For each of the studied emotions we have collected their less typical variants or types, together with moods and feelings they are associated with. The data reveal that SADNESS may take the form of the biggest number of emotional states, which display different shades of being sad, depending on their length, intensity, causes, etc., although both ANGER and FEAR also appear in many different variants. SADNESS also displays another interesting feature: combinations of *sadness* with different types of *anger* and *fear* are more frequent than combinations of *anger* and *fear* with more specific types of the other two emotions.

There are two interesting observations which can be made on the basis of the data; first, all the analysed basic emotions often go with their different variants, more often than with other basic emotions. Some of these variants are very specific and only appear together with its basic category, for example *gloom, loss, misery* and *dejection* with *sadness*. Secondly, however, combinations where a basic emotion occurs with a more specific type, feeling or mood associated with another basic emotion are also very frequent (*depression and fear, frustration and sadness, anxiety and anger).*

Sadness

	Fear	*Sadness*	*Anger*
Agony	*V*		
Dejection		*V*	
Depression	*V*	*V*	
Desolation		*V*	
Despair	*V*		*V*
Despondency	*V*		
Dismay			*V*
Distress		*V*	*V*
Emptiness		*V*	
Gloom		*V*	
Hopelessness		*V*	
Loss		*V*	
Misery		*V*	
Regret		*V*	
Sorrow			*V*

Anger

Aggression			*V*
Bitterness	*V*	*V*	*V*
Frustration	*V*	*V*	*V*
Fury			
Indignation		*V*	*V*
Outrage	*V*		*V*
Rage	*V*	*V*	*V*
Resentment		*V*	*V*
Wrath		*V*	

Fear

Anguish			*V*
Anxiety	*V*	*V*	*V*
Concern		*V*	
Dread	*V*		

Horror	*V*	*V*	
Intimidation	*V*		
Panic	*V*		
Terror	*V*		
Worry	*V*	*V*	

4. *Surprise* and its variants.

As might be expected, *surprise*, which denotes a neutral emotion, appears with all the examined negative emotions nouns.

	Fear	*Sadness*	*Anger*
Dismay	*V*	*V*	
Puzzlement			*V*
Surprise	*V*	*V*	*V*

5. Symptoms of the emotions which typically accompany them.

The following list includes physical symptoms which typically accompany emotions. As can be seen from the data, ANGER displays the fewest of those, while FEAR and SADNESS can be accompanied by a wide variety of symptoms.

	Fear	*Sadness*	*Anger*
Ache	*V*		
Cold	*V*		
Fatigue	*V*	*V*	
Nausea	*V*		
Pain	*V*	*V*	*V*
Shock	*V*	*V*	*V*
Suffering		*V*	
Sweat	*V*		
Tears		*V*	
Tension		*V*	*V*
Trembling	*V*		

6. Results/causes of experienced emotions.

The classification proposed below posed the most serious problem as the group of the words below encompasses a wide variety of different phenomena, such as the behaviour or action of a person experiencing an emotion, their feelings, moods and attitudes. It may seem that these states result from experiencing a given emotion, like evil or hostility which may linger after anger stops; on the other hand, it may also happen that feelings, moods or actions may give rise to emotions, like loneliness which can breed sadness, or betrayal which may cause anger.

The first table shows four feelings/attitudes which accompany two or three of the analysed emotions. The table below presents those states which accompany only one emotion.

As can be observed, all the three basic emotions appear together with *confusion*; however, the list of states and behaviours which accompanies each of the three emotions is relatively long. In most cases these related phenomena are negative, but there are also some which may be considered positive, like *charity, determination, pity* and *responsibility*, which would prove that dividing emotions into positive and negative is not obvious.

	Fear	*Sadness*	*Anger*
Confusion	*V*	*V*	*V*
Desire	*V*	*V*	
Distrust	*V*		*V*
Insecurity	*V*	*V*	

Fear	*Sadness*	*Anger*
Awe	*Apathy*	*Antipathy*
Charity	*Bewilderment*	*Betrayal*
Hesitation	*Determination*	*Condemnation*
Hysteria	*Discomfort*	*Disbelief*
Ignorance	*Disillusionment*	*Discontent*
Indecision	*Futility*	*Effort*
Insanity	*Loneliness*	*Evil*

Intimidation	*Powerlessness*	*Hostility*
Panic attacks		*Humiliation*
Responsibility		*Incredulity*
Uncertainty		*Injustice*
Uncomfortableness		*Irritability*
		Obsession
		Pity

6. Conclusions and discussion

As the analysis of the data has revealed, our emotional repertoire encompasses a wide range of emotional responses together with their blends, nuances and shades; probably there are more such states than we have words. Most psychologists would agree with Ekman that "words are one way to deal with our emotions, and we do use words when emotional, but we cannot reduce emotion to words" (Ekman 2007: 13). On the other hand, in Barrett's view (2006) language cannot be neglected as it helps determine which emotion categories speakers of a language acquire and also which emotion experiences can be available for emotion categorization. Wierzbicka (2009) also highlights the importance of the language of emotion as "languages (including English) shape the emotion categories of their speakers and carry with them culture-specific emotional scripts" (Wierzbicka 2009: 13). Thus language of emotion needs to be studied as human experience of emotions can only be "accessed from the "inside" through introspection, and communicated to others through language" (Wierzbicka 2009: 11).

While one must bear in mind that the present study is only a sample of the possible combinations in which emotions nouns can appear in everyday English, certain conclusions about the naive understanding of negative emotions can be drawn and tested against psychological theories.

The data show that using two emotion nouns together is a frequent phenomenon in English. The three analysed negative emotion words – *fear, sadness* and *anger* – often appear in combinations with a wide variety of emotional phenomena, including other basic emotions and their more specific types, or more specific types of the emotion in

question; moods, feelings and behaviours which accompany, precede or result from them; and typical symptoms.

As the analysis of the data has shown, there is a wide variety of phenomena which go together. If they appear together in the language, it may be assumed that they reflect the way the speakers experience these phenomena and try to describe them. Emotions are one of those phenomena which are very difficult to describe and express, which is reflected in their complex conceptual structure. In our fight to express and cope with what and how we feel and experience the myriad of multiple emotional phenomena, we try to express the unexpressed. These expressions represent our folk or naive knowledge of emotions. The preliminary conclusions that can be drawn are as follows:

1. Situations when we use the name of one negative (basic) emotion together with another different emotion word would prove that we often experience two emotions at the same time. Thus, our folk model allows for two negative emotions happening simultaneously.
2. Similarly, we can experience a negative emotion together with SURPRISE (or its variant) – in our folk model we can be pleasantly or unpleasantly surprised.
3. Situations when we use the name of one basic emotion together with the name of its more specific type would reveal that in striving for a precise description of what we feel, we may find that describing it as just *sadness, fear* or *anger* is not enough, that we need to be more precise and detailed; hence the need to further specify it as *hopelessness and sadness, anger and rage,* or *fear and anxiety.* It seems that we are perfectly aware of existence of various shades of the same emotion, and sometimes saying that *we are filled with sadness* does not fully reflect how we feel at the moment. Our folk model would then reveal that basic emotions can be felt as vague or underspecified, and also that there are numerous, less typical cases of negative emotions.
4. There may be numerous reasons why the name of an emotion appears together with a symptom which accompanies it. One

of them may be the need to emphasise the symptom, or point to the physical realization of the experienced emotion. As Lakoff points out (Lakoff 1987), our folk theory of emotions is based on the general metonymic principle THE PHYSIOLOGICAL EFFECTS OF AN EMOTION STAND FOR THE EMOTION. It might seem then that we may use the symptoms to guide us through what we experience and feel at a given moment.

5. Similarly, there may be numerous reasons why the name of an emotion appears together with its result or cause. Two possible explanations may be as follows:

    - It is probably difficult if not impossible to distinguish between the beginning and ending of one emotion, or an emotion passing into a mood. What we feel is a steady flow of feelings and experiences, which may be reflected in the language by combining an emotion with a likely cause, be it a mood or attitude, or with the resultant attitude, mood or behavior.
    - As emotions have a temporary aspect and can be described in terms of scenarios consisting of a number of stages (Lakoff 1987), we may want to point to something that (in our opinion) has triggered a given emotion, or something that our emotion has led us to. As rational beings we try to rationalize our behavior and find logical explanations for what we do, thus we may want to explain, to others and first of all to ourselves, these aspects of our emotional behavior.

The points mentioned above cannot be treated as conclusive, as they would need a more thorough analysis, which is the subject of our further research. However, it seems that the way we use *emotion and emotion* combinations reveals quite a lot of psychological truth about emotions.

First of all, as Ekman claims, emotions rarely occur singly, in a pure form. Indeed, we sometimes talk about *pure love* or *pure anger* as if there were a lot of cases of "non-pure" love or anger. He also

mentions that two emotions "can occur in rapid sequence, again and again. Two emotions also can merge together into a *blend*" (Ekman 2007: 69). Typically people experience "a stream of emotional responses" (Ekman 2007: 69), so an emotion happens after an emotion, and so on, and so forth.

Tomkins (1995) observed that we may be confused about our affects (that is, emotional experiences) as a result of

> combinations of affects, either simultaneous or sequential. Thus, an individual may be surprised and afraid at the same time, afraid and interested at the same time, surprised and interested at the same time, or in succession but also simultaneously (…) Or the affects of, surprise, fear and interest may appear in succession to the same object, but in such rapid succession that the three affects are perceived by the observer as an undifferentiated totality. (Tomkins 1995:240)

On the other hand, the need to give more precise descriptions of what we are feeling, and to point to symptoms, causes or results of the experienced emotion, may be the source of evidence for appraisal theories as mentioned above (Barrett 2006, Frijda 1986, Mandler 1975, Ortony, Clore and Collins 1988, Wierzbicka 2009). If our experience of emotion is a result of conceptual knowledge which helps categorise affect, the knowledge that is acquired from past experiences and supported by language, we may feel a strong need to explain our experience first of all to ourselves in order to define and categorise what it is that we feel.

It cannot be expected that people talking about emotions will ever be able to define what is happening to them at any given moment due to the imprecise use of the language itself. In his discussion of emotions and moods, as well as personality traits and emotional disorders which are associated with them, Ekman notices that people "commonly use these words interchangeably, for example, that one felt depressed that a grade on exam was not very high" (Ekman 2007: 93). However, studying the language of emotion within a given language may give insight into the real nature of emotions (Barrett 2006, Barrett, Lindquist and Gedron 2007, Wierzbicka 2009), although

"subjective" experiences are often treated suspiciously by psychologists (LeDoux 1996).

To sum up, it seems that the analysis of the data in the present study shows that in our folk model of negative emotions we may feel one or two emotions at the same time, that emotions may appear in different varieties, that they are accompanied by physical symptoms, and that they may be caused by different factors and result in different behaviours and moods. It seems that there is a lot of psychological truth in the folk model, and those elements which are not consistent with the scientific models (like the simultaneous appearance of two emotions) reflect those aspects of our emotions which are beyond our conscious perception.

REFERENCES

Anusiewicz, J. 1992. "Potoczność jako sposób doświadczania świata i jako postawa wobec świata" In: **Acta Universitatis Wratislaviensis Język a kultura** *Vol.5,* Wrocław: Wydawnictwo Uniwersytetu Wrocławskiego, 9-14.

Barrett, L. 2006. "Solving the Emotion Paradox: Categorisation and the Experience of Emotion". In: **Personality and Social Psychology Review** *Vol. 10 No. 1,* 20-46.

Barrett, L., Lindquist, K, and Gedron, M. 2007. "Language as context for the perception of emotion". In: **Trends in Cognitive Sciences** 11, 327-332.

Damasio, A. 1994. **Descartes' Error. Emotion, Reason, and the Human Brain**. Putnam Publishing.

D'Andrade, R. 1987. "A folk model of the mind". In: **Cultural models in language and thought** *D*. Holland and N. Quinn (eds.) New York: Cambridge University Press 102-148.

Darwin, C. R. 1872. **The Expressions of Emotions in Man and Animals**. London: Murray.

Ekman, P. 1992. "An argument for basic emotions". **Cognition and Emotion,** 6, 169-200.

Ekman, P. 1994. "All emotions are basic" In: P. Ekman and R. J. Davidson (eds.) **The Nature of Emotion**. **Fundamental Questions.** New York, Oxford: OUP, 15-19.

Ekman, P. 2007. **Emotions Revealed**. 2-nd Ed. New York: Holt.

Frijda, N.H. 1986. **The Emotions.** Cambridge: Cambridge University Press.

Frijda, N.H. 1994. "Varieties of Affect: Emotions and Episodes, Moods and Sentiments". In: P. Ekman and R.J. Davidson (eds.) **The Nature of Emotion. Fundamental Questions**. New York, Oxford: OUP, 59-67.

Hołówka, T. 1986. **Myślenie potoczne**. Warszawa: PIW.

Izard, C. 1991. **The Psychology of Emotions**. New York and London: Plenum Press.

Kosslyn, S.M., Rosenberg, R.S. 2004. **Psychology: the Brain, the Person, the World.** 2-nd Ed. Pearson Education Inc.

Kövecses, Z. 1986. **Metaphors of Anger, Pride and Love: A Lexical Approach to the Study of Concepts.** Amsterdam, Philadelphia: Benjamins.

Kövecses, Z. 1990a. **Emotion Concepts**. New York: Springer-Verlag.

Kövecses, Z. 1990b. "Joy. An exercise in the description of emotion concepts". **Grazer Linguistische Studien** *33/34,* 153-64.

Kövecses, Z. 2000. **Metaphor and Emotion: Language, Culture, and Body in Human Feeling**. Cambridge and New York: Cambridge University Press.

Kövecses, Z. 2008. "Metaphor and emotion". In **The Cambridge Handbook of .** R.Gibbs (ed.) New York: Cambridge University Press 380-396.

Lakoff, G. and Johnson, M. 1980, **Metaphors We Live By**. Chicago: Chicago University Press.

Lakoff, G. 1987. **Women, Fire, and Dangerous Things**. Chicago, London: University of Chicago Press.

LeDoux, J. **The Emotional Brain: The Mysterious Underpinnings of Emotional Life.** New York: Simon & Schuster.

Maćkiewicz, J. 2000. "Potoczne w naukowym – niebezpieczeństwa i korzyści". In: **Acta Universitatis Wratislaviensis Język a kultura** *13* Wrocław: Wydawnictwo Uniwersytetu Wrocławskiego, 107-113.

Mandler, G. 1976. **Mind and Emotion**. New York: Wiley.

Nowakowska-Kempna, I. 1995. **Konceptualizacja uczuć w języku polskim**. WST TWP: Warszawa.

Ortony, A. Clore, G.L., Collins, A. 1988. **The Cognitive Structure of Emotions.** Cambridge and New York: Cambridge University Press.

Plutchik, R. 1980. **Emotion: A Psychoevolutionary Synthesis.** New York: Harper & Row.

Quinn, N., Holland D. 1987. "Culture and cognition". In: **Cultural models in language and thought**. *D*. Holland and N. Quinn (eds.) New York: Cambridge University Press. 3-42.

Tomkins, S. 1995. 'Exploring Affect: The Selected Writings of Silvan'. S Tomkins. E.V.Demos (ed.) Oxford University Press.

Wierzbicka, A. 2009. "Language and Metalanguage: Key Issues in Emotion Research" **Emotion Review** *1.* Accessed at http:/emr.sagepub.com/cgi/content/abstract/1/1/3.

Anna Drogosz

EXISTENCE IS LIFE

Metaphors of language that ecolinguistics lives by

This paper investigates the interconnections between conceptual metaphors used by Darwin to frame his theory of evolution and conceptual metaphors of language employed in linguistic theories, especially ecolinguistics. An analysis of the text of the *Origin of Species* revealed the major source domains used by Darwin: family, tree, struggle, journey, as well as personification. Linguistic theories were found to use the same source domains to conceptualize language and its social dynamics due to the widespread use of the metaphor LANGUAGE IS AN EVOLVING ORGANISM. This tendency is particularly strong in ecolinguistic texts, in which the very existence of language is depicted as life. Many entailments of this metaphor are exploited: language endangerment, death and extinction, competition, survival, and adaptation to the environment. The conclusion of the study is that many ecolinguists treat this metaphor as a rhetorical weapon rather than an heuristic tool.

Keywords: Darwin, ecolingustics, conceptual metaphor, language

1. Introduction

When in 1859 Charles Darwin presented his ideas on evolution of living organisms in *On the Origin of Species*, he did not anticipate that his own theory, itself based on a number of conceptual metaphors, would become a source of metaphors for linguistics, a science so much unlike biology, and for the description of language, a phenomenon so much unlike life forms.

It is not the intention of this study to provide a comprehensive survey of how Darwin's theory of evolution influenced linguistics nor to investigate all the complex metaphors of language that have been employed in the study of language. We want to present how the

language of ecolinguistic paradigm remains indebted to Darwin's theory of evolution, and that the analogy between language and living organism remains very much alive. The analysis, couched in the theory of conceptual metaphors as proposed by Lakoff and Johnson (1980, 1999) and Kövecses (2002), begins with a presentation of those metaphors of evolution that where particularly frequently used in the study of language. Later we turn to metaphors of language found in contemporary ecolinguistic texts.

2. Conceptual metaphors in *The Origin of Species*

As we have presented elsewhere, Darwin's theory of evolution as presented in *The Origin of Species* draws on a number of metaphors. We have demonstrated the importance of ontological metaphors for the framing of the whole theory (Drogosz 2008) and the role of metaphors of family, tree and struggle in providing coherence (Drogosz 2009).

Among the best known metaphors associated with Darwin's theory are those based on the source domains of family and tree. Darwin used these to depict relationships among organisms and among species of organisms in time. In *The Origin* he presents all organisms, both living and extinct, as related and connected by family bonds, and emergence of new species as descent. The metaphor (SPECIES OF) ORGANISMS ARE FAMILY MEMBERS is illustrated in the examples below:

1. By the theory of natural selection all living species have been connected with the parent-species of each genus, by differences not greater than we see between the varieties of the same species at the present day; and these parent-species, now generally extinct, have in their turn been similarly connected with more ancient species; and so on backwards, always converging to the common ancestor of each great class. [228][1]

2. Now all these modified descendants from a single species, are represented as related in blood or descent to the same degree; they

[1] Figures in brackets refer to page numbers of the Oxford edition of *The Origin of Species*.

may metaphorically be called cousins to the same millionth degree; yet they differ widely and in different degrees from each other. [341]

3. …these three families would be so closely linked together that they probably would have to be united into one great family, ... [268]

Darwin's book provides a graphic representation of the metaphor (SPECIES OF) ORGANISMS ARE FAMILY MEMBERS in the shape of a diagram taken from a simplified genealogical tree. Examples of expressions derived from the diagram are numerous in the text, but we quote just one as an illustration:

4. ...they will generally go on multiplying in number as well as diverging in character: this is represented in the diagram by the several divergent branches proceeding from (A). The modified offspring from the later and more highly improved branches in the lines of descent, will, it is probable, often take the place of, and so destroy, the earlier and less improved branches: this is represented in the diagram by some of the lower branches not reaching to the upper horizontal lines. [98]

While the domains of family and tree served Darwin as means of conceptualizing relationships among organisms in different periods of time, the source domain of struggle was used to describe relationships among organisms at the same period of time and in the same place. The notion of "struggle for existence" or "struggle for life" has become unmistakably associated with evolution. Darwin explained the dynamics of the natural world, survival and extinction, modification of form and behavior in subsequent generations of organisms, and the eventual appearance of new species as the result of a constant struggle for survival and the chance to leave offspring. The idea was that those organisms which in some way best fit their environment and which are in some way superior to other organisms (either of different species or the same species), will succeed in this struggle. The domain of struggle is elaborated in the text as a competition or a race (5-7), or as a war (8-9):

5. The competition will generally be most severe, as formerly explained and illustrated by examples, between the forms which are most like

each other in all respects. Hence the improved and modified descendants of a species will generally cause the extermination of the parent-species; [259]

6. If under a nearly similar climate, the eocene inhabitants of one quarter of the world were put into competition with the existing inhabitants of the same or some other quarter, the eocene fauna or flora would certainly be beaten and exterminated... [272]

7. ...the more common forms, in the race for life, will tend to beat and supplant the less common forms for these will be more slowly modified and improved. [144]

8. ...one species has been victorious over another in the great battle of life... [64]

9. ...during the incessant struggle of all species to increase in numbers, the more diversified these descendants become, the better will their chance of succeeding in the battle of life ... [105]

The list of Darwin's metaphors would not be complete without those based on the source domain of journey. This is one of the most commonly used source domains and Darwin too exploited it extensively. Its main purpose is to describe how an accumulation of small modifications in successive generations of organisms leads to greater changes and, finally, to entirely new species. This transition is conceptualized as movement, as a passage from one stage to another, and thus evolution becomes a dynamic process. This concept of journey is illustrated in the examples below:

10. … individual differences are the first step towards slight varieties, such as steps leading to more permanent varieties, these as leading to species and … [44]

11. …that any organ or instinct, or any whole being, could not have arrived at its present state by many graduated steps. [371]

12. … in order to discover the early transitional grades through which the organ has passed , we should have to look to very ancient ancestral forms, long since become extinct. [155]

Finally we turn to personification, an ontological metaphor whereby a non-human entity, and often a non-physical concept, are granted the characteristics of a human being. In Darwin's theory personification is applied primarily to the concept of nature and natural selection. While nature, in accordance with a long tradition, is personified as a female (13), natural selection is conceptualized as an agent without any specific human characteristics (14-17):

13. Nature acts uniformly and slowly during vast periods of time on the whole organisation, in any way which may be for each creature's own good; and thus she may, either directly, or more probably indirectly, through correlation, modify the reproductive system in the several descendants from any one species. Seeing this difference in the process of selection, as carried on by man and nature, we need not be surprised at some difference in the result. [218]

14. …natural selection will always succeed in the long run in reducing and saving every part of the organisation [122]

15. …and in this case natural selection would continue slowly to reduce the organ, until it was rendered harmless and rudimentary. [368]

16. the eye of an eagle might be formed by natural selection [153]

17. …that natural selection has converted the simple apparatus of an optic nerve merely coated with pigment and invested by transparent membrane, into an optical instrument as perfect as is possessed by any member of the great Articulate class ... [153]

In the next part of this study we shall investigate how Darwin's theory and his metaphors have been employed in the study of language, especially in recent developments in ecolinguistics.

3. LANGUAGE IS A BIOLOGICAL ORGANISM

Language understood both in its abstract sense of human biological ability to communicate and in the sense of individual languages, dialects and varieties is non-physical, so any attempt to talk about it involves some kind of metaphorization. The least noticed way is to grant language the ontological status of an object. Then, as in the sentences above, we can refer to language as an "it". But such schematic objectification was found insufficient quite early in linguistic tradition and structural metaphors of language were developed, recruited from various source domains. The domain of biological organisms remains the most prolific.

The introduction of the concept of ecology into (eco)linguistics is attributed to Einar Haugen, but the conceptualization of language as a living organism has a much longer tradition. And while the ecological approach to language may be treated as a "normal development from the structuralism" (Mackay, 2001:67), it is at the same time a natural development of the evolutionist approach to language dating back over a century.

The idea that a language is an organism comes from August Schleicher (1821-1868), a leading German linguist of the 19th century. He explicitly compared languages to evolving species and represented genealogical relationships among languages in the form of a tree (*Stammbaum*) (Heinz 1983, Robins 1997). The metaphorical mappings of Schleicher's analogy are presented below:

Source domain (living organisms)	**Target domain (language)**
a living organism	a language
life cycle of an organism (development, maturity, decline)	stages in the development of a language
evolution of a species	diachronic changes in a language
family genealogical tree	relationships among languages in time

Table 1. Metaphorical mappings of Schleicher's theory of language change

Interestingly, Schleicher's ideas were initially considered as an application of Darwin's theory but it has been demonstrated that some of his views were earlier or at least parallel to those of Darwin (Anderson and Bache, 1976). It appears that the metaphors of family and tree were employed by Darwin and Schleicher independently.

The 19th century metaphor LANGUAGE IS AN EVOLVING BIOLOGICAL ORGANISM highlighted the changes of languages in time and their genetic affinities. The application of Darwin's theory to language study found its full manifestation in Otto Jespersen's works on language (e.g. *Progress in Language* in 1894 and *Language. Its Nature, Development and Origin* in 1922). However, with the diminished interest in the study of the origin of language, the metaphor of language as a biological organism was overshadowed by the metaphor of a tool or an instrument, "by which [a language] is compared to a hammer or a wheelbarrow or a computer, each of which serves as a means to achieve a human goal that might be difficult or impossible to achieve without it" (Haugen 2001: 58). The biological metaphor had its great comeback in the writings of ecolinguists. How this is manifested in language and what its uses are and entailments is the focus of the following part of the analysis.

If we consider the way language is conceptualized in the writings of such ecolinguists as Mühlhäusler, Steiner, Mackey, Haugen, Puppel, and others, it becomes apparent that the metaphor LANGUAGE IS A LIVING ORGANISM is the dominating metaphor.[2] It has to be admitted that many of the linguistic expressions based on this metaphor are a conventional way of talking about relationships among languages inherited from the tradition of comparative and historical linguistics

[2] The metaphor LANGUAGE IS A TOOL is relatively rare in ecolinguistic texts because it is just the opposite to the concept of language promoted by ecolinguistics. The negative approach to the 'tool' metaphor can be found in Haugen ([1972] 2001:58), quoted above, and in Mühlhäusler (2003) when he writes:

1. Ecolinguistics emphasizes the pervasive role of language and discourse in constructing and perpetuating perceptions of realities. It sees language as a biased tool, not a mere neutral instrument. (Mühlhäusler 2003:12)
2. Language is not a neutral tool but a 'loaded weapon' (Mühlhäusler 2003:45)
3. ... language is neither a passive repository of meaning nor merely an instrument for the transmission of meanings from a speaker to speaker. (Mühlhäusler 2003:45)

and are often present in any branch of linguistics. The examples in (18-20) are clearly applications of Darwinian metaphor of family and tree.

18. Today entire families of language survive only in the halting remembrance of the aged, individual informants (Steiner [1975] 2001: 26)

19. But we know little of the genesis of those tongues and their affinities, if any, with other major linguistic groupings (Steiner [1975] 2001: 26)

20. … the enormously ramified Uto-Aztec tree of languages… (Steiner [1975] 2001: 26)

It must be, however, emphasized, that ecolinguistics exploits the living language metaphor to a degree unknown to other studies of language.

In the first place the mere existence of languages is conceptualized as life:

21. …the interplay of the set of attributes (…) is assumed to exhaustively define the shape and life of any natural language as a cultural institution as well as define its competitive position … (Puppel 2009: 276)

22. … the above features are assumed to be present in the life of a language in constantly changing proportions… (Puppel 2009: 276)

23. Languages too must exist in environments and these can be friendly, hostile or indifferent to the life of each of the languages. (Mühlhäusler 2003:10)

Consequently, once the metaphor EXISTENCE OF A LANGUAGE IS LIVING is employed, various aspects of language use can be described in accordance with the theory of evolution. Thus, the relationships among co-existing languages are conceptualized as competition (24-26)[3], languages with a diminishing number of speakers are described

[3] Some ecolinguistic texts admit symbiosis as a possible conceptualization of language co-existence:

in terms of endangered or extinct species (27-29) while the continued existence of a language is presented as survival (30):

24. The number of competing languages within the area… (Mackey [1980] 2001:69)

25. The currently existing natural languages may, in addition, be regarded as co-existing in the global language space defined here as the natural global arena (…), where they all as institutions compete for the best possible and strongest status *vis-à-vis* other natural languages. This is done through various Language-to-Language (L2L) local competitions. (Puppel 2009: 275)

26. …the interplay of the set of attributes (…) is assumed to exhaustively define the shape and life of any natural language as a cultural institution as well as define its competitive position … (Puppel 2009: 276)

27. ... languages or varieties are in danger of dying out... (Mühlhäusler 2003:10)

28. … language diversity and language loss… (Mühlhäusler 2003:11)

29. ... endangerment of many smaller languages ... (Mühlhäusler 2003:11)

30. Haugen does not emphasize the question of the linguistic habitat or environment needed for linguistic organisms to survive, although it seems clear that facts such as setting can crucially affect viability of languages. (Mühlhäusler 2003:11)

4. We are familiar with certain specific situations of linguistic symbiosis, in which language systems are stretched almost out of recognition. (Haugen ([1972] 2001:64)
5. … a further accommodation between symbiotic languages… Haugen ([1972] 2001:64)
6. Gumperz (1967) has made similar observations from India, in areas where informal standards of Indo-Aryan and Dravidian languages have lived in centuries of symbiosis. (Haugen [1972] 2001:64)

To make the list of analogies with biological forms complete, earlier forms of language preserved in contemporary use are compared to fossils (31):

31. ... grammar as a fossilized theory of experience (Halliday 1992 in Mühlhäusler 2003:20)

Ecolinguists such as Mühlhäusler push the analogy between languages and living organisms so far as to talk about adaptation of a language to its natural environment in truly biological language:

32. Ecolinguistics, in focusing on the interrelationships between language and the environment, seeks to identify the adaptive processes that occur. Languages are optimally adapted to the cultural and natural environments where they have become endemic. (Mühlhäusler 2003:17)

33. ...how language adaptation occurs in the environment (Mühlhäusler 2003:17)

34. ... the adaptation of language to particular ecological conditions (Mühlhäusler 2003:20)

35. ... the fit between a particular language and the environment in which it is spoken is the outcome of a long process of accommodation (Mühlhäusler 2003:46)

36. As migration and spread of English occur at increasing pace, we can see a dramatic increase in the number of languages, which are linguistically not accommodated to their habitat. Such languages are exotic in the sense of introducing and not adapting. (Mühlhäusler 2003:46)

37. Not only are individual languages particularly well adapted to environmental conditions they have developed in, linguistic diversity is also a resource of environmental knowledge. (Mühlhäusler 2003:60)

The idea that languages adapt to their environment deserves more attention. Although superficially this may appear in harmony with evolutionism, in fact it departs from evolutionism quite significantly: while Darwin's theory emphasizes the role of natural selection in determining the fit between an organism and its environment (in the sense that forms better adapted to this environment are favoured by natural selection, and less fitted become extinct), Mühlhäusler's descriptions make it clear that languages somehow have the active role in the process of adaptation and, consequently, survival.

The agentive role of language is even more visible in the quotations below:

38. Language (...) does not describe reality but creates, shapes and perpetuates group-specific perception of reality. (Mühlhäusler 2003:60)

39. ... a particular language demonstrates sensitivity to other languages... (Puppel 2009:278)

40. ... the readiness of a natural language to absorb new elements from other contacting languages... (Puppel 2009:278)

41. ... a language which shows a high degree of sensitivity to other languages in the sense described above and which is predominantly focused on making operational compromises ... (Puppel 2009:279)

What is more, language can even gain emotional awareness (42, 43) so its "actions" can be morally judged (44, 45), which borders on personification.

42. ...well being of individual languages depends on meaningful relationships with other languages in a linguistic ecology. (Mühlhäusler 2003:11)

43. ... diversity is seen as a precondition of the well-being of languages and their speakers. (Mühlhäusler 2003:13)

44. Spreading killer languages such as English (Mühlhäusler 2003:7)

45. A language may also be regarded as militant in relation to other languages (Puppel 2009:277)

The metaphorical mappings that emerge from the analyzed examples are summarized in Table 2:

Source domain (living organisms)	**Target domain (language)**
an organisms	a language (a linguistic organism)
a species of organism	a given language (English, Spanish, etc)
biological environment habitat ecology	linguistic and cultural environment
life of an organism survival	existence of a language
thriving of a species (of organisms)	expansion (geographical and social) of a language (more people use it)
competition and supplementation between organisms	relationships among different languages in a given area
death of an organism/ extinction of a species	the use of a language is abandoned
organisms adapt/are adapted to their environment (Lamarckism)	languages are adapted to the area in which they are used
a very aggressive organism /a killer	languages gaining more and more speakers

Table 2. The metaphorical mappings of the metaphor LANGUAGE IS A LIVING ORGANISM as elaborated in ecolinguistics

As we can see, by applying the living language metaphor ecolinguistics has gained access to all metaphors of evolutionism. However, even within the limited scope of this study, we may note a

selective use of evolutionism. Firstly, as we have mentioned earlier, the concept of natural selection is absent from ecolinguistics and language is ascribed an agentive role. Such a conceptualization has a consequence, most probably unintended by linguists: people using a language become conceptualized as passive in the process of speaking, merely as vehicles for languages; the agentive role of language becomes foregrounded and the role of people in language use, change and formation becomes backgrounded. It is as if in the fight for preserving language people were less important than the languages they speak. Secondly, ecolinguistics highlights the competitive aspect of co-existence among languages/organisms. This is quite surprising, because even Darwin was criticised for such a one-sided picture of relationships among organisms, and modern evolutionism and ecology emphasises the co-operative aspects as well. Thirdly, not only is competition highlighted, but its results are presented in a non-Darwinian way. Darwin saw the positive effects of struggle and competition in the way the best fitted survive and leave progeny. Extinction was seen as a natural process of elimination of those less fitted. In ecolinguistics the negative aspects are foregrounded: competition means death and extinction, an irreplaceable loss of individual languages. It does not lead to evolution of better-fitted languages but to impoverishment of the linguistic environment.

4. Concluding remarks

The main reason why Darwin used metaphors to formulate his theory of evolution was their explicatory power. He had to express his thoughts using language in such a way as to be understood by fellow naturalists and a wide readership. His metaphors also had heuristic value: he described known facts in a novel way and without the involvement of supernatural powers. Metaphors in ecolinguistics have heuristic value as well. Thanks to these metaphors ecolinguistics offers a far more encompassing view of language than alternative theories seeing language as a self-contained system independent of cultural or psychological context. However, some ecolinguists seem to use their metaphors because of the rhetorical power they offer.

The most frequent use of the most elaborate metaphors can be observed in texts written by those ecolinguists who are actively involved in environmental issues and who advocate the need to preserve minority languages. What could be an objective and detached report of changes in language choices (the diminishing number of speakers of a given language is often a result of a conscious decision to learn and use a language of international currency), becomes a passionate narrative using words appealing to the emotions. And the living language metaphor serves this purpose very well. It turns the decreased use of a language into language death or extinction and languages with increasing numbers of speakers become labelled as killer languages. The weight is shifted from a linguistic investigation to a moral issue. One may only wonder how far a metaphor can be pushed before it loses its heuristic value.

REFERENCES

Anderson, F and C. Bache. 1976. 'August Schleicher: Towards a better understanding of his concept of language change'. **Anthropological Linguistics.**

Darwin, C. 1998. **The Origin of Species**. Oxford: Oxford University Press.

Drogosz, A. 2008. 'Ontological metaphors in Darwin's The Origin of Species'. In S. Puppel and M. Bogusławska-Tafelska (eds.) **New Pathways in Linguistics.** Olsztyn: Instytut Neofilologii Uniwersytetu Warmińsko-Mazurskiego.

Drogosz, A. 2009. 'Metaphors of family, tree and struggle in Darwin's *The Origin* of *Species'*. In S. Puppel and M. Bogusławska-Tafelska (eds.) **New Pathways in Linguistics.** Olsztyn: Instytut Neofilologii Uniwersytetu Warmińsko-Mazurskiego.

Evans, V. 2005. **The Structure of Time.** Amsterdam and Philadelphia: John Benjamins.

Fill, A. and P. Mühlhäusler. 2001. (eds.) **The Ecolinguistic Reader. Language, Ecology and Environment**. London and New York: Continuum.

Haugen, E. 2001[1972] 'The ecology of language'. In A. Fill and P. Mühlhäusler (eds.) **The Ecolinguistic Reader. Language, Ecology and Environment.** London and New York: Continuum.

Heinz, A. 1983. **Dzieje językoznawstwa w zarysie.** Warszawa: Państwowe Wydawnictwo naukowe.

Kövecses, Z. 2005. **Metaphor in Culture.** Cambridge: Cambridge University Press.

Lakoff, G. and M. Johnson. 1980. **Metaphors We Live By.** Chicago and London: The University of Chicago Press.

Lakoff, G. and M. Johnson. 1999. **Philosophy in the Flesh. The Embodied Mind and its Challenge to Western Thought**. New York: Basic Books.

Mackey, W. 2001 [1980] 'The ecology of language shift'. In A. Fill and P. Mühlhäusler (eds.) **The Ecolinguistic Reader. Language, Ecology and Environment.** London and New York: Continuum.

Mühlhäusler, P. 2003. **Language and Environemt. A Course in Ecolinguistics.** London: Battlebridge.

Puppel, S. 2009. 'Remarks on the sustainability of natural languages in the cultural-institutional perspective'. In S. Puppel and M. Bogusławska-Tafelska (eds.) **New Pathways in Linguistics**. Olsztyn: Instytut Neofilologii Uniwersytetu Warmińsko-Mazurskiego.

Robins, 1997**. A Short History of Linguistics**. London and New York: Longman.

Steiner, G. 2001 [1975] 'Language and gnosis'. In A. Fill and P. Mühlhäusler (eds.) **The Ecolinguistic Reader. Language, Ecology and Environment.** London and New York: Continuum.

Szwedek, A. 2000. 'Senses, perceptions and metaphors (of object and objectification)'. ***Multis vocibus de lingua*.** Poznań: Wydział Neofilologii UAM.

Iwona Góralczyk

Calling a spade a spade in aphasia. On similarity

This analysis offers a cognitive linguistic perspective on a selection of aphasiac speech problems. The issues raised concern the conceptualizer's role in the process of categorization, schematicity/specificity axis of construal, models of similarity and subjectivity in processing contrast, contextuality and frame/script organization of knowledge, as revealed in aphasiac speech, independent of impairment type. Particular emphasis is placed on relevance and compensatory strategies in deficient communication.

Keywords: schematicity/specificity, Tversky's model of similarity, metonymy, basic level category, script

1. Introduction

As a "natural experiment", aphasia has proved to be a very resourceful area of interdisciplinary research, with neuropsychology, neurology and cognitive sciences co-operating in attempts to uncover links between brain damage and language disorders. It is of major, and growing, importance for psycholinguistics (Kurcz 1992). The proliferation of publications in all such areas parallel evolving views on brain topography, functions and the organization of the human nervous system. The "cognitive turn" in sciences has shed new light on the issue of the modularity of the mind, or the innate character of human mechanisms of cognition, and aphasiology has its share in those insights (Ciepiela 2005)."Purely" linguistic aspects of aphasia have been just as inspirational, resulting in in-depth studies from a variety of methodological perspectives, including structuralist (cf. Jakobson 1989) and cognitive, mainly of generative provenance (cf. *Brain and Language*, Deane 1992). For Polish the most extensive treatment of aphasia can be found in Ciepiela 2005, Grabias 2001,

Mierzejewska 1971, 1978 ed., Panasiuk 2000, 2003, 2004, 2005 and Sadowska 1988. However, relatively little attention has been paid to aphasia within the cognitive linguistic paradigm, even less in Polish linguistics The present paper is an attempt at an overview of some aphasia issues from the perspective of some models of similarity that have been postulated in cognitive psychology, with a view to using evidence from aphasia as a helping hand to some cognitive linguistic concepts. We shall specifically consider the conceptualizer's role in the process of categorization, re-analyze the concept of metonymy, as it has been applied in aphasia studies by the followers of Jakobson, and consider the psychological reality of frame/script organization, as, we believe, it is revealed in some aphasiac patients' conceptualizations.

There are many aspects that are conspicuously absent from the present analysis. First of all, it is not aimed at correlating disorder types and types of aphasia. It intentionally avoids neurological and psycholinguistic technicalities, focusing on a selection of semantic phenomena. To this end it freely makes recourse to the data covering a full range of impairments, indiscriminately of the disorder type in most points. Second, the analysis is not experimental, nor is it directly based on a full-fledged corpus. All the examples are taken from materials published in the area and are based mainly on the data analyzed by Panasiuk. The aim of this analysis is to re-cast what has been thoroughly investigated by structuralists or generativists with a cognitive linguistic view.

2. Methodological issues

The framework adopted for the present analysis is that of Cognitive Linguistics and the methodological assumptions relevant for the issues raised can be summarized as follows:

a. Language is usage-based, linguistic competence involves full apprehension of the physical, linguistic, social and cultural context (Langacker 1987, 1990, 1991, 2000).

b. Languge is conceptualization, performed by a conceptualizing individual via his embodied mind. The meaning of such a conceptualization is emergent (the philosophies of Husserl, Heidegger, Ricoeur, Gadamer, Merleau-Ponty).

c. Category structure can be adequately captured by means of a prototype model and a family resemblance model. Prototype categories form taxonomic hierarchies.

Let us elaborate on the last premise in greater detail.Wittgenstein (1953) first challenged the classical view, arguing that necessary and sufficient properties cannot actually be found for the category GAME and suggested the **family resemblance** principle as best capturing the **similarities** between board-games, card-games, ball-games, etc. The family resemblance relationship can best be illustrated in terms of the following pattern of properties shared by the members of a category: AB-BC-CD-DE etc., with no single property **shared** by **all** category members. Wittgenstein gave no priority to any of the category members.

Prototype categories have been investigated by Rosch (1973, 1975, 1977, 1978), who found that there are **better** and **worse representatives** of such categories as BIRD, FRUIT, VEHICLE, FURNITURE, etc. She observed that a clearly determined **prototype** can readily be established for natural categories.

Labov's (1973) tests, based on his drawings of cups and bowls, brought to light the **fuzziness** of the boundaries of prototype categories. Additionally, his experiments prove that category structure is not fixed, as the ratings of the goodness-of-example are very clearly **context** and **culture** dependent. Also, as exposed by his experiments, similarity is not measured in terms of universal, primitive, binary features. Instead, the similarity within the fuzzy CUPs and BOWLs categories is relative to the width to depth ratio **attribute**, in itself complex and scalar (Taylor 1995).

What emerges from these observations is a view of a category as a complex network of categorizing relations. Following Taylor (1995:142-143) we shall specify those categorizing relation types as follows. For **monosemous** categories, such as CAR, we shall postulate

a prototype model, in which the **periphery** of a category, say, a three-wheel product of a do-it-yourself skill of a retired car-fun, is organized around the **prototypical** kind of a car, say, a Toyota, by virtue of the similarity category members display with their prototype. At the same time, all such category members adhere to organization of another type: they can be thought of as forming **taxonomic hierarchies**, in which there is a level of special cognitive salience, called **basic level**, which is itself subsumed under a higher level category (hyperonym) and which is itself such a higher level category for some lower level category members (hyponyms). In other words, the basic level category *car* is itself a higher level category for a *sports car* and a lower level category for *means of transport*.

Let us turn to polysemous categories now. We shall assume, following Lakoff (1987), that different senses of such a lexical category can best be described as a complex **radial** network of more or less distant but interrelated senses. We shall describe the categorizing relations within the many senses a polysemous word can have as organized according to the family resemblance principle, augmented with the prototype effects suggested by Rosch. Taylor (1989) emphasizes the role of structuring in that network through **prototype(s)** and a process of **extension** from a central or prototypical zone.

Langacker (1987) adds another dimension to the category structure. While acknowledging that sanctioning a unit as a category member is determined largely by the conceptualizer perceiving a sufficient amount of resemblance between the new member and the prototype of the category, he emphasizes the role of a **schema** and the process of **elaboration** or **instantiation** of a schema, or, more precisely, a hierarchy of schemas of a varying degree of abstractness, as the principle structuring the category. Let us see what the difference between the prototype and the schema consists in, in Langacker's (1987: 371) explanation:

> "A prototype is a typical instance of a category, and other elements are assimilated to the category on the basis of their perceived resemblance to

> the prototype; there are degrees of membership based on degrees of similarity. A schema, by contrast, is an abstract characterization that is fully compatible with all the members of the category it defines (so membership is not a matter of degree); it is an integrated structure that embodies the commonality of its members, which are conceptions of greater specificity and detail that elaborate the schema in contrasting ways."

As an illustration of how the two modes of category structuring actually coexist, see Langacker's (1990:3) analysis of the noun RING below. Figure 1 is but a fragment of the network of the many senses of the polysemous *ring*, the heavy-line box marks the category prototype, the dashed-line arrows indicate extensions, while the solid arrows leading from schematic nodes indicate the relation of elaboration.

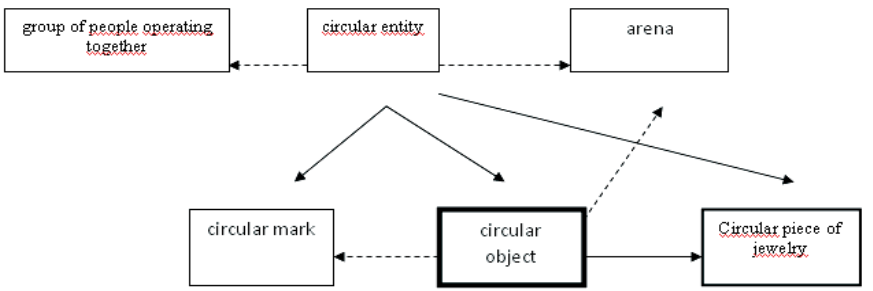


Fig. 1. Prototypes and schemas coexisting in the array of senses of *ring*

Tailoring the above exposition of cognitive linguistic views on category structure to the needs of the present analysis, let us concentrate on the following facts. First, every language use is an effect of conceptualization, delivered by a conceptualizing individual. The mind entertaining the conceptualization is embodied, the emerging categories are not directly related to reality. The presented category structure is a complex, multidimensional gestalt.

Implicit in every act of categorization, resulting in such a gestalt, is the relation of similarity. What makes us categorize the three wheeled entity referred to above as a car, or a vehicle, has been an issue in linguistics since the discipline came into being. Let us now consider in greater detail some of the models of similarity functioning in modern science, models underlying cognitive linguistic views on the category, models in the light of which Rosch's, Wittgenstein's and Labov's findings, as well as Langacker's schemas, can be better understood.

3. Models of similarity

Let us start with the observation that, as a concept notoriously difficult to couch, similarity has engendered a range of models attempting to capture its nature. We shall begin with **ontological realism** and **objectivist views** on the mode of existence similarity is awarded on such a philosophical approach.

Objective similarity is thus considered to be a relation between entities independent of the mind or language of the observing presence (Poczobut 2006). It is out there, in the objects in the universe. The perceiver is not constitutive for such a relation: similarity may be uncovered and is not a product of the observing mind. So defined, similarity may be due to the objects' attributes, structure, origin, function, behavior or the application of a natural law (Poczobut 2006:14). We shall capture this observation as the following:

X is similar to Y with respect(s) to R

Such a specification leaves some limited freedom for the observer: it is up to the observer to choose the respect(s) by virtue of which the objects are taken to be similar, yet the choice is made from an objectively grounded pool (Poczobut 2006).

Alternatively, from a cognitive linguistic viewpoint, similarity is subjective, "created" by "intelligence perceiving similarity". Let us put it as follows:

X is similar to Y with respect(s) to R to the observer O

Coded linguistically, similarity is conventionalized and context-dependent. Its relation to "objective reality" and its properties, captured as attributes, structure, origin, etc, has to be perceived as a function of the embodied mind and the emergent properties of meaning.

Researching aphasiac speech, one becomes particularly aware of the fact that similarity "lies in the eye of the beholder" and is a product of complex cognitive processing, only now carried out with impoverished brain powers. To illustrate, such a mind can perceive an entity as "*nosze do zębów"*(possibly a comb, not revealed in Panasiuk's 2004 analysis of her corpus).

Adopting a cognitive linguistic approach then, we shall look further into the nature of similarity, referring first to its most elementary definition as commonality of features or attributes. Arguably, it does not need to sound like an echo of Aristotelian views. Recall that Labov's cups and bowls were similar or dissimilar relative to one attribute mainly, that of width to depth ratio. Likewise, geometric models of similarity (Atteneave 1950, Torgerson 1965 in Francuz 2006), with multidimensional scaling as the analytical tool of such models, consist in comparing sets of parameters, such as the degree of domestication and the size for the categories *bird* and *mammal* (Rips, Shoben, Smith 1973 in Francuz 2006). Similarity between categories such as *lion* and *mouse* is then the difference in the respective values along these two parameters.

Views on similarity have been revolutionized by Tversky (1997). If not a cognitive linguist *sensu stricte*, Tversky is nevertheless a cognitivist in spirit. Consider the role of the conceptualizing mind in the following ideas. Tversky proposes that not only commonality but distinctiveness as well is important in the feature-matching process as a result of which objects are valued as similar. Tversky's **contrast model** differentially weighs common and distinct features. Let f(A ∩ B) denote the salience of the features that are common to A and B and let f(A – B) denote the salience of the features that are unique to A. The similarity of A to B is captured as follows (adapted version of the equation in Francuz 2006:93):

$$s(A, B) = \alpha f(A \cap B) - \beta f(A - B) - \gamma f(B - A),$$

where α, β, and γ are weights that vary across individuals, context, and instructions (as an illustration of this last variable, note, for example, distinct similarity judgments of, first, pictures and then their verbal descriptions, in the former case based more on distinctiveness of the objects and in the latter on their commonality in Tversky and Gati's experiments). According to this model, features in common increase similarity, whereas features that are unique to one party involved decrease similarity. An extremely important aspect of the model is the fact that features are not equally weighted. For example, one feature "alive" turns out to be critical in establishing dissimilarity between categories *man* and a dummy. The resulting dissimilarity is on this model a result of the high weight of *alive* for man and 0 value for the dummy (Francuz 2006 :93, 94).

It can be argued that not only commonality but distinctiveness as well are the two concepts underlying the family resemblance model of Wittgenstein and the prototypical organization in Rosch's model (to be enlarged upon below for Langacker's model). Thus, the former previews, and the latter is compatible with, Tversky's conceptions.

Let us turn now to similarity in Langacker's concepts (Kardela 2006). According to Langacker, every novel conception becomes a **target** of **comparison**, when the established conceptualization, in the form of a well entrenched and conventionalized cognitive routine, is the **standard** for such a conceptualization. And this is precisely where the relation of **similarity** comes into play. Let us consider the two categorizing relations mentioned in Section 2, i.e. **elaboration of schema** and, again, semantic **extension from the prototype**, through the prism of the similarity mode. In the former, the attributes of hyponyms are "repeated" in a lower-level schema or category. The mechanisms of semantic extension from the prototype follow another pattern: only part of the attributes of the prototypical and the extended category are identical. Langacker speaks of **conflicting values** in the relation of semantic extension. Let us re-cast such observations in terms of distinct models of similarity. While more schematic and less

schematic conceptualizations employ commonality as the driving force for the similarity relation, extensions involve a more advanced processing, one evoking the conception of both commonality and distinctiveness. This observation will be crucial for further analysis.

Specifically, in what follows we shall look at the selected data of aphasiac speech through the prism of the nature of similarity that could have been the stimulus for the responses given. The analysis is premised upon the assumption that utterances elicited from aphasiacs during therapy sessions attest to the patients' arduous, earnest struggles to regain their command of language and are not just chance performances. Thus we can find such utterances informative about the very nature of the relation of similarity as it is processed by such patients.

4. Similarity at the phonological level

Aphasiologists point to a recurring inability of the following kind (few translations are provided only rarely throughout the paper, as most aspects are bound to be lost in translation; we resort to translating samples, only to illustrate the phenomena):

(1) *to skóra…..mura, nie ….to właśnie chmury* (clouds)

(2) *ry….. ryba…*(fish)

(3) *T(therapist) :A tutaj co Pani widzi?* (what can you see here?)
P(patient): Kaczka? Nie, nie kaczka. (a duck, no, not a duck)
T: Koza (goat)
P: Właśnie (….)

(4) T: *Niech pani powtórzy: fale* (please, repeat : waves)
P: szal…szalpie….szalpie?

(5) *A kot gdzie śpi?* (where does the cat Steep?)
P: Gdzie śpi?(where..sleep?)
T: Pod…..
P: Pod krzyżykiem (under the cross?)
T: Pod krzesłem (under the chair)

Consider also the following infelicitous exchanges (Panasiuk 2005):

(6) *czesze*/comb(s) (czyści/cleans), *myje*/washes (marzy/dreams), *sól*/salt (słoń/elephant), *wazon* (walizka), *margaryna* (cytryna), *trze* (czesze), *ogórki* (worki), *książka* (księżyc), *pora roku* (prąd)

If we were to detect the processing mechanisms at work here it is perhaps justified to claim that (1-6) attest to a dissociation of phonological and semantic planes in a linguistic sign and that a momentous, dynamic, on-line similarity relationship struck in (1-6) is a few-phoneme similarity. The use of A is retrieved to stand for B by virtue of a recognition of one kind of attribute only: phonetic similarity of at least one sound segment. Dissimilarity of the other segments on the phonological plane appears to be overridden. Panasiuk (2005) offers a panorama of such examples, in which the similarity concerns a syllable in the onset (more frequent) and the coda (less frequent). Such data encourage considerations of redundancy and cognitive salience at the phonological level. Such issues, however, will not be pursued here.

Let us now turn to products of more deeply damaged minds, as in the following (Panasiuk 2003:22):

(7) *No, w tym zapogram żołoczy. Dokoła doożąb i pałwam zimbny te maja zeszyty, od to Majo zejna takie, brzydkie, O, wtym, o tu i tu jest przykryte, rozumiesz? Yyyy, jak tu ci nazwać… W tym jest poper, a tu jest taki szmil, no, no, no. To są zime. Czerwone. Nie rozu… Nie czujesz? O! W tym! Widzisz na na jednych jagłach są? O, są tu, o tu! Z tym,że ony dobrze, ty trzech je dobrze, dobrze grają w tym, no. No, tak czuję źle, no. No, to też gram proszę niemieckie i te i te i tu. (…)* (nonsensical)

Panasiuk provides the following observations about such speech disorders: these are word fluxes, **logorrheas**, with such quasi-words linked in stretches which apparently have some syntactic or quasi-syntactic organization. Indeed, they are rich in prosodic features, they have characteristically rich intonation-contour. What is interesting, according to Panasiuk, is that words in their phatic function are

typically easily discernible and surprisingly frequent. As if the need to communicate were stronger than the obstacles… As if the quantity were to compensate for the quality. Such premises make logorrhea a target of analyses in terms of communicative, or possibly even life, strategies. Let us add one more observation, now in pragmatics, linking the fluent-aphasia speech deficit types, as in (7) and the extensive use by such patients of gestures marking the syntactic organization of the utterance (Polish: *batuty*, in Drabik 2005:165).

On the surface of it, logorrhea lies outside the research area of the present analysis. Apparently, what stimulates the overproductivity in speech in cases like (7) is not set by similarity of sound, meaning attributes, or function. It appears however justified to postulate a similarity relation sparked at the level of prosodic features. It seems that, if distorted, the prosodic organization of a sentence is stimulated and the overfluent speech just fills in the pattern in a random manner (Panasiuk 2003). Such an analysis points both to the topographical conclusions about the mind and to a somewhat unexpected ability of such minds to operate on a very abstract level, such as is needed for processing prosody. In passing let us note some recent findings about Alzheimer's disease, which seem to point to the fact that the struggle to remember is eased with tunes and music employed in the process of learning. Likewise, deep neurological damage in a child observed by the author seem to mercifully spare musical talents.

Arguably, similar types of activation routes may be operant in the language patterns typically referred to as **echolalia**. Consider the following:

(8) *T: Na jakiej ulicy Pani mieszka?* (what street do you live in?)
P: No, na jakiej…(what)
T: Na jakiej ulicy? (what street?)
P: Ulicy? Ulicy….ulicy…na czwartej…(street..street…four)

(9) *T: Trudno wymienić nazwy miesięcy?*
P: Trudno, trudno.
T: A nazwy dni tygodnia?
P: Dni tygodnia?
T: A jaki dzisiaj dzień mamy?

P: dzisiaj, dzisiaj….
T: Czwar..
P: Czwartek, czwartek

Panasiuk's (2003) commentaries on such patterns point to the, at least partial, onomatopoeic status of such behavior. Even if the aphasiac patient understands the communicative situation and his or her role in the task, the main drive behind the infelicitous responses is echoing the clusters of sounds. These analyses typically emphasize the utility of such compensatory strategies for the phatic function of language. Apparently, they help achieve what looks like a seemingly natural flow of linguistic interaction.

Let us turn now to the mechanisms of **perseverance**, as observed in (10) (Drabik 2005):

(10) *pasiesienie kozy*

In Drabik's explanations such utterances can be considered as attempts at finding the right soundtrack, so to speak. Likewise, the retrieval of the right pattern can result in (11,12) (Panasiuk 2003):

(11) *Z drzew spadały drzewa.* (trees were falling from trees)

(12) *Idą na bal chłopcy i dziewczynki idą.*

The sound pattern can also be **anticipated**, as in (13):

(13) *Mała dziewczynka bawi sie bawić lalkami.*

Relating all the above considerations to the similarity models in Section 3, it may be stated that the data discussed above appear to point to the simplest processing: the commonality of speech sound clusters is the dimension/ attribute that binds the similarity relation in (1-13).

Furthermore, it should be noted that such a relation is in an obvious sense the outcome of the conceptualizer's mind. Such similarity as detected in the above examples is *par excellence* non-objective. Finally, let us consider the role of context – in its commonsensical understanding as a communicative situation – in the

similarity relation implicit in the linguistic behavior discussed in this section. Its role appears to be negligible in most responses quoted above. The majority of the noted responses seem to be autonomous of contextual information.

5. Aphasiac categories

Let us turn now to similarity in meaning. The data considered below have been classified in the literature into a number of classes and a variety of phenomena. Our attempt here is to find a common denominator for such a miscellaneous collection. In particular, we shall postulate that, underlying this apparently random set, there is a uniform phenomenon and that it has to do with the nature of processing similarity that can be detected in the words examined. Thus, in accordance with the cognitive linguistic framework, we shall claim that we are not dealing here with **just language** or **just** its **use**, we are instead dealing with **conceptualizations** and their reflections in language.

5.1. A hyperonym for a basic level category

Let us first consider the ease with which the patient in (14) is able to retrieve the category GARMENT, while struggling for, and failing to come up with, the basic level category COAT:

(14) *P* (naming objects in the picture) *Wszystko to by było jako tako jeszcze bal…chcę powiedzieć nawet czy to dla mężczyzn, co to może być?* (…what can that be?)
T: Palto. (a coat)
P: Palto. Może być?
T: Yhy.
P: No, ja wiedziałam, ze to jest ubranie, ale tak właśnie nie wiem, czy żony, czy męża, ale dla męża jednak było….(I knew it was a garment. Only I did not know whether it was one for the wife or for the husband)

Note further a parallel relation between DO/ACT and WRITE categories in (15):

(15) *P: Napisać tutaj?*
T: A teraz proszę zapisać te cyfry. (put those numbers down)
P: Co? Co robić? (do what?)

Panasiuk finds many more examples in which ACT/DO is used to stand for the verb *speak, cut hair, repair shoes, sew, teach, explain,* etc. (Panasiuk 2005:205)

In the next example the patient mixes three types of concepts: numbers, days of the week and months:

(16) T: *A jaki dzień tygodnia dzisiaj?*(what day is it today?)
P: Jest tak: dwa, trzy, nie…. To jest poniedziałek, wtorek, środa czwartek, piątek!(…) (two, three…Monday, Tuesday…)
T: Jaki będzie następny miesiąc? (next month?)
P: Ósmy…siód…. To będzie dwanaście.. dwa..Os… gru…luty (…) (eight…Dec..February)
T: To teraz, a wcześniej (about a month)
P: to poniedziałek…nie ..nie poniedziałek…. Yyy styczeń (..) (Monday…January)

Panasiuk's analysis focuses on the fact that the activated words are apparently stored as chunks and retrieved more easily in an automatic series. However, the interference between the three concepts is not explained. It will be claimed here that cross-cutting the concepts is the domain of ORDERED ENTITIES, schematic for the three types of ordering. If we cannot speak of the hyperonym vs. basic level term opposition with respect to (16) we are surely dealing with a recognition by the patient of the similarity between months, days of the week and numerical ordering, here conveniently captured as a domain (in the sense of Langacker, and specifically as related to the notion of frame in Dirven and Radden 2006).

In light of the above examples it appears justified to claim that some aphasiac patients reveal their inability to process basic level categories, normally cognitively most salient and most economic for an

average language user in the sense of being most informative: packed with unique characteristics. At the same time those patients have no problems with using the respective more schematic categories. We shall look further into the nature of this difficulty in Section 5.4.

5. 2. A hyponym for a basic level category

Another class of responses noted in Panasiuk's corpus parallels the above problems with an adequate level of processing categories, only now the utterances elicited from the patients can be characterized as too specific. The details are often provided without correspondence with the factual situation described. On Panasiuk's analysis such uses are classified as cases of **epenthesis** or **metonymy,** in the sense of Jakobson (1989). We shall here pursue an alternative explanation. Consider the following set:

(17) *borowik/*a specific kind of a mushroom (grzyb/mushroom); *autobus czerwony*/red bus (a bus, not a red one); *płaszcz mokry przeciwdeszczowy/* wet raincoat (płaszcz przeciwdeszczowy/ raincoat); *gerbera* (kwiat); *parówka* (kiełbasa); *maszynka do mielenia mięsa wołowego* (maszynka do mielenia mięsa); *mała mrówka* (mały); *zapala papierosa* (zapala gaz), etc.

It will be claimed here that the above are misfired attempts to process a category at the expected level of schematicity/specificity. Now hyponyms of categories are offered, often automatically. It will be claimed here that the problem is parallel to the mechanisms uncovered in Section 5.1. We shall deal with what we believe is one motivation behind (14-17) in Section 5.4.

5.3. A basic level for a basic level category

The data collected by Panasiuk point to an extremely productive pattern of the following shifts:

(18) *idzie, siedzi* /go, sit (stoi/stand); *siedzi/sit* (idzie/go); *stoi* (leży); *leży* (płynie); *patrzy* (płynie, tłumaczy); *mówi* (słucha);

skacze/jump (patrzy/look); *pisze* (czyta, rysuje); *wisi* (stoją); *jedzie* (wozi); *płacze/cry* (śmieje się/laugh); *pranie* (prasuje); *zamiata* (porządek);

(19) *ciemno/dark* (noc/night); *puch* (śnieg); *słodkie* (ciastka); *po wodzie* (po deszczu); *woda* (mokro); *zielony/green* (żółty/yellow); *zielony* (niebieski); *granatowy* (czarny); *żółty* (niebieski);

(20) *banan/ banana* (pomidor/ tomato); *cebula* (cytryna, rzodkiewka); *cytryna* (banan); *jabłko* (gruszka); *jagoda* (agrest); *kalafior* (sałata); *wiśnia* (śliwka); *bocian* (dzięcioł); *gąsienica* (pająk); *krokodyl/crocodile* (żyrafa/giraffe); *łabędź* (indyk); *mucha* (osa); *zając* (lis); *ciocia* (dziadek); *morze* (jezioro); *koło* (kwadrat); *krzyżyk*/cross(trójkąt/ triangle); *lokomotywa* (rower);*styczeń* (grudzień);

On Panasiuk's analysis, the above are metonymic re-locations. In structuralist terms they follow from the conception of a linguistic sign as a form- meaning pairing and can be explained as a "wrong " pairing.

Specifically, what motivates the shifts in (18-20) is, on Panasiuk's analysis, the **contiguity** relation in time or place, or logical contiguity of events. Thus Panasiuk insists on concrete relations in the physical world that ultimately drive the metonymy between $sign_1$ and $sign_2$ in these responses (Panasiuk 2005:199). Such a motivation is coherent with the generalized claim that aphasiac patients favor the concrete over the abstract (ibid.).

Putting aside the very basic distinction between structuralist metonymy and cognitive linguistic metonymy, we shall argue that contiguity relation grounded in experience is not enough for an explanation of such misuses as in (18-20). The shifts considered are not random and the pattern emerging will be claimed to be linked to the nature of similarity processing in such words. In other words, if the patient takes an apple for a pear he/she recognizes the fact that they are both FRUIT. Allowing for simplifications, they see the FRUIT

category in the apple and they name this fruit with the term which happens to be most salient in their fractured nervous system: a pear. Perhaps it is the first category that the patient is able to retrieve. The similarity is relevant enough and further processing need not be continued.

It appears justified to claim that processing commonality has been successfully accomplished. The failure occurs at the basic level and the contrast between an apple and a pear turns out to be "too difficult".

5.4. Schematicity and specificity as an axis of construal

We shall insist that the type of disorders reflected in (18-20) comes part and parcel not only with the flawed processing illustrated in (14-16) as well as in (17), but that examples (1-13) can also be incorporated within one uniform mechanism underlying the observed data.

First, we assume that the responses are a product of conceptualization and so of a construal adopted by a conceptualizer (Langacker 1987,1991). One such dimension proposed by Langacker is the selected level of schematicity/specificity. And this is precisely the axis along which all the utterances studied can be arranged.

The **phonological similarity** noted in (1-13) will be located at one end of the axis. The target category with which the patient managed to come up is in this case very schematically related to the standard, i.e. the category with which the patient was supposed to come up. What is processed for similarity is only a couple of phonemes (as in 1, 3, 4 and some in 6), a syllable (2, 5, some in 6), the prosodic features of a syntactic chunk, as in (7), and phonological stretches that are word or phrase long in (8) and (10-13). The similarity relation is struck at a very schematic level indeed.

We shall treat attempts at a more or less felicitous use of **semantic categories** in Section 5.1, 5.2 and 5.3 as a less schematic/ more specific construal than the phonological similarity discussed before. Under such an arrangement, the responses noted in Section 5.1. display a much more schematic construal of the conceptualizations than those in Section 5.3., while examples (18-20) will be located somewhere in between.

It should be noted that such a schematic/specific construal is a product of the specifics of one major cognitive process, i.e. processing similarity in categorization. As pointed out in the exposition in Section 1.3. of some of the models postulated in psychology to capture the mechanisms of similarity we can be dealing with either comparing entities relative to a respect/respects, or, following Tversky, comparing and **contrasting** entities relative to a number of respects. For the sake of the present analysis let us observe that the second model appears to be much more advanced, requiring much more processing, i.e. weighing conflicting values.

It will be claimed here that the data analyzed allow for the following generalization to be made: some aphasiac patients seem to have problems with processing **contrast**. They seem to concentrate on comparing. Processing similarity is stopped, so to speak, once some relevant respect has been found which allows a category to be used in a given context.

Such processing can arguably be treated as a communicative strategy compensating for impoverished capacities. An aphasiac brain can make use of all kinds of mental shortcuts to ease the pain of losing speech and the effort of struggling for words. And it helps to keep the exchange going in what could be treated as a normal flow – a motivation not to be rejected lightly.

Finally, let us consider the role of context in such processing. Following Langacker we shall assume that language is usage-based and the process of conceptualization proceeds with a full apprehension of the context. It should be noted that aphasiac categories appear to be in large measure independent of context. If the patient calls a pear tree an apple tree, when the fruit is given in the drawing the patient is describing, the categorization surely proceeds without taking full advantage of the communicative situation. Such "insensitivity" to context is surely one of the flag deficits of aphasiac speech.

6. Word-formation via contamination

Let us turn now to a different kind of an organization of language uncovered in a specific example of **word formation by contamination**, illustrated in (21) below (Drabik 2005:162):

(21) *Myciera się.* (he washes-dries himself)

The analysis that we pursue for (21) requires reference to some basic methodological assumptions of both cognitive and non-cognitive approaches to language

The non-mentalist (non-cognitive) school of thought, e.g. structuralist, would attempt to seek an explanation for the flawed structure in distorted allocations in the processing of the *signifiant-signifie* pairings in *parole,* parallel to the mechanisms referred to in Section 5.3. So, the principle operating in associations within a linguistic sign in (21) would perhaps be again that of **contiguity** of meaning in two linguistic concepts *mycie się* and *wycieranie się*, being derivative of their temporal contiguity in a broad social usage of these two words. Thus, structuralist analysis would refrain from providing commentaries about the cognitive processing and the condition of the aphasiac patient's cognitive system underlying such structures as in (21). Let us emphasize however that (21) is not identical with what is along the structuralist lines referred to as metonymic neologisms discussed in Section 5.3. Under the structuralist approach we can at best call (21) a case of metonymy freeze-framed half way, so to speak.

Alternatively, from a cognitive linguistic viewpoint, (21) can potentially attest to much graver distortions and, arguably, at the same time lend plausibility to some cognitive linguistic constructs.

It should be remembered that cognitive linguistics, while assuming in its methodology the view of a linguistic sign as a bi-polar symbolic integration between phonological form and meaning, nonetheless holds that meaning spans both conceptual and linguistic planes and that linguistic processing comes as part and parcel of many other human cognitive processing abilities. Neologisms such as (21)

can thus be regarded as indicative of deformations in the organization of normal language processes. In particular, under the cognitive linguistic view it can be argued that underlying (21) there are two concepts evoked and **blended** into one. The choice of these two concepts is strongly motivated, not just because of their temporal contiguity in experience but because of the fact that these two concepts are part of the complex chunk of knowledge, organizing our mental lexicon in the area of PERSONAL HYGIENE in terms of **frames** (cf. Fillmore 1985). There is much more to frames than spatial or temporal contiguity. In the case of (21) we are dealing with the dynamic realizations of such frames, i.e. **scripts,** in which *mycie się* and *wycieranie się* are two consecutive steps.

Thus the data in (21) can plausibly be considered as providing argument for the psychological reality of frames. Consider the following claims: first, there are no idiomatic, fixed phrases incorporating the two words in Polish to explain their automatic co-activation in (21). Second, in their usage in a pragmatic context they are rather unlikely to appear together, in the sense that one, i.e. *mycie się* entails the other. *Wycieranie się* is then left implicit due to the Principle of Relevance crucial in the organization of discourse. Consider the following:

(22) *Wstał, umył się I poszedł do pracy.* (He got up , washed himself and went to work)

(23) **Wstał, umył się, wytarł się i poszedł do pracy.*(He got up, washed himself, dried himself and went to work)

Third, note the temporal sequencing of the co-activated actions. Given the three observations, we take it to be justified to tentatively claim that (21) uncovers the organization of the human conceptual system in terms of frames.

7. Competence and performance

Finally, it is interesting to note aphasiac patients' own observations of the language impairments they are suffering from. They often complain of their lack of knowledge:

(24) *Nie wiem./ Nie bardzo wiedziałam, co zobaczyć, naprawdę./ Chciałabym ładnie nazwać i nie wiem jak powiedzieć.*

They sometimes capture their condition in terms of impoverished intellect:

(25) *Tego nie rozumiem./ Głupi!(* discouraged*)/ Ale jestem tępa zupełnie. Pusta pała./ Głupie. Nie uda się.*

Or feeling:

(26) *Nie czuję, nie czuję, to nie jest takie naturalne.*

Or memory:

(27) *Nie bardzo pamiętam jak to powiedzieć dobrze./ Ja wiem, ale nie mogę sobie przypomnieć jak to jest.*(what it is called)

They often express their inability:

(28) *Nie mogę./ Noo, noo*! (surprised at a successful achievement)

We treat such opinions as capturing human folk models underlying the notions of competence and performance. (24-28) reveal this duality, when knowing a language need not be accompanied by an access to that knowledge.

One of the patients captures a dissociation in her mind between competence and performance in an elaborate way, Panasiuk (2004:186):

(29) *Ja nigdy nie wiem, czy ja dobrze mówię, ja tego nie czuję, to takie obce. Jeśli ja powiem coś nawet dobrze, a ktoś powie, ze powiedziałam źle, to ja przyznam, ze to źle.. nigdy nie wiem jak mówię. Często nie jestem tego pewna… zawsze nie jestem pewna. Czy ja dobrze powiedziałam? Wiem w środku co chcę powiedzieć.*

In some cases the difficulties encountered are referred to as a blockage to a natural flow or mode of operations;

(30) *Nie, nie pójdzie./ Gdzieś się blokuję i nie mogę tego zapisać.*

The elusiveness of the nature of the impairments is sometimes reflected in the grammatical structure of the descriptions. Consider the use of the dative and the semantic role of PATIENT and not AGENT chosen to refer to the aphasiac patient:

(31) *Tak mi się niestety robi…/ Tak mi się teraz robi właśnie…* (it happens to me)

8. Conclusions

In light of the data studied in the present article the following appear to be viable conclusions:

First, linguistic categories are not objective and only uncovered by the user, they truly are a matter of subjective construal. In aphasia they come into being as a result of impaired brain capacities and are a product of flawed processing.

Second, similarity likewise is subjective. Processing similarity is dynamic, on-line and very complex. An aphasiac brain resorts to compensatory techniques and strategies to ease the difficulty and keep the flow of the conversation going.

Third, many categories formed by aphasiac patients do not adhere to the conventional set and the difference is not random. Some such novel uses reveal problems at the schematicity/specificity axis of construal.

Fourth, inadequate uses along the schematicity/specificity dimension are a derivative of the impaired mechanisms of processing similarity and, specifically, the ability of the brain to process contrast.

Fifth, relevance seems to be an important issue in such processing. To put it very simply, we could state that the brain is pleased with some first relevant similarity relation(s) discovered. Finding a contrast and then weighing the values of respects is an expense such brain cannot afford , given its impoverished powers. Even if the contrast is processed, the outcome of the processing does not necessarily result in the conventional categorization.

Sixth, aphasiac categories are often freed from contextual limitations.

Finally, let us observe that a cognitive linguistic framework seems to be particularly well suited for an analysis of aphasia. And a cognitive linguist may well benefit from studying the nature of aphasiac deficits. They appear to lend credibility to many cognitive linguistic concepts.

REFERENCES

Atteneave, F. 1950. 'Dimensions of similarity' **American Journal of Psychology** 63, pp. 516-556.

Deane, P. 1992. **Grammar in Mind and Brain: Explorations in Cognitive Syntax.** Berlin, New York: Mouton de Gruyter.

Ciepiela K. 2005.'Kognitywizm w badaniach nad afazją.' In: Kognitywistyka. Problemy i perspektywy. vol. 1. Lublin: Wydawnictwo Uniwersytetu M. Curie-Skłodowskiej.

Dirven and Radden 2006. **Cognitive English Grammar.** Berlin: Mouton de Gruyter.

Drabik, B. 2005. 'Język i komunikowanie się chorych z afazją - nowe perspektywy badawcze' In: Dąbrowska M. (Ed.) **Język trzeciego tysiąclecia III,** vol. 3 :**Język polski i języki obce- kontakty, kultura, dydaktyka,** Kraków: Wydawnictwo Tertium.

Francuz, P. 2006. 'Koncepcje podobieństwa strukturalnego i funkcjonalnego w psychologii poznawczej'. In Kardela H., Muszyński Z., Rajewski M. (eds.).**Podobieństwo**. Lublin: Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej. Grabias, S. (ed.) 2001. **Zaburzenia mowy. Mowa-Teoria – Praktyka.** Lublin, pp. 89-99.

Jakobson, R. 1989. **W poszukiwaniu istoty języka. Wybór pism**, Warszawa: PIW.

Kardela, H. 2006. '(Nie) podobieństwo w morfologii: amalgamaty kognitywne. In Kardela H., Muszyński Z., Rajewski M. (eds.).**Podobieństwo**. Lublin: Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej.

Kurcz, I. 1992. **Język a psychologia**. **Podstawy psycholingwistyki**. Warszawa

Mierzejewska, H. 1971. **Zaburzenia polskiego systemu fonetycznego w niektórych wypadkach afazji**. Wrocław.

Mierzejewska, H.(ed.) 1978. **Badania lingwistyczne nad afazją**. Wrocław.

Labov, W. 1973. 'The Boundaries of Words and Their Meanings'. In Fishman J. (ed.) **New Ways of Analyzing Variation in English,** Washington, D.C.: Georgetown University Press. pp. 340-373.

Lakoff, G. 1987. **Women, Fire, and Dangerous Things: What Categories Reveal about the Mind** Chicago and London: University of Chicago Press.

Langacker, R.W. 1987. **Foundations of Cognitive Grammar. Vol. 1: Theoretical Prerequisites**. Stanford: Stanford University Press.

Langacker, R.W. 1990. 'Subjectification' **Cognitive Linguistics**. 1: pp. 5-38.

Langacker, R.W. 1991. **Foundations of Cognitive Grammar Vol. 2: Descriptive Application**. Stanford: Stanford University Press.

Langacker, R.W. 2000. **Grammar and Conceptualization**. Berlin: Mouton de Gruyter.

Panasiuk, J. 2000. 'Strategie komunikacyjne w przypadkach afatycznych zaburzeń mowy'. In Borkowska, A. and E. M. Szepietowska **Diagnoza neuropsychologiczna. Metodologia i metodyka**. Lublin, pp. 149-182.

Panasiuk, J. 2003. 'Realizacja struktur składniowych w afazji'. **Logopedia** 32. pp. 15-61 Lublin: Polskie Towarzystwo Logopedyczne.

Panasiuk, J. 2004. 'Kompetencja językowa a kompetencja metajęzykowa w afazji'. **Logopedia** 33 pp. 171-189 Lublin: Polskie Towarzystwo Logopedyczne.

Panasiuk, J. 2005. 'Neologizmy znaczeniowe w afazji'. **Logopedia** 34. Lublin pp. 192-207.

Poczobut, R. 2006. 'O samej relacji podobieństwa. Na marginesie sporu o uniwersalia.' In Kardela H., Muszyński Z., Rajewski M. (eds.).**Podobieństwo**. Lublin: Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej.

Rips, L.J., Shoben, E.S., Smith E.E. 1973. ' Semantic distance and the verification of semantic relations' **Journal of Verbal Learning and Verbal Behavior** 12. Pp. 1-20.

Rosch, E. 1973. 'On the Internal Structure of Perceptual and Semantic Categories'. in T.E. Moore (ed.) **Cognitive Development and the Acquisition of Language**. New York: Academic Press. Pp. 111-144.

Rosch, E. 1975. 'Cognitive Representation of Semantic Categories'. **Journal of Experimental Psychology.** 104(3): 192-233.

Rosch, E. 1977. 'Human Categorization'. in N. Warren (ed.). **Studies in Cross-Cultural Psychology** vol. 1, 1-49, London: Academic Press.

Rosch, E. 1978. 'Principles of Categorization'. in E. Rosch and B.B. Lloyd, (eds.) **Cognition and Categorization**. Hillsdale, N.J.: Erlbaum. Pp. 27-48.

Sadowska, M.1988. 'System fotostatyczny- kształtowanie się w ontogenezie a dezintegracja i reintegracja w afazji'. **Poradnik językowy** 5. Pp. 311-323.

Wittgenstein, L. 1953. **Philosophical Investigations.** New York: Macmillan.

Taylor, J. R. 1989. **Linguistic Categorization: Prototypes in Linguistic Theory**. Oxford: Clarendon Press.

Taylor, J. 1995. **Cognitive grammar**. Oxford: Oxford University Press.

Torgerson, W.S. 1965. 'Multidimensional scaling of similarity'. **Psychometrika**. 30, pp. 379-393.

Tversky, A. 1997. ' Features of similarity' **Psychological Review**. 84 (4) pp. 327-352.

Aleksandra Górska

Turn-taking organisation in IM

A part of a PhD project, in which instant messaging has been analysed within the framework of Conversation Analysis, the present paper is an investigation of turn-taking in instant messaging, i.e. a type of writing-in-interaction (as opposed to talk-in-interaction). On the one hand, it is a type of written discourse, on the other, it is heavily interactive, which makes it especially suited for applying the framework of Conversation Analysis in order to uncover the underlying order of communication within instant messaging. The aim of my analysis is to investigate, regardless of the classification of instant messaging within the domain of computer-mediated discourse, how far IM users employ conversational patterns and strategies in this mode of communication. In short, how similar instant messaging is to conversation, especially in view of the fact that IM users perceive it as conversation, and how tolerant they are prepared to be of apparent conversational rules violation. In order to achieve this goal, turn-taking, a phenomenon central to CA, is analysed.

Keywords: Computer-mediated Discourse, instant messaging, Conversation Analysis, turn-taking

1. Introduction

The following quotation from Schegloff 1986, even though it concerns telephone talk, is very pertinent to the considerations and motives behind the idea of studying instant messaging:

> The virtues of talk on the telephone have been reviewed before, and are largely methodological. Although parties to such talk continue to deploy their bodies and body parts – posture, gesture, facial expression etc., and although such deployments may well repay detailed study, these

> visually accessible aspects of talk-in-interaction are denied to co-participants in telephone conversation. Investigators are thereby relieved of some exceedingly difficult problems in the analysis and description of these facets of conduct in interaction, while not omitting anything in the interactants' conduct which is a resource for them. These advantages are gained while continuing to insist on the study of naturally occurring behavior which is part of the warp and weft of everyday living. (Schegloff 1986: 112)

Studying writing-in-interaction of the one-to-one type, namely, instant messaging, gives the researcher an opportunity to explore a type of communication which is, on the one hand, very similar one-to-one conversation, such as telephone talk, and, on the other hand, utterly new to humankind, i.e. interactive writing. It also provides the conversation analyst with the unique conditions where the analyst is in possession of e x a c t l y the same information as the interactants were before. Nothing is lost in transition from a record to a transcript, because the record *is* the transcript. Whatever information might be lost on the analyst, it is certain to have been lost on the participants of the interaction as well. It seems that instant messaging is the ultimate research site for conversation analysis.

2. The sample

The sample analysed for the present paper was collected over six months from November 2001 to April 2002. During that period I engaged in casual conversations with randomly chosen ICQ users. I accessed the Internet via a dial-up connection (characterised by low connection speed) which might have affected the transfer, and by the same token, the flow of conversation (cf. examples (1) and (2) below) The original spelling of the messages in the sample of the present paper, including misprints, has been preserved. The letters in square brackets indicate which interaction the example has been taken from. The number indicates the line(s) of the transcript. The element of interest to the ongoing discussion is indicated with an arrow →.

(1) *A 2002-01- 11:47 it seems i'm getting ur lines late, sorry if my repalys are disorted :)* [Dn 126]

(2) *A 2002-03- 19:34 hiya, how are u, by the way*

A 2002-03- 19:34 ?

→ *B 2002-03- 19:34 sorry icq slow.* [Jb 43-45]

On a few occasions, illustrated below in examples (3) through (11), the connection was lost, which adversely affected the interaction. Sometimes the connection breakdown resulted in a pause in the ongoing conversation (cf. examples (3) through (6))

(3) *A 2002-01- 23:56 sorry , i got kicked out* [Alb 475], [Cpt 59], [Crbb 84]

(4) *A 2001-12- 00:20 sorry, got disconnected* [Andr 51]

(5) A *2002-01- 00:23 i got cut off sorry about that* [Snl 31]

(6) *A 2001-12- 00:29 sorry lost connection* [Wg 120]

At other times the connection breakdown brought the interaction to an abrupt end, in which cases the ongoing conversation was cut off rather than closed. This is illustrated in examples (7) through (11):

(7) *A 2001-12- 08:30 Hello. I am sorry about last night. My ICQ kept on crashing so I couldn't respond to you.* [Alb 102]

(8) *A 2002-02- 21:53 you go girl !!*

how are you?

→ *sorry for the last time; i got cut off* [Sz 193]

(9) *A 2002-01- 18:48 hi sorry about last night*

B 2002-01- 18:48 no worries :)) I'm glad u're her, i thought u lost interest :))

→ *A 2002-01- 18:49 Not at all I have a cheap internet connection and I get cut off a lot* [Sj 24-26]

(10) *A 2002-04- 15:18 sorry about last time; i got kicked off* [Vck 233]

(11) *A 2002-01- 01:06 hey sorry about the other night my compter went off and then i lost you on icq* [Wlm 2]

Examples (12) and (13) could have been just breaks, but when the connection was lost by one of the participants, the other one went offline:

(12) *A 2002-01- 23:24 oh, sorry; for some reason ICQ didnt notify me there was a reply from you; are u still there?* [Erdn 38]

(13) *A 2001-12- 18:16 sorry about that got disconnected and couldn't get back on successfully. Catch u later hopefully.* [Andr 11]

The dial-up connection was a standard at the time of collecting the sample (with only a few users enjoying broadband connection) so the cut-offs and delays were simply the features on IM that its users had to accommodate (example (14) illustrates how the users went about resolving the possible problems).

(14) *A 2002-02- 13:33 i thought i may have said somthing i shouldnt have yesterday*

B 2002-02- 13:33 what do u mean?

→ *A 2002-02- 13:34 i didnt get replies 2 my messages last night and*
you went without saying goodbye

B 2002-02- 13:36 tearry? you said 'i'm going to crash' and i said
'nite'

→ *A 2002-02- 13:38 nope i didnt get that mess*
i spose icq does that somtimes
it happens with a friend of mine but i just
thought it was his icq
:-)

B 2002-02- 13:39 god, i was going to write 'really'
yeah, icq does that soemtimes; as far as i'm
concerned we're cool :)
i like talking to you :))

A 2002-02- 13:40 thanx
i just thought it may hav been a cultural thing
please dont take that the wrong way either
:-)

B 2002-02- 13:42 nah, i think i know what u mean;
for the future , lets always assume stuff like
that to be a cultural thing and spell out all
wierd things, ok?

A 2002-02- 13:44 sure ok. [Vck 102-110]

The sample consists of 204 conversations with 61 ICQ users, among whom just under nine thousand messages were exchanged.

The transcript has been generated automatically by the software. Most IM programs, including the one used for this paper, create an

archive, where all online activity of the interactants is recorded. Thus created archive is accessible to both participants of the interaction. Such an archive, in ICQ called "History of events", has been copied into Microsoft Word documents, by the use of the simple copy-and-paste procedure, which entails that neither the layout nor the content of the archive has been altered in any way. As can be seen in the above examples, the program records the message beside the identifying sequence of the nick of its sender and the date and time at which the message was posted (i.e. when the message became accessible to the other interactant). Unfortunately, due to technical problems during archiving, only part of the date (the year and month of the exchange) was preserved, but this has no bearing on the validity of the sample. As is also apparent from the above examples, the original spelling, including typing, spelling and grammatical errors, has been kept.

In order to ensure the anonymity of the subjects, their nicknames are substituted with letters A and B in all the examples. Each example is followed by a set of square brackets that identify the example within the sample. The letters indicate which interaction the example has been taken from, the numbers indicate the line in the transcript. When need arises for a longer sequence to be quoted and discussed in detail, the lines of the exchange are numbered for clear reference.

3. The analysis

The present paper focuses on the analysis of casual talk, otherwise referred to as *mundane talk* within the domain of CA. Matters involving immediate context of the interactants, as well as goal-oriented exchanges concerned with solving non-interactional problems, such as sending and receiving photo files, have been omitted. The phenomenon under analysis is turn-taking organisation.

3.1 *Turn* versus *message*

Before the analysis proper can be presented, two notions indispensable in the discussion of interactional discourse have to be discussed. Oral discourse proceeds by means of turns, while the vehicle for instant

messaging is the message. In the present paper the term *message* is used in the technical sense to denote a fragment of text that is transmitted electronically as one (Murray 1989: 323). The relation of the two to each other is paramount to the discussion of instant messaging within the conversation-analytic framework.

To a lay eye it might seem that a message is the equivalent of a turn in instant messaging: a turn is the basic unit of interactional discourse (Coulthard 1979), while a message is the basic unit of IM. However, there the similarities end. A turn can be roughly defined as "everything the current speaker says before the next speaker takes over" (Stenström 1994: 30). In other words "a turn begins when one speaker starts to speak and ends when he or she stops speaking" (Johnstone 2002: 73). It is impossible to talk of the duration of a message, as it becomes an interactional fact only when it is fully produced and sent. The participants type in their contributions, press the return key, or click on the "send" icon with their mouse button, and the message is sent to the server which makes it available to both participants of a given IM session. At this point the discussion of the structural differences between *turn* and *message* is in order.

Unlike the internet chat or early versions of instant messengers, contemporary IMs do not place any constraints on the length of messages (Certainly, there is a technical limit to the size of messages, but in the sample discussed in the present paper IM users never exhausted the limit, therefore, it did not interfere with the course of interaction. Hård af Segerstad (2002: 91) reports on her subjects trying to exhaust the limit by e.g. telling stories, but they failed to write a message that would be too long for the system to process it), but there are instances of users splitting their turn into more than one message, in order to hold the floor, or for a typically tag-positioned element to constitute a separate message (Sacks et al. 1998 [1974]: 214), e.g.

(15) *A 2002-01- 19:26 do you live on your own, or do you share a house/*
B 2002-01- 19:27 I share a flat; actually i stay at my friends flat and share the room with her :)
B 2002-01- 19:27 what about u? [sj 99-101]

It is also possible for one message to contain more than one turn, as in (16) below, where B's message contains turns adjacent to two separate messages by A:

(16) *A 2002-01- 23:49 did you enjoy your stay in england*
A 2002-01- 23:50 how far from warsaw are you
B 2002-01- 23:50 Well, i can honestly say I enjoyed my stay in Britain:)
Poznan is less then 200 miles west [crbg 47-49]

This will become apparent in the course of the following analysis, at this point it is argued that the term *turn* is nonetheless indispensable in the discussion of IM, as it is central to the CA framework.

3.2 Turn-taking in IM

There are two features of IM paramount to its turn-taking system. First, IM users do not have access to messages in progress (Garcia and Jacobs 1998: 308). That is to say, the recipient of a message cannot monitor its production, as is the case in oral conversation, but sees the message only when it is fully produced and posted. Second, in posting messages, users respond to the already posted messages, not the ones in progress (Garcia and Jacobs 1998: 308). These two features not only differentiate IM from oral conversation, but also strongly influence the turn-taking system of IM.

The analysis of turn-taking within any interactional discourse boils down to analysing two mechanisms. One is turn allocation (Sacks et al. 1998 [1974]), the other is that the interaction proceeds with no gap and no overlap (or rather that for most of the time there is very little gap or overlap). In the case of IM, which is a one-to-one type of interactive discourse, the matter of turn allocation is not an issue (Sacks et al. 1998 [1974], Ten Have 1999). What is at issue, however, is whether an instant messaging session proceeds with relatively no gap and no overlap, and if so, how this is achieved, and if not, how IM users manage interaction.

3.2.1 Gaps in IM

Before one embarks on an analysis of gaps in IM, two important factors need to be considered. First of all, the dynamics of IM are very much different from oral conversation. One consequence of the fact that message production is inaccessible to the addressee of the message (Garcia and Jacobs 1999: 339), is that s/he needs time to read the message after it has been posted. Secondly, typing takes more time than speaking (Murray 1991: 40). As a result, a substantial amount of time may pass between sending a message and receiving a response to it. The experience of instant messaging is thus quite different from that of oral conversation. There is a phase of hurried typing, and then the phase of waiting for a response. All the above makes the establishing of when a gap has occurred in IM very difficult even for its participants (for a much more detailed treatment of the roles that chat participants take, and of the interactional consequences for such role distribution cf. Garcia and Jacobs 1999: 346-347).

Gap in CA is defined as "silence after a possible completion point" (Sacks et al. 1998 [1974]: 240). A completion point in IM is marked by the sending of a message, which makes it very easy to identify. However, the technical constraints that IM medium imposes on its users makes it very difficult to interpret the silence that follows the sending of a message. Is the recipient of the message typing in the response? Is s/he thinking about it? Has s/he even noticed that a message has been received? These questions remain unanswered until one of the two possible scenarios takes place: either the recipient of the message sends a response, or the sender of the message gets impatient and complains about the silence.

To complicate matters even further, IM exchanges vary in pace; sometimes messages are exchanged very promptly, as in (17), sometimes at a much slower pace, as in (18) . In (17) below, nine messages were exchanged over the course of two minutes, with one message (marked with #) belonging to a sequence preceding the one quoted in (17). Its "out of place" status is marked with "change of state token" *oh* (Heritage 1984b).

(17) *A 2002-01- 19:26 do you live on your own, or do you share a house/*

B 2002-01- 19:27 I share a flat; actually i stay at my friends flat and share the room with her :)

B 2002-01- 19:27 what about u?

B 2002-01- 19:27 oh, i just checked, my details say my name is aleksandra :))

A 2002-01- 19:27 I have lodgers in my house in chester, a man called stev and two girls kate and zia

B 2002-01- 19:27 so all the more - dont worry :)

A 2002-01- 19:28 ok

B 2002-01- 19:28 that's cool; i could never live on my own

A 2002-01- 19:28 Its good to have company, and i can have a laugh with them [sj 99-107]

Example (18) consists of nine messages as well, but the pace at which messages were exchanged was much slower – the exchange quoted in (18) lasted twenty-two minutes, which gives an average pace of one message per over two minutes.

(18) *A 2002-01- 01:25 So what part of the world are you from*

B 2002-01- 01:28 Poland, not that far away :)

A 2002-01- 01:30 i take it by that comment that you know that i live in ireland. Have you ever visited. i have never been in poland

B 2002-01- 01:34 i'm going to Ireland at the end of January, but i've never been ther before :)

A 2002-01- 01:37 very nice. I hope that it won't be too cold and wet for your trip. what part of ireland are you going?

B 2002-01- 01:41 Just Dublin and then Northern Ireland - my friend is on a work experience there, and i'll stay at her's :)

A 2002-01- 01:42 very nice. You should have a good time. can i ask how young you are?

B 2002-01- 01:46 i'm not too young :)
23, yourself?

A 2002-01- 01:47 i also ain't too young. 19 [Gr 9-16]

Examples (17) and (18) were chosen for their striking contrast, but they are not singular instances. It seems that the pace of the exchange depends on the level of involvement of the interactants, and at the same time, the slower the pace of the interaction, the longer the pauses that go unnoticed (Jefferson 1983: 19). However, the average, unmarked pace of IM exchange could be estimated at one message per just under a minute.

Moreover, just like oral conversation, instant messaging can be discontinuous, with gaps extending to lapses (Sacks et al. 1998 [1974]: 210-211) when the conversation is not the priority but rather one of ongoing activities (cf. (19) below, where the primary activity is looking at the web page which A is designing), or a form of virtual co-presence within a "communication zone" (Nardi et al. 2000: 84), where interactants seem content with simply knowing that the other is there, as in (20).

(19) *A 2001-12- 22:07 did you get over the probs last night?*

B 2001-12- 22:11 yeah i made some... first attempts... suprised they came out presentable...
want to have a look?

A 2001-12- 22:11 yeah, sure:)

B 2001-12- 22:11 remember first attempt :)

A 2001-12- 22:11 i will

A 2001-12- 22:20 NICE; we like the picture in Nuttz best (a humble opinion u didnt ask for :)) [Al 194-199]

(20) *A 2002-01- 01:18 ok then... so you do have a photo... just want to know what you look lke*

B 2002-01- 02:46 Joey, i didnt see your last remark , i'm sorry! DIDNT MEAN TO IGNORE U OR ANYTHING :(

A 2002-01- 02:57 no it is OK... [Jy 39-41]

Example (20) is interesting in that there is an almost ninety-minute gap between A's and B' messages, the occurrence of which appears to be unintentional, at least on B's part. However, after another eleven minutes A, in this case the more experienced IM user, assures B that the gap is not a problem. The following analysis of gaps in IM reveals that both participants of an instant messaging session have means to amend gaps in the flow of messaging.

There is also a technical difficulty in analysing gaps in the sample of the present paper. Namely, the timings provided by the software are to the minute, which is analytically insufficient. Although the pace of IM is much slower than the pace of oral conversation, where silences are counted to the tenth of a second, the analysis of IM reveals that, for the timings to be analysable, they would have to be to the second. Taking into account the above, especially the slower pace of IM, I started by looking at the pauses that are noticed, i.e. the pauses that the participants complain about. Then I proceeded to look for pauses of similar length that are not complained about. I estimated the length of pauses by means of two factors: the timing provided in the log, and the intensity of the interaction. To do that, I looked at how many messages were sent within one minute in the co-text of the

pause. Example (21) below illustrates how problematic the analysis of silences in IM can be:

(21)

1. A 2002-03- 23:45 *how are u?*
2. B 2002-03- 23:46 *not bad .. and u*
3. A 2002-03- 23:46 *not bad; i handed in part of my thesis; a small part but i feel releived :)))*
4. A 2002-03- 23:47 *and got a job today :)))*
5. A 2002-03- 23:47 *relieved*
6. B 2002-03- 23:50 *I should think so ... is always a relief*
7. A 2002-03- 23:50 *:))*
8. B 2002-03- 23:50 *was just called away for a moment there ... had only just arrived at work* [Dn 314-321]

This excerpt is taken from the beginning of that conversation. The first three lines of the excerpt are parts of a *how are you* sequence, by means of which, in line 3. the first topic is introduced (Sacks 1992: 205). User A produces two messages on the topic and also a self-correction concerning spelling in line 5, after which an appropriate second pair part to the announcement made by A is produced in line 6 by B. This is acknowledged in 7 by A, and after that, as a third message sent within one minute, an accounting (Jefferson 1987: 88) follows in 8. This is puzzling; why would B account for a gap where there is none? Going back, however, one can see the gap that is actually present, namely the one between messages 5 and 6. A close analysis of the sequential organisation of the excerpt reveals that the gap was noticed also by user A. In line 3 A produced an announcement, to which some kind of acknowledgement is due. However, acknowledgement does not follow, so in line 4 A posts an addition to line 3, as a kind of "exit technique" (Sacks et al. 1998 [1974]: 214), and then, having realised that there is a spelling error in

line 2, A produces the aforementioned self-correction. On returning to his computer, B can see A's efforts for continuous talk, and so chooses to first provide a second pair part to A's first, and only then accounts for his silence. Thus, in fact, the apology in line 8 accounts for the silence after line 3.

Sacks et al. (1974) argue that it is up to participants themselves to decide whether a silence is heard as a *pause*, a *gap* or a *lapse* (Sacks et al. 1998 [1974]: 211), e.g., when the next turn is allocated, the following silence is heard as a pause before the next speaker begins (Sacks et al. 1998 [1974]: 211). A lapse occurs when, at a transition-relevance place, the next speaker is not selected and nobody self-selects (Sacks et al. 1998 [1974]: 209). One way of identifying gaps would then be by paying attention to where silences become the topic of the exchange, e.g. are complained about or accounted for.

The sample contains thirty-four instances of overtly acknowledged silences, i.e. gaps. In twenty-two cases the gaps are complained about, in the remaining twelve cases the gaps are accounted for by the participant to whom the silence "belonged". The complaints are made mainly by means of three types of phrases:

a. '*are you there?'* (11 instances).
b. *'hello?'* (5 instances).
c. expressions showing that the gap is heard as a meaningful pause (4 instances).

All these devices serve as *presence checks*, since participation, marked by steady sending of messages, is the only way that IM users can assure one another that they are there.

On analysing the sample I came across 11 instances of gaps that are complained about by means of the phrase "are you there?". Example (22) is an excerpt taken from the beginning of the conversation, the quoted lines are in fact the very beginning of that exchange. Between B's question and B's complaint in (22) there is a 6-minute gap (the complaint is indicated with an arrow →).

(22) *A* *2002-03- 11:05 hi, hows things*

B *2002-03- 11:05 not bad, tho lazy, how are u?*

→ *B* *2002-03- 11:11 are u there?*

A *2002-03- 11:11 pretty good*

back into soccer training 4 middle son

our thursdays r really rushed now :-)

[vck 118-121]

(23), on the other hand, takes place when the conversation is well underway:

(23) *A* *2001-12- 23:59 So how would you descibe yourself?*

B *2001-12- 00:02 looks u mean?*

A *2001-12- 00:07 Yeah for a start....*

→ *A* *2001-12- 00:12 Hi still there?*

B *2001-12- 00:13 sorry, i'm quite tall for a girl, onthe plump*

side, light brown hair and glasses; boribg :)

[Nck 29-33]

The structure of exchange (23) is summarised in Figure 1, where Q denotes a question, A denotes an answer, C denotes a complaint and the square brackets mark an insertion sequence:

Q1 [Q2 – A2] (C) A1

Figure 1. The structure of example (23).

What is noteworthy about excerpt (23) is the slow pace at which the messages are exchanged; this five-message long exchange extended over the period of fourteen minutes. What is more, the gap preceding the complaint is not the longest one in this excerpt. The longest silence

in (23) belongs to A, and falls between the elements of the insertion sequence.

Excerpts (24) and (25) below are two out of five instances of the use of "hello?" as a presence-checking device. (24) is taken from a conversation that accompanies the sending of a photo file. After a rather prolonged discussion concerning the sending of the photo, the file is finally sent and the exchange in (24) follows:

(24)

*1. A 2001-12- 00:12 ok, i did it (and f*** the consequences)*
what about yours?

2. B 2001-12- 00:12 ok before i view do you really want me to look at this.
I will respect your decision

3. B 2001-12- 00:12 no piccy :

4. B 2001-12- 00:13 i promise not 2 look if u dont want me 2

5. B 2001-12- 00:14 hello?

6. A 2001-12- 00:14 no, that's ok, if i was really worried about your mental health i wouldnt send it would i?
:)))
just promise me u wont stop writing straight away:) [Al 306-311]

The exchange in (24) is quite dynamic, so it may not be immediately apparent why B sends a "hello?", which is a presence-check tool, and by the same token, a complaint. What happens in this exchange is that in 1 A informs B that the file has been sent, and follows the information with a first pair part of an adjacency pair, a question. In 2 B offers another first pair part, a kind of request for approval, or a request for confirmation, ignoring the question for the time being. It is

noteworthy that the sequence started in 2 is not an insertion sequence. In 3 B provides an answer to the question A sent in 1, but there is no message from A, so the first pair part sent by B in 2 is left unanswered. Hence in 4 B makes a *recompleter* (Sacks et al. 1998 [1974]: 214), an addition to his turn which was supposed to trigger a response from A but failed to do so (Sacks et al. 1998 [1974]: 221). This *recompleter*, however, is an addition to 2, not to 3 which it directly follows, since 3 is seen as belonging to a separate sequence. Leaving the 1 – 3 sequence aside, there is a first pair part in B's 2, which is followed by a *recompleter* in B's 4, and since this fails to trigger a response, a presence check is in order. This presence check is apparently successful in bringing A back into the conversation. However, note that A's message 6 addresses not the "hello?", which could itself constitute a first pair part, but the request for confirmation sent in messages 2 and 4. On a different note, between the sending of line 2 and that of line 5 probably less than two minutes elapsed.

In contradistinction to (25), the pace of the exchange in (25) is quite slow and the gap that is complained about is in fact one of two six-minute silences in that fragment.

(25) *A 2002-01- 22:44 if i can get away for a weekend i usally go camping up north on one of the beaches with a couple of mates and do a bit of fishing ect but usally when i am sticking around here i either catch up with friends or go to the beach, watch a movie or sit on the balcony and read, all the normal things i guess, hows about you*

B 2002-01- 22:51 most of the time i'm working or studying :(; but I do manage to do'all the normal things' once in a while :)

→ *B 2002-01- 22:57 hello?*

A 2002-01- 22:59 sorry i went to make a cuppa =)

B 2002-01- 23:00 enjoy it then :)

A 2002-01- 23:00 that i shall, so what is it that your studying?

[rstr 34-39]

The reason why A in (25) is apparently more tolerant of pauses is impossible to determine *post hoc* by the analyst, and has no interactional significance for the participants of the IM session, otherwise, it would be somehow reflected in the exchange itself. One guess could be that A is already gone to make the "cuppa" when B sends her first message.

The sample contains four cases where the gap is heard as a turn in its own right, i.e. a meaning is read into the silence. Excerpts (26) and (27) provide examples coming from conversations surrounding the sending of photo files.

(26) *A 2002-01- 23:21 should be coming now*

B 2002-01- 23:21 it is coming :) just a sec

A 2002-01- 23:21 ok

→ *A 2002-01- 23:23 i take it u dont like mine*

B 2002-01- 23:24 hmmm, i'm sorry but its not downloading; the window is open and all, but downloading hasn't started :([bgm 31-35]

(27) *A 2001-12- 23:56 ok, think I'm dumb, but I still dont know how to... I'll e-mail it in a sec*

B 2001-12- 23:57 Open my user menu and then select file transfer and select the pic or pics to transfer and slick on send or okay, whatever is available.

→ *B 2001-12- 00:00 Did I scare you off?* [Albn 40-42]

Excerpt (26) is an example of a more dynamic exchange, while the pace of the conversation quoted in (27) is much slower. This is visible to a certain extent even in the small fragments quoted. In the case of (26) the photo is supposedly being sent, while in (27) B has already sent his photo and is now waiting for A to sent hers. The prolonged silence is heard in both cases as an unfavorable estimation of the photos received. This seems to be jocular modesty, nonetheless, as becomes apparent on reading even the limited amount of data provided here, photos are a delicate matter.

In the sample there are also two instances of a phrase *'what are you doing?'* used as a complaint about a gap. Excerpt (28) follows a mundane conversation proceeding at the pace of about one message a minute. The last topic is the "job hunt" that A undertook. This topic has surfaced in more than one conversation with this subject:

(28) *A 2002-01- 23:36 Not sure yet, trying again tomorrow :)*

B 2002-01- 23:37 good luck then :)

A 2002-01- 23:37 Thanks :)

→ *A 2002-01- 23:45 What are you doing now?*

B 2002-01- 23:46 chatting with u and looking for soulcages; an album :)), y? [Albn 458-462]

One has to be careful, however, as in other situations the phrase *'what are you doing?'* is used as a question, not a complaint. While excerpt (28) is an example of the use of the question "what are you doing now?" as a presence-check device, in (29) this question is simply a question (i.e. request for information). (29) is happening very early into conversation, just after an exchange of "hellos".

(29) *A 2002-01- 11:08 how r u in the mornin?*

B 2002-01- 11:09 Tired. lol. You?

A 2002-01- 11:12 me to; havent actually woke up/regain my consciousness yet lol

→ *B 2002-01- 11:12 What are you doing now?*

A 2002-01- 11:14 chatting to u! i'm gonna take another hour before i start doing anything :), what are u doing today?

B 2002-01- 11:14 Working :) [lc 80-85]

In the majority of cases the "what are you doing?" question is accompanied by some additional context, such as "today", that allows the recipient of the question to recognise its status as an actual question. Nonetheless, it is important to be aware of the context-sensitivity of this particular device.

Regardless of the particular phrase used to complain about a gap, the treatment of complaints about gaps may vary. In some cases, they are followed by some accounting on the part of the party responsible for the gap, i.e. they initiate a repair sequence. In such cases the complaint is treated as a first pair part of a repair sequence, and as such it is followed by a second pair part. Excerpts (30) and (31) below are two of eleven such instances.

(30) *A 2002-02- 19:18 hello, long time no see*

B 2002-02- 19:20 yea... how are you

A 2002-02- 19:20 not bad, ta, yourself?

B 2002-02- 19:30 hello?

A 2002-02- 19:31 just popped out

B 2002-02- 19:31 ail right :) [Jy 46-51]

(31) *A 2002-01- 01:38 so, whatcha do?*

B 2002-01- 01:41 are u there? did the boss just walk in? :))

A 2002-01- 01:42 Sorry, had a short meeting

B 2002-01- 01:42 no probs, glad u'r back :) [Mchl 15-18]

Otherwise, the complaint is followed by the element that was due before the complaint was issued, as is the case in excerpt (32) below, which is the case in twelve instances of gaps.

(32) *A 2001-12- 00:08 I'm glad to hear u think. Its quite rare nowadays;)*
what opportunities, if i may ask?

→ *A 2001-12- 00:12 are you there?*

B 2001-12- 00:13 if it is a chance to go cycling with a group of friends in america from San Fransisco to San Diego or if it is a chance to take a new job or relationship. it is always good to have an open mind. there is a saying 'Luck always favors a prepared mind' [wg 106-108]

However, in the majority of cases where a complaint is followed by the element that was due before the gap occurred, namely in seven out of the aforementioned twelve cases, after providing the due element, the pause is accounted for as in (33):

(33) *A 2002-03- 11:05 hi, hows things*

B 2002-03- 11:05 not bad, tho lazy, how are u?

B 2002-03- 11:11 are u there?

A 2002-03- 11:11 pretty good
back into soccer training 4 middle son
our thursdays r really rushed now :-)

B *2002-03- 11:12 :)*

A *2002-03- 11:12 sorry im on the phone and i 4 got 2 click send*

[vck 118-123]

Apart from the silences that participants complain about, and that are later accounted for, there are also silences that are not complained about, and yet, they are evidently seen as gaps by those responsible for their occurrence. The sample analyzed here contains thirteen instances of gaps that are not complained about, but that are accounted for, such as those in excerpts (34) and (35). Excerpt (34) is the very beginning of that conversation.

(34) *A* *2001-12- 21:42 hey U ;)*

A *2001-12- 21:47 have some graphics... heh not bad for first attempt considering.*

A *2001-12- 21:59 so what u up 2?*

B *2001-12- 22:01 Hello Ali, i'm having some problems whith icq, this is why i'm so quiet. Hopefully, i'll talk to you in a sec :)* [Al 188-191]

Excerpt (35) is a fragment taken from a point a few minutes into the conversation. It is striking, that the gap is accounted for by B even though interacionally it was A's turn to talk:

(35) *A* *2002-01- 23:53 do you have a photo of your self*

B *2002-01- 23:54 i thought i sent u one... ?*

B *2002-01- 23:56 sorry , i got kicked out* [crbg 82-84]

The examples above were chosen to show the longest and shortest silences present in the sample. What is striking about these pauses is the fact that even the nineteen-minute long silence did not provoke a

complaint, despite occurring after a first pair part and exceeding the limits of what could be reasonably described as a pause (Sacks et al. 1998 [1974]: 211).

Regardless of whether an accounting is a reaction to a complaint, or it is issued without such complaint being posted, all accountings present in the sample fall into two categories. There seem to be two reasons for gaps that IM users account for; one reason are technical difficulties caused by the hardware, software or the internet connection, such as those in excerpts (34) and (35) above, the other reason is the immediate context of the users. The users may leave the room to make a cup of tea (cf. (25) above), or somebody in their immediate vicinity may require their attention (cf. examples (31) and (33) above).

It has already been stated that interactants themselves decide what is classified as a gap and what is not – gaps are violations of the turn-taking system and as such provoke participants' reaction. Also, the placement of a silence in the sequence is paramount to classifying a silence in oral conversation as a pause, gap or lapse (Sacks et al. 1998 [1974]: 209-211). The analysis of IM sessions reveals, however, that gaps occur in all three sequentially possible places:

a. after a first pair part of an adjacency pair.
b. after a second pair part of an adjacency pair, or "in a less clearly defined position in larger sequence" (Schegloff 1996: 66).
c. after acknowledgement, i.e. sequence-finally.

01. below presents a summary of how the silences present in the sample are distributed. Within the body of thirty-four instances of gaps twenty two occur after a first pair part. This does not seem surprising, since after a first pair part, one can only complain, and by the same token initiate a kind of repair sequence (Sacks 1992: 534). After a second pair part, one is free to start a new sequence, instead of complaining about lack of acknowledgement, or lack of a new first pair part on the part of the other participant. This is why it is quite surprising that the sample contains some complaints after a second pair part and after acknowledgement. Nonetheless, there are six instances of gaps after a second pair part and six instances of gaps occurring after acknowledgement.

Apart from the instances of silence discussed above, the sample contains also twelve two-minute-plus silences that are not acknowledged in any way. That is to say, after the silence the exchange is naturally picked up, as if neither of the participants minded, or even realised, that a moment of silence occurred. The placements of those silences have been summarized in Table 1. alongside gaps, as their distribution may shed some light on the treatment of silence in IM. They occur in all three possible places, however, there seems to be a strong skewing; twelve of those silences occur after a first pair part, one after a second pair part, and eight after acknowledgement.

	post first pair part	post second pair part	post acknowledgement	total
Gaps complained about	12 instances	5 instances	5 instances	22 instances
Gaps without complaint but accounted for	10 instances	1 instance	1 instance	12 instances
Silences unaccounted for	12 instances	1 instance	8 instances	21 instances
Total	34 instances	7 instances	14 instances	55 instances

Table 1. Distribution of silences in the sample.

Such a summary of the findings brings out some interesting queries concerning the silences in IM.

1. Among all thirty-four silences falling after a first pair part, only twelve are complained about. Why are most silences after first pair part not complained about?

2. Six out of fourteen sequence-final silences are accounted for. Why are silence after acknowledgement complained about at all?
3. Why do participants undertake accounting for gaps when the other participant does not complain?

In section 4.2. of the present paper, in an attempt to answer these questions, I turn to the turn-taking model for conversation. First, however, overlaps in IM need to be discussed.

3.2.2 Overlaps in IM

As has already been pointed out, technically there is no possibility for two messages to overlap in IM. Even if two messages were sent at exactly the same moment, they would nonetheless be posted consecutively by the messaging program. Moreover, even if it were possible for the program to register two messages simultaneously, it would nonetheless be impossible for two messages to appear as simultaneous in the log. In this way, technical limitations obscure the dynamics of IM interactions by presenting parallel events as sequentially ordered. Despite the fact that the log of the interaction looks more like a dialogue in a narrative than a transcript of a natural conversation, with messages positioned consecutively, a close reading of exchanges such as the one in excerpt (36) reveals that functional or interactional turn overlap is present in IM. Examples such as (36) show that not only can messages overlap in IM, but also that the overlap can be noticed and commented on by IM participants. Excerpt (36) is taken from the very beginning of that exchange:

(36)

1.	*A*	*2002-01- 13:06 hi, how goes it*
2.	*A*	*2002-01- 13:06 ?*
3.	*B*	*2002-01- 13:07 pretty good , how are you?*
4.	*A*	*2002-01- 13:08 not bad :)*
5.	*B*	*2002-01- 13:08 cool*

6.	*B*	*2002-01- 13:08 what have you been up to?*
7.	*A*	*2002-01- 13:08 what have u been up to?*
8.	*B*	*2002-01- 13:08 lol*
9.	*A*	*2002-01- 13:08 :D*
10.	*B*	*2002-01- 13:08 not much had a very quiet weekend*
11.	*A*	*2002-01- 13:08 great minds think alike i guess :))))*

[Dnl 564-574]

In (36), the overlapping lines are the "what are you up to?" questions (lines 6 and 7) sent by both participants. In this case the overlap is present not only in the positioning but also in the content and form of the messages. Were it not an overlap, a question positioned right after a question would have to mark a beginning of an insertion or a delay sequence (Sacks 1992: 528-529). Alternatively, it would have to belong to a class of one-word or *appendor questions* (Sacks 1992: 559), here, however, it is clearly not the case. Such interpretation is supported by what follows the overlap. Instead of answering the question, participants acknowledge the overlap with laughter (lines 8 and 9. On the bonding role of *speech convergence,* see Giles and Smith 1979), and in the case of A, a comment (line 11). It is also possible that lines 10 and 11 overlapped, as A's comment is not interactionally valid once B has moved on to answering the question, thus returning to the main sequence.

Striking as it is, (36) is not the only example of overlap in the sample analysed for the purposes of the present paper. In the case of excerpt (36), the overlap follows the *greeting/how are you* sequence (Sacks 1992: 205). Both answers to "how are you?", "pretty good" and "not bad" (lines 3 and 4), are neutral, and as such are "closure relevant" (Schegloff 1986: 129). Additionally, the *how are you* sequence is closed with B's assessment "cool" (line 5). The sequence is thus closed without the first topic being established, and the next turn has not been allocated; the floor is open for self-selection. These are the conditions for the occurrence of most overlaps in the sample of the present paper. Consequently, what has been understood as an overlap

in the process of analysing the sample of the present paper, is the situation where two messages, each sent by a different participant, are meant to fill in the same slot in the interaction, as is the case with the "what have you been up to?" questions in (36), lines 6 and 7.

Most instances of overlapping messages, twenty-nine cases out of sixty-four, occur within sequences without clearly marked positions. That is to say, the overlap falls within a sequence where a clear first or second pair part of an adjacency pair cannot be indicated, as in (37) below (overlapping messages marked with arrows →).

(37) *A 2001-12- 12:33 when do you graduate*
B 2001-12- 12:34 this year, if i manage to complete my thesis
A 2001-12- 12:34 ok, have you got much to do?
B 2001-12- 12:36 its a work of at least 60 pages of original text, or something like that, and i'm still at the stage of reading stuff, collecting data and so on
A 2001-12- 12:36 sounds like a lot of work
→ *A 2001-12- 12:37 what is it like in poland?*
→ *B 2001-12- 12:37 it is; i get paranoid about it at times*
B 2001-12- 12:37 what is what like?
A 2001-12- 12:38 skip that question
B 2001-12- 12:38 ok [Dnl 45-54]

The topic of the conversation is B's school work. The overlap takes place because A's comment "sounds like a lot of work" is meant to close the topic of school (the evidence lies in the fact that it is immediately followed by the introduction of a new topic – "Poland"), but it is interpreted as a topic continuation by B, whose surprise at the abrupt change of topics is evidenced by the repair-initiating question

"what is what like?", evidently adjacent to A's "what is it like in Poland?". In fact, such misinterpretation of what an utterance is doing is often the cause of overlap in IM.

The majority of overlaps, however, are caused by the fact that one of the interactants produces an IM equivalent of a multi-entry turn (Sacks 1992: 526), adding another message to what he or she has sent earlier, as in (38) and (40) below.

(38)

1. A *2001-12- 01:19 so why dont you travel a little; it does wonders*
2. B *2001-12- 01:20 work :*
   even my x-mas plans have been change due to it...
   now holiday jan 6... which makes it kinda
   pointless.
3. A *2001-12- 01:21 work is the root of all evil ;)*
4. B *2001-12- 01:21 but it pays the bills and for the toys ;)*
5. B *2001-12- 01:22 ladies wont go out with guys who dont work :)*
   or who cant support themselves.
6. A *2001-12- 01:22 yes it does; when i leave the house these days*
   its for work :(
7. A *2001-12- 01:22 who cares about ladies , save yourself :)*

[Al 110-116]

A quick reading of the exchange in excerpt (38) reveals that the overlapping messages are lines 5 and 6. A's message in line 6 is clearly meant as adjacent to B's line 4, not 5, while B's message in line 5 is a second message in the said multi-message turn. This is supported by A's reference to "ladies" in line 7, marking this message adjacent to B's 5. Multi-message turns are most frequently the cause of overlap in

sequences without clearly defined positions (Schegloff 1996: 66), but they can be observed in all types of interactional context, such as past a sequence completion (cf. (40)) and even after a first pair-part of an adjacency pair.

Thirteen out of sixty-four instances of overlap observed in the sample occur past a sequence completion, namely after acknowledgement or assessment (cf. excerpt (39) below). A comparable number of twelve instances occur after an adjacency pair's second pair part (cf. excerpt (40) below). This is an inevitable consequence of the turn-taking system operation since, after a sequence is completed, the floor is open to self-selection (Sacks et al. 1998 [1974]: 198). This is the case in excerpt (39): there is a question-answer-acknowledgement sequence, after which both parties send a message and thus take a turn (overlapping messages marked with arrows →). B returns the re-finding question (Sacks 1992: 564), while A starts a new topic. The problem of overlap is resolved within the nest two messages.

(39) *A 2002-03- 00:51 ok, i will;*
anyway (sorry to change the subject) what have u been up to?
B 2002-03- 00:51 working like a slave sweety
A 2002-03- 00:52 as usual then
A 2002-03- 00:52 :)
→ *B 2002-03- 00:52 yeah, what about you?*
→ *A 2002-03- 00:52 what time is it oner there? Sunday morning?*
B 2002-03- 00:53 10 am
A 2002-03- 00:53 over
quite a lot actually, but it'll have to wait till next time; its 1:00 am here and im knackered
[dmn 493-500]

In excerpt (40) the topic is "a movie". B asks a question about the film, to which A gives an answer. This evokes more questions from B, the first of which overlaps with additional information as to the genre of the film, volunteered by A.

(40)	*A*	*2002-01- 13:32 just watching the end of a movie*	
	B	*2002-01- 13:33 what movie?*	
	A	*2002-01- 13:33 the truth about cats and dogs*	
→	*B*	*2002-01- 13:33 whats it about?*	
→	*A*	*2002-01- 13:33 romance comedy*	
	A	*2002-01- 13:34 havn't you seen it*	
	B	*2002-01- 13:34 i see, is uma thurman in it?*	
	A	*2002-01- 13:34 yeah i think its her*	
	B	*2002-01- 13:37 ok*	[Dnl 629-637]

Excerpt (40) is also a case of an overlap caused by the production of a multi-message turn by one of the participants, in this case, B.

In four instances of an overlap falling after an adjacency pair's second pair part, one of the overlapping messages contains acknowledgement or assessment. A note of caution is necessary here, as in the case of messages overlapping with acknowledgment messages, the overlap is accessible to the researcher only when the acknowledgement message is placed after the other message in the log. In the reverse situation the overlap is obscured, which implies that the count for this type of overlap should be treated with caution. On the other hand, however, such overlap may not be seen as overlap by the interactants themselves, as the exchange would then appear to be interactionally orderly.

Finally, four instances of overlap occur after adjacency pair's first pair part. Seemingly, this is a violation of the turn-taking system of conversation. However, a closer look at the context of such cases reveals that the turn-taking system is still in operation. In the case of

(41), the overlap is in fact caused by the mechanism of conversation opening. Since IM participants are notified when other participants log onto the instant messaging program, A can compress the opening sequence into one message, without waiting for a response to her "hello". B, on the other hand, takes two messages to say "hello" and "how are you", and only having done so goes on to respond to the "how are you" question. At the same time, his "how are you" is a first pair part to which A provides the systematically legitimate second pair part of an adjacency pair, which results in an overlap.

(41) *A 2002-02- 23:55 Hello, how is it going? I havent seen you for ages!*

B 2002-02- 23:55 Hello :)

B 2002-02- 23:56 How are you?

→ *B 2002-02- 23:56 I am fine thanks :)*

→ *A 2002-02- 23:56 not too bad, though really knackered :)*

[Albn 497-00]

In excerpt (42) the overlap follows a gap. This may be due to the fact that the preference for self-correction is at work (Schegloff et al. 1977), and B's question fails to elicit a response, B sends another question at the same time that A is posting her due response.

(42) *A2002-01- 23:42 how cool; where in england did u used to live?*

B 2002-01- 23:42 nottingham

B 2002-01- 23:43 have you been there

→ *B 2002-01- 23:48 where in poland are you its 11.45pm in warsaw and 9 15 here in australia*

→ *A 2002-01- 23:48 noo; didnt visit too many places in England*

A 2002-01- 23:49 I'm in Poznan and its 11:49 p.m. here as well

[crbg 41-46]

All in all, it seems to be a consequence of the turn-taking system at work, that sending a message after one's first pair part results in an overlap.

Another major cause of overlap is employing elements that are valid at any point in the interaction, such as repair initiations (Schegloff et al. 1977) or closing openings (Schegloff and Sacks 1973). Especially the latter, as the low priority of IM (Murray 1991: 48) allows its participants to close exchanges abruptly, as in (43):

(43) *A 2002-02- 13:40 hi there, how's things? did u see the lawyer?*

B 2002-02- 13:40 i did yes, thanks, he is sending a letter and the keys back, and if the letter is ignored and i still get threatened it will go to a court case

A 2002-02- 13:42 alright :)

B 2002-02- 13:43 and i got a giro today cos i had to claim for myself,, social security, so ill go in a while, cash it and go to bank then see my mum in hosp

A 2002-02- 13:43 great :)

→ *B 2002-02- 13:44 so how ru*

→ *A 2002-02- 13:44 anyway, talk to you tonight, ok? gotta go now; just wanted to say hi*

B 2002-02- 13:44 thanks [A] see u later xx [sz 203-210]

The exchange in (43) is brought to a close before its has even properly started, as the closing opening overlaps with a "how are you".

4. Discussion

The present section is an account of the application of the "no gap, no overlap" principle of the turn-taking system (Sacks, 1998 [1974]: 196) in instant messaging. The number of gaps is estimated at 34 occurrences (plus 12 unaccounted for silences), the number of overlaps is estimated at 64 occurrences. Given the number of exchanges constituting the sample, and the number of messages sent within the exchanges (204 and 8989 respectively), gaps and overlaps seem to be surprisingly marginal phenomena, considering the constraints imposed on the interactants by the medium. Moreover, the analysis has revealed that IM participants employ a number of strategies for dealing with both gaps and overlaps, and that they do not lead to communication failure. The implications of the treatment of gaps and overlaps for the turn-taking system of IM are discussed in this section.

4.1 *Turn* vs. *message*

The analysis of the sample reveals that while formally the basic unit of IM communication is a *message*, the basic interactional unit in this type of communication is a *turn*. Moreover, there is no one-to-one correspondence between a turn and a message. It is possible to break down a turn into more than one message, it is also possible for a message to contain more than one turn. IM users capitalise on this property of messages for interactional gains, such as holding the floor. Furthermore, there are interactional differences between a turn and a message, since the recipient of a message has no way of monitoring the message in progress. This affects the turn-taking system in the way that interactants respond not to the messages in progress but to the already completed ones (cf. Garcia and Jacobs 1998: 308). The fact that IM interactants respond to completed messages rather than to messages in progress also affects the way gaps and overlaps are treated in IM.

4.2 Turn-taking

In order to investigate turn-taking in IM, the treatment of gaps and overlaps in the sample has been analysed. A summary of the occurrences of silence in the sample posed some questions as to the treatment of silence in IM interaction. For the sake of clarity these questions are repeated below:

1. Why are most silences after adjacency pair's first pair part not complained about?
2. Why are silence after acknowledgement complained about at all?
3. Why do participants undertake accounting for gaps when the other participant does not complain?

In an attempt to answer these questions, I turn to the turn-taking model for conversation.

In oral conversation a silence after a first pair part is not heard as a gap, but as a pause (Sacks et al. 1998 [1974]: 211). Given the slower pace, and the different dynamics of IM when compared to oral conversation, the users may allow the possibility that the other user is taking time to think about his/her answer. This would account for the large number of silences after a first pair part that are not acknowledged by the participants (12 instances). On the other hand, in IM it is impossible to tell what the cause of the silence on the part of the other participants is, and this uncertainty may lead to sending a *presence check*. This would account for the number of silences that are complained about (12 instances). The fact that the silences after the first pair part fall almost equally into the three categories, complained about (12 instances), accounted for (10 instances) and unacknowledged (12 instances), is an indication of how difficult it is for IM participants to interpret silences.

When a silence after a first pair part exceeds what the producer of the first pair can tolerate as a pause, the only thing that can be done is starting a repair sequence. But when such silence falls after a second pair part, there are more ways in which participants can deal with the gap. This is supported by the fact that most post-acknowledgement

pauses (8 instances) are not accounted for at all. After a sequence is completed, the next turn is not allocated, and if no party self-selects, there is a moment of inactivity. After acknowledgement the floor is open to self-selection (Sacks et al. 1998 [1974]: 199-200). Yet, the sample contains five instances of participants performing a *presence check* or otherwise complaining about a silence after acknowledgement.

The analysis of these five cases reveals that they are singular cases, resulting from specific circumstances of the particular exchanges in which they occur, e.g. when an adjacency pair plus acknowledgement sequence belong to some larger structure, as in (44) in which A gives B some step-by-step instructions, where each step is one very short message (the complaint is indicated with an arrow →):

(44)	*A*	*2002-03- 20:21 ok..... turn it blue.....*	
	A	*2002-03- 20:21 then right click on it.....*	
	B	*2002-03- 20:21 it turned blue!!!!!*	
	A	*2002-03- 20:21 the blu.....*	
	B	*2002-03- 20:21 ok*	
→	*B*	*2002-03- 20:21 AND?????*	
	A	*2002-03- 20:21 then right click on it.....*	[jb 226-232]

The purposefulness of the exchange and the small size of the messages provide for a very speedy exchange. In fact, the first message of excerpt (44) is the second message posted that minute, and after the last message in the sample there is one more message sent within that minute. Also, in the case of this particular exchange, A is extremely meticulous in giving the instructions, which makes B impatient. Hence the pause that would escape the analyst and perhaps even the participants, were it not complained about.

Something remotely similar happens when silences after a second pair part, or "in a less clearly defined position in a larger sequence" (Schegloff 1996: 66) are complained about. In all five cases the reason a complaint is made seems to be a lack of acknowledgement. All five

cases take place at a point in IM conversations where a new topic is being established, as in excerpt (45) below.

(45) *A* *2002-01- 13:38 when do you have your winter break*

B *2002-01- 13:38 at the beginning of February*

A *2002-01- 13:38 thats when i go back*

A *2002-01- 13:39 i have to wait another 2 weeks to see if i got into my course*

A *2002-01- 13:41 are you still there?*

[Dnl 639-643]

Just before excerpt (45) starts, the previous topic is closed. By asking a question A provides a lead-in to the new topic, making the topic of university *something for us*, a "talkaboutable" (Sacks 1992: 563-568). However, after the lead-in, when the topic is properly introduced, for it to be fully established as the current topic of the exchange, B has to pick it up. Until she does it, there is uncertainty as to the status of the topic, and hence the complaint.

Finally, the question arises why participants account for gaps that are not complained about. It seems that the pace of an exchange marks the users' involvement in that exchange. Every time a silence is not complained about but instead commented on by the party responsible for the silence (and also in the cases when the accounting follows a complaint), excuses are made on account of events independent of the participants. It seems that IM users want to assure their interactants that they are not lowering the priority of the interaction and withdrawing their involvement.

The analysis of the gaps present in the sample reveals some interesting features of instant messaging. First of all, the pace of messaging is much slower that that of talking, hence, the tolerance for silence in IM is far greater than in oral conversation. Silences longer than in oral conversation may occur and not be complained about, it

also takes more time before a complaint is issued. Secondly, gaps in IM do occur, but there are strategies for managing those gaps, such as complaints or presence checks, accounting for the lack of response, but also self-selection. The analysis of gaps in IM reveals that the turn-taking system for conversation operates in IM as well.

The analysis of the sample reveals a surprisingly small number of overlap occurrences: the entire corpus contains roughly sixty-four instances of overlapping messages, which is surprising if one considers the inaccessibility of the production of messages and the virtual lack of cues announcing that a message is about to be sent. The evidence points to the fact that interactants infer that the other is about to send a message from the turn-taking system alone, with only four overlaps occurring after a first pair part of an adjacency pair, twenty-five overlaps occurring past sequence completion, or sequence-initially (after a second pair part of an adjacency pair or after acknowledgement), and twenty-nine overlaps occurring "in a less clearly defined position in a larger sequence" (Schegloff 1996: 66).

The quasi-synchronous character of the medium (Garcia and Jacobs 1999: 346-347), causes a high level of uncertainty as to whether a speaker – in the case of IM a user – has self-selected. The situation in IM is comparable to such a situation in oral conversation, when two turns by two speakers overlap and end simultaneously. In such case no speaker has won the floor, so the overlap is followed by a gap, during which both speakers are waiting for the other to start talking. Having found that the other has not started talking, each of them might start a new turn and such turns might also overlap, if both interlocutors decide to start at the same time (Schegloff 1996: 108). If such a situation can occur in face-to-face interaction, where the participants see and hear each other, and therefore have access not only to the production of the turn, but also to various extralinguistic cues marking turn beginning (Schegloff 1996: 92, 120), it is not surprising that when the interactants lack these cues, overlap is all the more likely to happen. Thus it is of paramount importance not only to analyse the overlaps themselves, but also to investigate what can cause the overlap in IM.

Most overlaps fall in those places in the conversation where the next turn is not allocated. The overlaps are a result of both IM

participants self-selecting at the same time. In view of the lack of cues enabling participants to see that the message is under way, it is actually quite surprising that overlaps are not more frequent, as the overlaps present in the sample are in fact products of the turn-taking system applied to conditions where turn production is inaccessible to both participants. Most overlaps in the sample are a result of two turn-taking system-specific mechanisms. The most frequent one is the production of multi-message turns, that is, sending more than one message in a row, while every time a message is sent, a turn-transition relevance place is produced. Another major cause of overlap is employing elements that are valid at any point in the interaction, such as repair initiations or closing openings.

5. Conclusions

The analysis of turn-taking in IM reveals that the turn-taking system for conversation applies to IM as well. Gaps and overlaps turn out to be fairly marginal phenomena, and when they occur, they are managed by means provided by the turn-taking system itself, such as repair initiations or self-selection in the case of gaps. The tolerance of silence is greater than in spoken conversation. The definition of overlap has to be adjusted to the conditions of the written one-way synchronous interactive discourse, that is instant messaging; an overlap is observed when two messages posted by two different participants are intended to fill in the same slot in the interaction. The treatment of thus defined overlap differs from the treatment of overlap in spoken conversation, since in IM it is impossible to stop speaking once one discovers the overlap.

The treatment of overlaps reveals the way in which turn-taking system for conversation is adapted to the new medium. Taking into account the persistence of the medium, it seems that the interactants have chosen the most effective and system-compatible strategy of completing the minimal sequences of which the overlapping message is a part (cf. Górska 2007a). The organisational consequence of employing such strategy is the emergence of *parallel sequences*, a feature of sequential organisation of instant messaging, discussed in my unpublished PhD dissertation (Górska 2007b).

REFERENCES

Coulthard, M. 1979. **Introduction to discourse analysis**. Burnt Mill – Harlow, Essex, England: Longman.

Garcia, A. C. and J. B. Jacobs. 1998. "The interactional organisation of computer-mediated communication in the college classroom", **Qualitative Sociology** 21, 3: 299-317.

Garcia, A. C. and J. B. Jacobs. 1999. "The eyes of the beholder: Understanding the turn-taking system in quasi-synchronous computer-mediated communication", **Research on Language and Social Interaction** 32, 4: 337-367.

Giles, H. and P. M. Smith. 1979. "Accommodation Theory: Optimal levels of convergence", in: H. Giles and R. N. St. Clair (eds.), **Language and social psychology**. Oxford: Blackwell., 45-87.

Górska, Aleksandra. 2007a. "An ICQ message board session as discourse: A case study", **Łódź Papers in Pragmatics** 3: 179-193.

(http://versita.metapress.com/media/af8aljwtqh0wu02g9m7j/contributions/d/3/1/7/d317215144731r12.pdf) (date of access: 6 Sep. 2007).

Górska, Aleksandra. (2007b) **Instant Messaging as Conversation: Conversation Analysis of Instant Messaging Exchanges**. Unpublished PhD dissertation defended 30th November 2007.

Hård af Segerstad, Ylva. 2002. **Use and adaptation of written language to the conditions of computer-mediated communication**. Göteborg: Göteborg University Press.

Heritage, John. 1984b. "A change of state token and aspects of its sequential placement", in: J. M. Atkinson and J. Heritage (eds.), **Structures of social action: Studies on conversation analysis**. Cambridge: Cambridge University Press, 299-345.

Jefferson, Gail. 1983. "Notes on a possible metric which provides for a 'standard maximum' silence of approximately one second in conversation", **Tilburg Papers in Language and Literature** 42: 1-83.

Jefferson, Gail. 1987. "On exposed and embedded correction in conversation", in: G. Button and J. R. E. Lee (eds.), **Talk and social organisation**. Clevedon, UK: Multilingual Matters, 86-100.

Johnstone, B. 2002. **Discourse Analysis**. Malden: Blackwell.

Murray, D. E. 1989. "When the medium determines turns: Turn-taking in computer conversation", in: H. Coleman (ed.), **Working with language: A multidisciplinary consideration of language use in work contexts**. New York: Mouton de Gruyter 319-337.

Murray, D. E. 1991. "The composing process for computer conversation", **Written Communication** 8, 1: 35-55.

Nardi, Bonnie A., Steve Whittaker and Erin Bradner. 2000. "Interaction and outeraction: Instant messaging in action", **CSCW 2000**: 79-88.

Sacks, H., E. A. Schegloff and G. Jefferson. 1998 [1974]. "A simplest systematics for the organisation of turn taking for conversation", in: A. Kasher (ed.), **Pragmatics: Critical concepts**. London: Routledge, 193-242.

Sacks, H. 1992. **Lectures on conversation**. 2 vols. (Edited by Gail Jefferson.) Oxford: Blackwell.

Schegloff, E. A. 1986. "The routine as achievement", **Human Studies** 9: 111-151.

Schegloff, E. A. 1996. "Turn organisation: One intersection of grammar and interaction", in: E. Ochs, E. A. Schegloff and S. A. Thompson (eds.), **Interaction and grammar**. Cambridge: Cambridge University Press, 52-133.

Schegloff, E. A. and H. Sacks. 1973. "Opening up closings", **Semiotica** 7: 289-327.

Schegloff, E. A., G. Jefferson and H. Sacks. 1977. "The preference for self-correction in the organisation of repair in conversation", **Language** 53, 2: 361-382.

Stenström, A.-B. 1994. **An introduction to spoken interaction**. London: Longman.

Ten Have, P. 1999. **Doing Conversation Analysis: A practical guide**. London: Sage Publications.

Barbara Kryk-Kastovsky

Do fixed expressions reflect national stereotypes? Some evidence from English, German, and Polish

Stereotypes are not so much aids to understanding
but aids to misunderstanding
McGarty, *et al* (2002:4)

The paper discusses national stereotypes by examining fixed expressions which are products of the three cultures of interest here: Anglo-Saxon, German, and Polish. The analysis has a relatively broad scope and includes sayings, proverbs, and idioms. My hypothesis is that fixed expressions reflect the stereotypical features associated with a particular language and culture, e.g. the Anglo-Saxon distance and tentativeness, the German directness and some degree of rough humor, and the Polish directness verging on pushiness and even vulgarity. Hence, neither German nor Polish have exact equivalents of the English expression *to take someone for granted* or concepts like *personal space*. Conversely, the German or Polish use of imperatives in requests and offers would be unacceptable in English.

Keywords: directness, face (negative, positive), fixed expression, politeness, stereotype

1. Introduction

Drawing comparisons between "us" and "them" has always been part of human nature and this is how various preconceptions and prejudices about others give rise to stereotypes, like the ones expressed in the well-known joke quoted below:

> Heaven is where the police are English, the cooks are French, the mechanics are German, the lovers are Italian, and everything is organized by the Swiss. Hell is where the police are German, the cooks are English,

> the mechanics are French, the lovers are Swiss, and everything is organized by the Italians (http://www.msnbc.msn.com/id/9598717/, 21/4/2008.

The phenomenon of stereotype has been given many definitions. Below I select three of them as most relevant for my purposes. The oldest of the three definitions represents a sociological point of view, and according to its authors, it is neutral and non-judgmental in nature. I share this stand as intuitively correct and accept the definition as a good starting point for the discussion on stereotypes, a social, psychological, political and linguistic phenomenon recognized and discussed by many but understood by the selected few.

> A stereotype refers to a category of people (a national population, a race, a professional group, etc.) and suggests that they are all alike in a certain respect. It is therefore an undifferentiated judgment. Furthermore, it contains, implicitly or explicitly, an evaluation. This is to say, it is either favorable or unfavorable, Duijker and Frijda (1960: 115).

The second definition quoted here was formulated over 30 years later within the framework of intercultural communication studies. The definition is already evaluative in nature as it takes a stand on the dangers of stereotyping across languages and cultures (notice how consonant it is with the motto of this study):

> Stereotyping is a way of thinking that does not acknowledge internal differences within a group, and does not acknowledge exceptions to its general rules or principles (-). Stereotypes blind us to other, equally important aspects of a person's character or behavior. Stereotypes limit our understanding of human behavior and of intercultural discourse because they limit our view of human activity to just one or two salient dimensions and consider these to be the whole picture, Scollon and Scollon (1995: 156).

More recently, the following definition of stereotypes has been suggested by social psychologists:

> [Stereotypes] are psychological representations of the characteristics of people that belong to particular groups, McGarty, Yzerbyt and Spears (2002: 2).

Whichever of the three approaches we accept, it turns out that stereotypes are ubiquitous phenomena which spread across various languages and cultures. Here is where I agree with the rather bold universalist claim that stereotypes might be a property not of national but of human character in general, cf. Duijker and Frijda (1960: 5). Nevertheless, on an individual basis, a person forms his/her own stereotypes as a member of a particular group/community of practice and s/he shares them with its other members. The question that arises at this point is why and how stereotypes are formed. McGarty, Yzerbyt and Spears identify three principles guiding the formation of stereotypes:

1. Stereotypes are aids to explanation (they should form to help the perceiver make sense of a situation);
2. Stereotypes are energy-saving devices (they should form to reduce effort on the part of the perceiver);
3. Stereotypes are shared group beliefs (they should be formed in line with the accepted views or norms of social groups that the perceiver belongs to), McGarty, Yzerbyt and Spears (2002: 2f).

Another issue relevant to the present discussion is the origin of and the reasons for stereotype formation. A very pertinent answer to the query can be found in Triandis who blames the human predilection for stereotyping on our ethnocentric nature, so that we consider our own culture "as the standard against which we judge others", Triandis (1994: 249). Predictably, the more similar a culture is to our own, the more acceptable it is, and, the other way round, the more different it is, the more alien it is to us. As a result, people's ethnocentric views are a very fertile ground for stereotype formation. Furthermore, Triandis makes a crucial distinction between 'autostereotype' which refers to what members of a group think about its other members (in other words, a kind of self-image, e.g. what Germans think about Germans), as opposed to 'heterostereotype'

(what members of a group think of members belonging to a different group, e.g. what Germans think about Italians), cf. Triandis (1994: 107).

The theoretical framework of this study employs analytical tools adapted from works in anthropology, social psychology, pragmatics, and intercultural communication. My multifaceted approach starts with an attempt at establishing some national characteristics of the three linguistic-cultural communities of interest here, i.e. USA, Austria and Poland. For this purpose I employ a modified version of four cultural dimensions distinguished on the basis of empirical research conducted by Hofstede and Hofstede (2005) to investigate the employees of IBM representing 74 countries. The results of Hofstede & Hofstede's investigations about the nature of the three languages and cultures described here serve as a starting point of my analysis. To achieve a more comprehensive view of the problem of stereotyping as reflected in fixed expressions, the anthropological model is later complemented by relevant standpoints from other disciplines.

My hypothesis concerning the reflection of national stereotypes in what I call here fixed expressions will be tested against data coming from collections of proverbs, phraseological dictionaries, and my own data collected in real life situations. My aim is to show that national stereotypes are optimally reflected in fixed expressions which are by definition much more conventionalized than texts with a higher degree of orality, e.g. spontaneous conversations. As will be seen below, the Anglo-Saxon data exhibit the highest degree of tentativeness and indirectness perceived as polite among native speakers of English and somewhat overdone (artificially polite) by speakers of German and Polish. This confirms the stereotype of the English "stiff upper lip". On the other hand, the speakers of German are perceived as much more direct, thus less polite by the speakers of English, but still acceptable to the speakers of Polish, whose fixed expressions might be even more explicit. Since stereotypes have become a hot topic in various disciplines inside and outside linguistics, in what follows I will look at various approaches to stereotypes as proposed in some of these frameworks.

2. Analysis

2.2 Theoretical foundations

2.2.1 Hofstede & Hofstede's (2005) sociological approach

The starting point of my analysis is Hofstede & Hofstede's system of sociological criteria characterizing 74 countries in the following areas:

a) Social inequality, including the relationship with authority, labeled *power distance* (ranging from small to large);
b) The relationship between the individual and the group (*collectivism* vs. *individualism*);
c) The social and emotional implications of being born a boy or a girl, i.e. *masculinity* vs. *femininity* (in masculine society emotional gender roles are clearly distinct, in feminine society they overlap);
d) Ways of dealing with uncertainty and ambiguity, which is related to the control of aggression and the expression of emotions (called *uncertainty avoidance* ranging from weak to strong), cf. Hofstede & Hofstede (2005:23).

The results and the statistical information contained in the study turn out to confirm the intuitions with regard to the three countries of interest to the present analysis, i.e. USA, Austria and Poland. In what follows the most relevant results of Hofstede & Hofstede's study are discussed and exemplified with some data from the three languages and cultures discussed here.

Power Distance Index (PDI): Austria – score 11 points, which results in rank 74 (out of 74 countries!), USA – score 40, rank 57-59, Poland - score 68, rank 27-29. The highest social inequality in Austria might be due to the hierarchical society rooted in the imperial tradition of the Austro-Hungarian Empire, whose remnants have been preserved in the elaborate system of honorifics and professional titles used not only in professional contexts but on many other (also purely social) occasions. This includes both the usual professional titles like *Herr Doktor* 'Mr. Doctor' conventionally used when addressing a physician as well as the persistent use of a variety of academic titles in

any academic and non-academic context. For instance, a holder of an MA degree will be addressed as *Frau/Herr Magister* 'Madam/Mr. MA holder' not only at work by his/her colleagues but also by anyone who possesses the relevant information (neighbors, shop assistants, etc.). The phenomenon of "title-mania" in Austrian German reaches its peak in an elaborate system of forms of address denoting professional functions and positions, like *Herr Sektionschef* 'Mr. section manager' (in an office), cf. Braun (1988). In addition, another significant aspect of the Austrian address system is that one holds the honorific for life, so that one is always addressed not only with one's academic titles, like *Herr Doctor/Professor* 'Mr. Doctor/Professor' (which are obviously permanent), but also with temporary function titles, like *Herr Sektionschef* 'Mr. section manager' or *Frau Ministerialrätin* 'Madam Ministerial Advisor'. However, it must be admitted that Austrian German does have special linguistic means of conveying the information that the person is no longer in office. In such cases the honorific is modified by the adjective *alt* 'old', as in *Altkanzler* often used with relation to the previous German Chancellor Helmut Kohl, or the phrase *a.D. (ausser Dienst)*, as in *Minister a.D.* (ex-minister). Interestingly, the passion for titles is an Austrian idiosyncrasy in the German-speaking world since in Germany (possibly due to a different historical development and the "democratization" processes after the 1968 student revolts) no titles are used unless in very restricted academic contexts so that even students in class would address a professor with his/her second name only preceded by the usual polite (V) form of address, e.g. *Frau Hosp* 'Ms. Hosp'.

Not surprisingly, out of the three countries discussed here, Poland scores second since the conscious use of titles is still relatively high as compared to the US context. Thus physicians always receive the title *Pan/Pani Doktor* ('Mr./ Madam Doctor') regardless of whether they hold a PhD or not, and even pharmacists selling medicine at a pharmacy receive an honorific corresponding to their official academic degree *Pani Magister* ('Madam MSc. holder'; on the use of titles and honorifics in Polish as a sign of respect, cf. Wierzbicka 1991: 57). In contrast, the use of titles and honorifics in Anglo-Saxon countries depends largely on the broadly understood socio-pragmatic variables, e.g. the relation between the speaker and the addressee often

established at the first encounter. Thus, if a university professor introduces herself to a younger visiting scholar with *Hi, I'm Elisabeth*, the exchange of first names naturally follows, which however does not mean that a symmetrical solidarity relation automatically replaces the initial power relation, cf. Brown and Levinson (1987). Even though it is customary in American academic circles to use first names, some restrictions apply and sometimes they are hard to fathom. One of the most striking examples is my experience at Stanford University where I was a senior Fulbright Scholar in 1984-85 and met two distinguished professors at the Department of Linguistics: Joseph Greenberg and Charles Ferguson. Both were around 70 years old, long-time colleagues and friends of equal professional status and both equally respected and well-liked, but while the former received from everyone the honorific *Professor Greenberg*, the latter was invariably addressed with his nickname *Fergie*!

Individualism Index (IDV): USA – score 91, rank 1, Austria – score 55, rank 27, Poland – score 60, rank 22-24. According to Hofstede & Hofstede (2005: 111), the IDV score can be predicted from the country's wealth (richer countries have a higher IDV), and the country's geographic latitude (countries closer to the equator are associated with lower IDV). As can be expected, USA scores the highest, and Poland the lowest, with Austria in-between on the Individualism Index. The results reflect the old American tradition of autonomy and "the person's need to have freedom of action" expressed in Brown and Levinson's (1987) notion of "negative face". In Austria the individualism vs. collectivism ratio is relatively balanced, the old imperial threats to the citizens' negative face now long forgotten after about 100 years of the Austrian republic (with the exception of the Nazi times). Thus the individual's personal freedom has become a cornerstone of the Austrian democratic tradition, whereas in Poland the feel for collectivism, a remnant of the Communist past, is still lingering on in the older generation, although it is of course not as strong as in South-East Asian countries, where collectivism goes back to the philosophical tradition of Confucianism, cf. Hofstede & Hofstede (2005: 208ff).

Masculinity Index (MAS): Austria – score 79, rank 4, Poland score 64, rank 14-16, USA score 62, rank 19. The results certainly do not mean that Austria and Poland have more machos that the USA, but rather that the emotional gender roles are more distinct in the first two countries than in the USA where the official recognition of sexual minorities was initiated much earlier than in Europe and has only gradually been seeping through to The Old Continent. The process of liberalization has been especially slow in the Polish society which is not only known for its staunch Catholicism (over 90% Poles declare themselves as members of the Catholic Church), but has recently been the scene of an extreme influence of the Church on the state, hence also on the media and cultural life in general. Under such circumstances the traditional family model with a clear distinction between male and female gender roles is a logical consequence.

Uncertainty Avoidance Index (UAI): Poland – score 93, rank 9-10, Austria score 70, rank 35-38, USA score 46, rank 62. Here the historical reasons for the formation of national characteristics might again be of relevance. Since UAI measures the extent to which the members of a culture feel threatened by ambiguous or unknown situations, most of the countries scoring high on the index, e.g. Greece, Portugal, Guatemala, to mention but a few, have been known for their turbulent histories which made their citizens insecure of their future. In comparison, Poland's history certainly brought many moments of uncertainty (insecurity), be it the division of the country between Austria, Prussia and Russia from 1772 to 1918, the Nazi occupation from 1939 to 1945, or the turbulent post-war times. Hence, it is not surprising that, as the results of Hofstede & Hofstede's study implicate, Polish citizens still do not feel as secure as many of their European neighbors. Predictably, Austria occupies the middle position, and the US citizens enjoy a low Uncertainty Avoidance score due to their long-standing democratic traditions and the status of one of the political world powers. It must be emphasized at this point that the results quoted above are by no means to be taken as absolute values, although they hint at certain tendencies in the three discussed countries.

2.2.2 Stereotypes in social psychology

As mentioned above, I adopt here the definition and the characteristics of the term *stereotype* employed by McGarty *et al.* (2002) "for any impression of groups held by anybody regardless of whether the accuracy of that belief is disputed", in other words, a stereotype is "a set of associated beliefs" (2002: 7).

Stereotypes are formed for various reasons, mainly to make sense of reality and to achieve self-enhancement, but they can also be pragmatically motivated, i.e. rather than provide an exact match with reality, they provide a useful fit with reality. Hamilton and Gifford (1976) point to the formation of new stereotypes in terms of distinctiveness-based illusory correlation, i.e. an erroneous perception of the co-occurrence of rare characteristics, e.g. *Poles steal cars*, as has been observed in one of my classes on national stereotypes in Vienna by a foreign student. According to McGarty *et al.* (2002:9), the illusory correlation has often been applied to explain the development of stereotypes of minorities, however, I assume here that the notion can be extrapolated to intercultural stereotypes as well. The fascinating aspect of stereotypes is their transience, since their content is not fixed, but is context- and theory-dependent, cf. Brown & Turner (2002: 87).

A more data-oriented approach has been suggested by Haslam *et al* (2002). The authors envisage the formation of national stereotypes as a cognitive and a socio-political process and conclude very plausibly that stereotypes are explanations of social reality on both the intra-cultural and the inter-cultural level. And it is the intercultural level that is of interest to the present study.

2.2.3 Stereotypes in political discourse

The phenomenon of stereotypes has also found a fertile ground in discourse analysis, especially in the domain of political discourse. For instance, van Dijk approaches stereotypes from this perspectives within what he labels "critical theory of racism", i.e. a study of possible exponents of racial attitudes with respect to minorities, cf. van Dijk (1993:202ff). Although his concept of ethnocentrism focuses on the negative portrayal of other groups, the positive representation of their

own group and forms of racial dominance by the white group, my hypothesis is that the negative portrayal of other linguistic-cultural communities can be extrapolated onto a more general level, i.e. intercultural sentiments and animosities. And this is the stance I will take in my analysis below.

2.2.4 Stereotypes in intercultural communication studies

The notion of stereotype was also employed as an explanatory tool in Clyne's analysis of intercultural communication at work in various contexts. For instance, he discusses a case of miscommunication when an unintended message is communicated, which if passed unnoticed may become a serious problem and can aggravate ethnic and racial stereotypes and even cause a conflict, cf. Clyne (1994: 148). However, as pointed out by Spreckels and Kotthoff (2007: 424), it was Quasthoff's (1998) approach to stereotype as a verbal form of stating a conviction which opened new perspectives on the issue so that a hitherto social-psychological concept was also understandable for the linguistic community. The new trend is also traceable in many of the papers constituting the collection with the telling title *Us and others*, cf. Duszak (2002). Finally, Spreckels and Kotthoff (2007) discuss stereotyping as part of categorization and they rightly point out that categorization means simplification which brings along the danger of developing prejudices, Spreckels and Kotthoff (2007: 422).

2.2.5 Fixed expressions in intercultural communication studies

Since the aim of this paper is to look for traces of stereotypes in fixed expressions, it might be useful to determine the status of such expressions in intercultural communication studies. One possibility is to approach fixed expressions as a communicative genre which is part of a communicative practice. Communicative genre can be defined as "historically and culturally specific pre-patterned and complex solution to recurrent communication problems", cf. Luckmann (1986). As can be expected, the role of proverbs differs radically across languages and cultures. Günthner (2007: 140) claims that while in

German proverbs are treated as "the wisdom of the little man" and books on good style advise against using them in everyday discourse, in Chinese ornamenting one's speech or thesis with proverbial sayings is highly valued as a sign of good education. We will see below how relevant proverbs are to stereotype formation.

Another example of how proverbs reflect a particular culture is Gökhan's (1990) account of the role of Turkish proverbs. Like in the Chinese case discussed above, also in the Turkish society "proverbs may assume many of the functions of formal education for children". The author distinguishes between quantity proverbs (which advise how much should be said) and quality proverbs (concerning the appropriateness of a topic), Gökhan (1990:93).

In his analysis of proverbs in English and Malay Goddard (in print) proposes a semantic template for proverb meanings some of which are metaphorical and others represent the simple maxim variety. One could not but agree with the author's statement that choosing to use a Malay saying "provides speakers with a device for positioning themselves and/or their interlocutors within a complex identity politics" (ibid. 20). Analogous cases of identity politics will be seen in my analysis of fixed expressions conducted below.

3. Some socio-pragmatic observations on the analyzed languages and cultures

My hypothesis is that fixed expressions found in (American) English, (Austrian) German and Polish reflect national stereotypes shared by representatives of other languages and cultures. Following this assumption, Anglo-Saxon fixed expressions should be a reflection of the polite, detached, reserved and hardly emotional representative of the English-speaking community. In my analysis I will ignore the well-known contrasts between different varieties of English and concentrate on American English (again ignoring the regional varieties which are immaterial for my argument). In what follows I will discuss a few socio-pragmatic notions characteristic of the cultures in question which are relevant for my approach.

One of the stereotypical characteristics of the English language and culture is the Anglo-Saxon notion of politeness which includes the

concepts of negative face and positive face, cf. Brown and Levinson (1987). Negative face (the want to be unimpeded and autonomous) is reflected in culture-specific concepts and linguistic expressions like *privacy, personal space, to take someone for granted* as well as in the much-described array of indirect syntactic constructions employed in face-threatening acts like requests. None of these lexical and syntactic devices could be applied in German or Polish without sounding exaggerated, artificial and even funny. Significantly, the notion of negative face does not determine just the language behavior of the speakers of English, but it is equally traceable in their ways of non-verbal behavior (the avoidance of eye contact with strangers in public places, e.g. in an elevator or at the theater while passing other people on the way to one's seat).

The notion of negative face is complemented by the notion of positive face (the want to be accepted by others), e.g. establishing verbal rapport in public places by talking to strangers in restaurants, at airports, on planes, etc., e.g. the proverbial *Where are you guys from?* This type of positive politeness although acceptable in (some informal contexts) in Austria, e.g. at a popular wine place *(Heuriger)* or a simple restaurant (*Beisel*), would be unacceptable in northern varieties of German or in (the German-speaking part of) Switzerland. The notion of positive face includes also the general "positive attitude" and the avoidance of complaining behavior, even in extreme situations, e.g. smiling while talking about one's own bankruptcy (as did the owners of a health-food store in Palo Alto in 1985), finally the generally "positive attitude" in small talk. While in German and in Polish the questions equivalent to "How are you today?" are very often still understood literally (despite the influence of the Anglo-Saxon "positive attitude") and can be answered with a complaint or even a negative story, in English about the lowest one can get in the hierarchy of positive answers is saying "Not too bad", or "I'm OK", which has in the meantime acquired some negative connotations and means something like "I'm not too bad" rather the original "I'm fine".

According to Watts (1992), the Anglo-Saxon notion of politeness should be expanded in order to distinguish between *politic behavior* (aiming at a social equilibrium) and *polite behavior* (making other people having a better opinion of themselves). Politic behavior (deeply

rooted in English social history) includes another crucial aspect of Anglo culture, i.e. the avoidance to express emotions or what Watts (1992: 57) calls "exchange of intimate stuff". Wierzbicka (1991: 53ff) rightly emphasizes that the adjective *emotional* has acquired negative connotations in English, i.e. public display of emotions is disapproved of. Here Wierzbicka's example of an *ABC News* reporter's use of the phrase *emotional mother* with relation to the mother of a baby who had been rescued from his kidnapper (ibid. 54), is comparable to the disapproval of public display of emotions as described in US press. For instance, when a woman found guilty of second-degree murder because her dog fatally wounded her neighbor broke into tears *The Seattle Times* (March 22, 2002) reported: *Marjorie Knoller (-) reacts yesterday as guilty verdicts are read*. Whereas the negative connotations of the adjective *emotional,* depending on the context, could also mean an overreaction in German or Polish, the bare verbs G. *reagieren*/P. *reagowac* cannot be interpreted as synonymous with an emotional over-reaction. These observations can be confirmed by my personal experience.

Speakers of German are usually perceived as very direct compared to speakers of English. Thus, while the latter would indirectly ask for a bill: *Could I have the bill/check, please?*, in German it is perfectly appropriate to say *Zahlen, bitte* 'Pay, please' or slightly more politely, *Wir möchten zahlen, bitte* 'We'd like to pay, please'. It is not surprising that Polish partly follows the German pattern, i.e. one can say very directly *Placic prosze* 'Pay, please', or more politely *Poprosze o rachunek* 'I'd like to have the bill/check, please'.

As can be expected, the directness of German discourse can come in various degrees. In the following example a German student Y whose English landlady X has given her sandwiches for a journey applies the rules of her native language and answers in a way too direct to the English ear:

(1) *X: I hope it'll be enough.*
Y: Yes, of course it will be enough.

Y's utterance is certainly intended to express appreciation, but instead it sounds brusque and dismissive due to its directness. Instead, Y might have said *Yes, that'll be just fine, thank you!*, cf. James (1980: 137).

Some more examples of German directness come from my own collection:

(2) *Gibt's eine Kassa in diesem Geschäft?*'is there a cash register in this shop?' (asked by an impatient customer at a supermarket in Vienna)

(3) *Jetzt reicht's* `now that's enough` (said at the Austrian Parliament by the then Vice-chancellor Molterer about the behaviour of the other coalition party (SPÖ)).

However, as is the case with any data used in disciplines which investigate spoken language, statements such as the above are not only culture- and language-specific but they also crucially depend on the idiosyncratic behaviour of the speaker(s) in question. As noticed by Kryk-Kastovsky and Kastovsky (2006: 464), in specific contexts participant roles following from particular scenarios/cultural scripts might even be reversed. Consider the following example of an impatient US customer addressing a slow waiter at a Caribbean restaurant by asking the question normally expected of the latter when waiting on the customer, the obvious implicature being that of irony:

(4) *Are you ready?*

Another characteristic of the German language is the use of imperatives in requests, which often sound like orders to the Anglo-Saxon ear, but they might simply be a reflection of the fact that the two systems are organized differently, cf. House (1989). A similar situation holds in Polish where the use of imperatives is much more frequent than in English, e.g. in offers and requests. However, there the use of imperative is softened by the use of diminutives, all these being signs of Polish hospitality:

(5) *Wez jeszcze sledzika. Koniecznie!* 'Take some more dear-little-herring-DIM)! You must!, Wierzbicka (1991:51).

These uses are comparable to Russian and Ukrainian hospitality strategies which baffle representatives of Anglo-Saxon culture (perhaps due to the unknown hospitality/politeness rules of the Slavic culture?). As has been pertinently put by Thomas:

> For a Ukrainian the 'generosity maxim' systematically overrides the 'quantity maxim'; for a British person it does not. Indeed, British recipients of such hospitality sometimes feel that their host is behaving *impolitely* by forcing them into a bind since they run out of polite refusal strategies long before the Ukrainian host has exhausted his/her repertoire of polite insistence strategies, Thomas (1983: 408)

German directness is also reflected in public signs which usually employ the word *verboten* 'forbidden' unacceptable in English, so that while in English prohibitions are expressed more indirectly (*No smoking*) or with reference to the responsible authorities (*According to Federal Regulations no smoking is allowed in public buildings*), in German the word *verboten* is perfectly acceptable (*Rauchen verboten*), often adorned with an exclamation mark. Interestingly, there are marked differences between German spoken in Germany and the Austrian variety of German, so that predictably, in Austria other, more indirect expressions would be used in the same contexts. For instance, while in Germany signs like *Reklame verboten* 'Adds forbidden' are perfectly acceptable on private mail boxes, in Austria often more indirect ways of expressing the same idea are used, e.g. *Reklame unerwünscht* 'Adds not welcome', cf. Wierzbicka (1998).

Foreign visitors are often struck by the profusion of Austrian German fixed expressions referring to food, drink and the gastronomic scene in general. This could be due to the general food cult which is constantly enhanced by the Austrian media full of programs devoted to gourmet cooking, restaurant guides, and ads featuring high quality foods. The food cult is also reflected in the unique Austrian German expressions concerning one's expertise in certain gastronomic areas. Thus, Austrians claim to have *Weinkultur* 'wine culture' and *Esskultur* 'eating culture', which are supposed to indicate the high standards of Austrian eating and wine-drinking habits often denied with relation to other nations. Thus, one can hear remarks like *Es gibt keine Weinkultur in diesem Land* 'There is no wine culture in this country'. Some more examples of fixed expressions employing food terms in Austrian German are:

(6) AG. *Das ist nicht mein Kaffee* 'It's not my coffee' (G. *Das ist nicht mein Bier* This is not my beer', E. *It's not my cup of tea*)

Surprisingly, these expressions have no gastronomical equivalents in Polish, only the literal *to nie moja sprawa* 'it's not my problem' being possible. Consider also: *Es ist mir Wurst* 'It is sausage to me' (E. *I don't care*, comparable to the vulgar P. *Zwisa mi to* 'It is hanging on me'), *Was für ein Kas(Käse)*'What a cheese' (E. 'How stupid'), comparable to Polish *Ale bryndza* 'What (sheep) cheese' and *Narobic bigosu* 'to make a (hunter's) stew', cf. WSF 17 (E. to cause a problem, to make a mess). Another example from German is *eine Schnapsidee* 'a vodka idea' (E. a crazy idea). Funnily enough, no direct equivalent thereof is available in Polish, however, as (an important) part of the cultural script of a Polish party, vodka is mentioned in a saying which wisely warns against the negative consequences of drinking it: *Od wodki rozum krotki* 'Vodka shortens your memory' (WSF 628). This fixed expression is comparable to another "didactically coloured" piece of advice which involves another alcoholic drink popular at Polish social occasions, i.e. beer: *Od piwa glowa sie kiwa* 'Beer makes your head swing'. Finally, a typically Austrian saying not used in Germany is: *Es zieht sich wie Strudelteig* 'It'dragging like strudel dough' (E. It is going very slowly) which has a rather vulgar equivalent in Polish: *Cos idzie komus jak krew z nosa* 'It is coming like blood from one's nose', i.e. It is going very slowly, with difficulty (WSF 188). Some more, rather vulgar Polish fixed expressions include *Cos jest nudne jak flaki z olejem* 'something is boring like tripe/guts with oil', i.e. something is indigestible and/or hard to handle (WSF 102). The idea can be also rendered more neutrally by expressions *smiertelnie nudny* which, not surprisingly, has exact equivalents in English (*deadboring*) and German (*sterbenslangweili*g). Consequently, it follows from my data that fixed expressions are a valuable source of information concerning national stereotypes, probably more than spontaneous interaction is.

Having looked at some socio-pragmatic characteristics of the three languages and cultures discussed here, I will now pass on to the data illustrating some of the theoretical points tackled above.

4. The data

Consider the following selected fixed expressions and proverbs in the three languages under discussion (data from dictionaries and collections of proverbs):

(7) P. *Co sie odwlecze, to nie uciecze/*E. *All is not lost that is delayed/Aufgeschoben ist nicht aufgehoben* (*SP 176*)

This typical Polish proverb has some equivalents in the other two languages, but they are not as frequently used and are counterbalanced by proverbs propagating hard work and diligence, surprisingly, also in Polish:

(8) E. *Early bird catches a worm*/G. *Morgen Stund hat Gold in Mund* 'The morning hour has gold in its mouth'/*Kto rano wstaje temu Pan Bog daje* 'One who gets up early is rewarded by God' (SP 281)

Notice that the German diligence is reflected in another proverb G. *Morgen, morgen nur nicht heute, sagen alle faulen Leute* 'Tomorrow, tomorrow, just not today, this is what lazy people say', which (unsurprisingly?) does not have any Polish equivalents. Consider another proverb, typical for the fatalistic Polish mentality:

(9) P. *Co ma byc to bedzie/*E. *What will be,will be/*G. *Was sein soll, das schickt sich wohl (SP* 62*).*

It is interesting to note that while in Polish the saying is very frequently employed in everyday discourse (and could be taken as a sign of the Polish high uncertainty avoidance, maybe even determinism and resignation in view of the unfathomable turns of the wheel of fortune), its English and German equivalents are hardly ever used with the exception of the equally deterministic Austrian German expression *Wird schon werden* 'It will work somehow'. Another revealing parallel between the Polish and Austrian mentalities are the sayings which express some hope in (seemingly hopeless) situations. The standard German saying is *Die Lage ist ernst aber nicht hofnungslos* 'the situation is serious but not hopeless', comparable to the Polish *Jest zle ale nie beznadziejnie* 'It is bad but not hopeless', while Austrian

German has reversed the order *Die Lage ist hofnungslos aber nicht ernst* 'the situation is hopeless, but not serious'. However, in accordance with the generally fatalistic attitude of its speakers, Polish counterbalances it with a few pessimistic sayings: *I tak zle, i tak niedobrze* (*WSF* 709) '(the situation) is bad either way' (a fatalistic approach comparable to Antigone's choice between two evils, which made it to the English language as *Hobson's choice* 'an apparently free choice that offers no real alternative' (*AHD,* p. 615). The peak of the Polish negative and fatalistic attitude is *Nigdy nie jest tak zle, zeby nie moglo byc gorzej* (WSF 709) 'it is never so bad that it could not get worse'.

Another, equally deterministic and much more explicit fixed expression, which verges on vulgarity, is the P. *Dzis sie zyje, jutro gnije* 'Today alive, tomorrow rotting'/E. *Today gold, tomorrow dust/Heute rot, morgen tot* (*SP* 93). However, here the German equivalent quoted from the Polish international dictionary of proverbs (Swierczynscy 2004) has been questioned by native speakers of German (Dieter Kastovsky (p.c) claims that the proverb has only political connotations since it is used with reference to someone who due to his/her leftist political leanings was subject to prosecution).

As can be seen from the above, many Polish fixed expressions/ sayings are very direct and sometimes even vulgar, which is also true of some of the German data, whereas the American English expressions are more neutral and detached.

5. Instead of a conclusion

Since it has already been concluded above that fixed expressions offer the researcher many insights concerning stereotypes which function in cultural-linguistic communities, I will close this analysis with a family of rather peculiar sayings concerning (the representatives of) other languages and cultures: Notice that in this case English, German and Polish differ considerably as to the choices of the nationalities which are supposed to symbolise various national characteristics according to the speakers of the three languages (Various aspects of national character have been discussed in Wierzbicka (1992: 95-108, 373-444). Although detailed socio-historical knowledge is necessary to trace the

exact origins of fixed expressions like the ones below, my hypothesis is that the nationality chosen for these fixed expressions describing mostly its negative characteristics in a (more or less) explicit fashion has a negative image among the members of a particular linguistic-cultural community. Thus, Greek seems to sound alien to the Anglo ear as much as Spanish to the German speaker, and Turkish to a Pole (an image which goes back to the years of Turkish invasion of Europe in 17th century).

(10) *It's all Greek to me*/G. *Es kommt mir Spanish for* 'sounds like Spanish to me'/P. *Siedziec jak na tureckim kazaniu* 'to sit like at a Turkish sermon', i.e. without understanding anything' (*WSF* 163)– incomprehensible speech.

The alien nature of a foreigner's speech concerns not only the language in all its components (mainly vocabulary and syntax) but also the accent which sounds strange to the native ear. This has been pertinently summarised by a 5-year old Austrian girl Hannah with whom I tried to strike a conversation in my then very basic German. She said to me: *Meine Mutti hat schon eine griechische Freundin* 'My mom has already got a Greek (girl-)friend'. Hannah probably did not use the standard stereotype of a Spanish speaker since she was not familiar with it, whereas she had just returned from Greece, hence her fresh linguistic experience.

The other two examples have a clearly historical origin going back to the Polish turbulent history and the three partitions mentioned above. Thus, as follows from (11), Prussia seems to have been despised for its strict military rule, whereas the Austrians (the most lenient of the three occupants who even allowed Poles some autonomy and participation in the Austrian government) were just benevolently laughed at for their verbosity, as in (12):

(11) P. *Pruski dryl* `lit. Prussian drill, i.e. 'very strict way of dealing with others, mainly bringing up children'

(12) P. *Austriackie gadanie* 'Austrian talking', i.e. talking nonsense (*WSF* 7)

Some more examples of fixed expressions based on negative stereotypes include:

(13) G. *Polnische Wirtschaft* 'Polish economy', i.e. mismanaged, inefficient economy

(14) E. *Cornish mile* 'a distance much longer than (what one claims to be) a mile'/P. (in P. mountaineers' dialect *Kilometr z hakiem* 'a kilometre with a hook', i.e. a distance much longer than (what one claims to be) a kilometre (WSF 138).

(15) *Popamietasz ruski miesiac* 'You'll remember the Russian month', i.e. you'll remember the hardest times (*WSF* 456)

(16) *Jak w czeskim filmie* 'like in a Czech movie', i.e. a situation when nobody knows what's going on (WSF 102).

(17) *French leave*/G. Sich auf Französisch verabschieden/P. *Wyjsc po angielsku* 'English leave' (*WSF* 4).

It follows from this section that much still remains to be done in the domain of stereotype formation as reflected in various languages and cultures. The rich data multiplied nowadays by the media and in internet can hopefully be explained more adequately thanks to international contacts in the globalised world where intercultural communication leads to a better understanding among different communities of practice.

REFERENCES

AHD. 1982. **The American Heritage Dictionary**. Boston: Houghton Mifflin Company.

Braun, F. 1988. **Terms of Address: Problems of Patterns and Usage in Various Languages and Cultures**. Berlin: Mouton de Gruyter.

Brown, P. and J. Turner. 2002. 'The role of theories in the formation of stereotype content'. In: C. McGarty, V. Y. Yzerbyt and R. Spears (eds.), **Stereotypes as Explanations**. Cambridge: Cambridge University Press. 67-89.

Brown, P. and S. Levinson. 1987. **Politeness. Some Universals in Language Usage**. Cambridge: Cambridge University Press.

Clyne, M. **Intercultural Communication at Work**. Cambridge: Cambridge

University Press.

Dijk, T. van. 1993. **Elite Discourse and Racism**. London: Sage.

Duiker, H.C.J. and N.H. Frida. 1960. **National Character and National Stereotypes**. Amsterdam: North Holland.

Duszak, A. (ed.). 2002. **Us and others: Social Identities across Languages, Discourses and Cultures**. Amsterdam: John Benjamins.

Goddard, C. In print. 'Follow the way of the rice plant: The semantics of proverbs in English and Malay'.

Gökhan, A. 1990. 'Speaking as reflected in Turkish proverbs'. In: Thomas, S. and W. Evans (eds.). **Communication and Culture**. Norwood, N.J.: Ablex. 92-100.

Günthner, S. 2007. 'Intercultural communication and the relevance of cultural specific repertoires of communicative genres'. In: Kotthoff, H. and H. Spencer-Oatey (eds.). **Handbook of Intercultural Communication**. Berlin: Mouton de Gruyter. 127-151.

Hamilton, D.L. and Gifford, R.K. 1976. 'Illusory correlation in intergroup perception: a cognitive basis of stereotypic judgments'. **Journal of Experimental Social Psychology** *12*: 392-407.

Haslam, S. A., J. Turner, P. Oakes, K. Reynolds and B. Doosje. 1996. 'From personal pictures in the head to collective tools in the world: how shared stereotypes allow groups to represent and change social reality'. In:

McGarty, C., Vincent Y. Yzerbyt, and R. Spears (eds.). 2002. **Stereotypes as Explanations**. Cambridge: Cambridge University Press. 157-185.

House, J. 1989. 'Politeness in English and German. The functions of *please* and *bitte'*. In: Blum-Kulka, S., J. House and G. Kasper (eds.). **Cross-cultural Pragmatics: Requests and Apologies**. Norwood: Ablex. 96-119.

Hofstede, G. and G. J. Hofstede. 2005. **Cultures and Organization: Software of the Mind**. New York: McGraw Hill.

James, C. 1980. **Contrastive Analysis**. London: Longman.

Kryk-Kastovsky, B. and D. Kastovsky. 2006. 'Anything you can do I can do better: a paper not so much about musicals, but about the semantics-pragmatics interface'. In: Dziubalska-Kolaczyk, K. (ed.). **IFAtuation: A life in IFA. A Festschrift for Professor Jacek Fisiak on the Occasion of his 70th birthday**. Poznan: Wydawnictwo Naukowe UAM. 453-469.

Luckmann, T. 1986. 'Grundformen der geselschaftlichen Vermittlung des Wissens: Kommunikative Gattungen'. **Köllner Zeitschrift für Soziologie und Sozialpsychologie, Sonderheft 27**: 191-211.

McGarty, C., V. Y. Yzerbyt, and R. Spears (eds.). 2002. **Stereotypes as Explanations**. Cambridge: Cambridge University Press.

Meider, W. 1994. **Wise Words: Essays on the Proverb**. New York: Garland.

Niemeier, S. and R. Dirven (eds.). 1997. **The Language of Emotions**. Amsterdam: John Benjamins.

Norrick, N. 1985. **How Proverbs Mean: Semantic Studies of English Proverbs**. Berlin: Mouton de Gruyter.

Quasthoff, U. 1998. ‚Stereotype in Alltagkommunikationen: Ein Beitrag zu Dynamisierung der Stereotypenforschung'. In: Heinemann, M. (ed.). **Sprachliche und soziale Stereotype**. Frankfurt: Lang. 47-72.

Schiffrin, D. 1983. **Discourse Markers**. Cambridge: Cambridge University Press.

Scollon, R. and S. Wong Scollon. 1995. **Intercultural Communication. A Discourse Approach**. Oxford: Blackwell.

Swierszczynscy D. and A. 2004. **Slownik Przyslow w Osmiu jezykach**. (Dictionary of proverbs in eight languages). Warszawa: Wydawnictwo Naukowe PWN.

Sprekels, J. and H. Kotthoff. 2007. 'Communicating identity in intercultural communication'. In: Kotthoff, H. and H. Spencer Oatey (eds.) **Handbook of Intercultural Communication**. Berlin: Mouton de Gruyter. 415-439.

Thomas, Jenny. 1983. 'Cross-cultural pragmatic failure'. **Applied Linguistics** 4: 91-112.

Triandis, H.C. 1994. **Culture and Social Behaviour**. New York: McGraw-Hill.

Watts, R. 1992. 'Linguistic politeness and politic verbal behaviour: Reconsidering claims for universality'. In: Watts, R., Sachiko I., and K. Ehlich (eds.). **Politeness in Language. Studies in its History, Theory and Practice**. Berlin: Mouton de Gruyter.

WSF. 2005. **Wielki SlownikFrazeologiczny z Przyslowiami** (Great phraseological dictionary with proverbs). Warszawa: PWN.

Wierzbicka, A. 1991. **Cross-cultural Pragmatics**. Berlin: Mouton de Gruyter.

Wierzbicka, A. 1992 **Semantics, Culture and Cognition**. Oxford: Oxford University Press.

Wierzbicka, A. 1998. 'German cultural scripts: public signs as a key to social attitudes and cultural values'. **Discourse and Society** 9/2: 241-282.

Stanisław Puppel

Remarks on language as a rheological-ecological entity: towards a flow-design-synergy approach

The paper introduces a novel subdiscipline of linguistics named rheolinguistics, which sees natural language as a combined rheological-ecological entity. This newly postulated approach to language may be tentatively defined as the one which deals with language as a rheological entity, that is, as the design which is subjected to the variable conditions of flow. In the present analysis, natural language is viewed as resulting from the flow dynamics and synergy of the biological, social, and cultural flows.

Keywords: rheolinguistics, ecolinguistics, flows, design, synergy

1. Language as an entity

In this paper an attempt is made to present a preliminary and very sketchy view of language as a combined rheological-ecological entity. The ecological approach to language, defined as the study of the interaction of any natural language with its environment, has been called 'language ecology' (cf. Haugen, 1972; Garner, 2004, 2005)) or 'ecolinguistics' (cf. Fill and Mühlhäusler, 2001). Both terms refer to a well-established subdiscipline of linguistics which focuses on taking account of the full complexity and interrelatedness of all the processes which are activated and combined in order to produce the dynamic relationships of any natural language (NL) with its complex and variable environment. Furthermore, the ecological approach to language allows one to view it as a real biology-based entity which has been constructed socially and culturally and with the purpose of

providing a dialogically-oriented service to the metacommunity of humanity as a part of more general ecosystem services (cf. Kremen, 2005) which are fundamental for sustaining healthy human societies, in particular for sustaining language as a universal code of human interaction on the one hand and for sustaining any natural language as an expression of more general ecological diversity, or, in a more narrow sense, natural language diversity, on the other.

We may therefore venture to say at this point that the ecological approach proposes to look at language as existing objectively by virtue of its embodiment, just the way any physical organism exists (cf. Varela et al., 1991). Therefore, one of the key characteristics of the ecological approach to language is the close and inseparable link between body (i.e. the human nervous system and the human brain in particular) and mind such that both strengthen each other and thus jointly produce language which may be understood as an embodied and structured (i.e. systemic) functional 'entity' (from late Latin *entitas*, 'being, existence' as opposed to 'non-existence') determined by its complex interplay with the environment and necessarily rooted in the biology-sociality-culture complex.

This traditionally dual understanding of the design of language, that is, as both a physical and mental phenomenon, allows one to approach it jointly as a physical object (i.e. regarded as being on a par with any really existing physical organism which is most naturally subject to various physical limitations) as well as a mental construct which is therefore subject to the constraints characteristic of the life of 'evanescent' and evasive mental phenomena generated by the physical organism, or, more precisely, by the human brain in the synergistic processes of inter- and intra-organismal interactions. Subsequently, in the above delineated understanding of language as an organism, it may be defined as characterized by the following:

(a) within the organismal metaphor, language may be specified in terms of an inherent degree of 'robustness' (or 'vitality') which serves to determine its overall power (i.e. quality/ value) and which is decisive for its conduct in the open natural language arena where all the existing languages, meant as embodied entities, inevitably confront each other

(i.e. in the conditions of contact, cf. Weinreich, 1953) thus attaining the status of either superstratal (i.e. 'dominant/ hegemonic/ imperialistic') or substratal (i.e. 'submissive/ inferior') languages (cf. Phillipson, 1992; Puppel and Puppel, 2005; Puppel, 2007b). Thus, like any physical organism, a particular natural language may gain or suffer from its physical dimension. That is, either as a result of language contact in the natural language global arena or as a result of variable population dynamics, or simply as a result of the combination of both factors, it may become either a 'dominant' or a non-dominant (i.e. 'submissive') language, or may go to an 'endangered language' phase, or, in extreme cases, it may even become extinct, that is, it may disappear all together from the highly diversified pool of all the currently existing natural languages (cf. Crystal, 2000; Puppel, 2007a),

(b) moreover, as an entity which may 'suffer', like any physical organism, from various inequalities and pressures occurring between natural languages as a result of inevitable contact in the open and global natural language arena, any natural language may become subject to deliberate, social restorative (i.e. therapeutic) programs and procedures, where the restoration (i.e. natural language preservation especially via language planning) of a particular natural language constitutes a part of 'restorative ecology' whose goal is to sustain a given living language as a form of a valuable natural resource and, what is even more important for the human culture as a whole, as an expedient of a much greater and diversified anthropological context, i.e. a particular local culture (cf. Hale, 1997; Romaine, 2007; Puppel, 2009b) in which any living natural language is immersed,

(c) like any physical organism, a particular natural language is characterized by geographic distribution (i.e. spatial dispersal) and a temporal dimension of highly variable longevity (i.e. temporal variability of a particular natural language),

(d) in addition to the above, language may be viewed as an entity which has been determined by a network of social (i.e. as a part

of community ecology, cf. Diamond and Case, 1986) as well as both cross-cultural and intra-cultural interactions which, in turn, provide the necessary external environment for language use. This is most conspicuously reflected in the generation of natural language diversity and of social-cultural artifacts, such as, for example, the various cultural traditions and writing systems exercised by the particular linguistic communities which serve the purpose of natural language diversity maintenance.

Thus, it may be stated that in the more traditional linear perspective, language may be determined by an interplay of the following parameters: its quality and value, that is, its inherent power/vitality (i.e. its robustness, see Puppel, 2007b), a possibility for being subjected to restorative programs and procedures initiated by the more highly ecolinguistically aware and ecologically-oriented individuals and organized social groups for whom such a restoration is an important way of rescuing and sustaining a given natural language at the present moment of the language's existence, as well as its spatial and temporal dimension. In addition, it should be emphasized that the linear perspective also entails the significance of natural language diversity and spatial dispersal combined with the communicator verbal variability, as well as the highly diversified contexts of NL use, for affecting the positive functioning of the linguistic ecosystem (cf. Mühlhäusler, 2000; France and Duffy, 2006).

2. Language as a rheological-ecological entity

In addition to being viewed as a dual physical-mental entity, language may also be regarded as an ecological entity (cf. Mikkelson, 2003). The latter concept indicates an understanding of language in terms of an interactive system, in fact, much like an ecosystem, defined as Eugene Odum (1953) would prefer to define it, namely as a holistic design where all the major constitutive components, that is, in our case language and the environment, are viewed as cooperating with each other in a mutualistic and totally interdependent manner. In this way,

the holistic approach to language, represented and integrated by the concept of the ecosystem, in fact, constitutes a clear breach from the mainstream, linear and strongly dualistic and predominantly Aristotelian Western tradition by emphasizing the concept of the generation, maintenance and conservation of the ecosystem which is fed by the natural base (referred to here as 'the feeding base') in which both energy, being emergentive in nature, and matter, resulting in its organization into a variety of terrestrial designs (expressed by diverse terrestrial systems), flow incessantly thus propelling the generation and continuous changes of the linguistic ecosystem at the same time securing the continuous biological-social-cultural flows through the design node. In this way, the Aristotelian view is combined with the Heraclitean view which promotes variability and holism.

As may be inferred from the above, the linguistic ecosystem is regarded as being greater than the sum of its parts. Subsequently, the linguistic ecosystem, viewed here as a part of the more inclusive human ecosystem, may also be conceived of as being constituted by the necessary interaction, reciprocity and entrainment of the afore mentioned linear and circular (i.e. flow) components within the more fundamental nature-culture dichotomy where the component of Nature is opposed to the component of Culture where the latter summatively comprises the entire and above mentioned biology-sociality-culture complex of synergetic flows underlying the linguistic ecosystem. The entire setup may be represented by means of the following diagram:

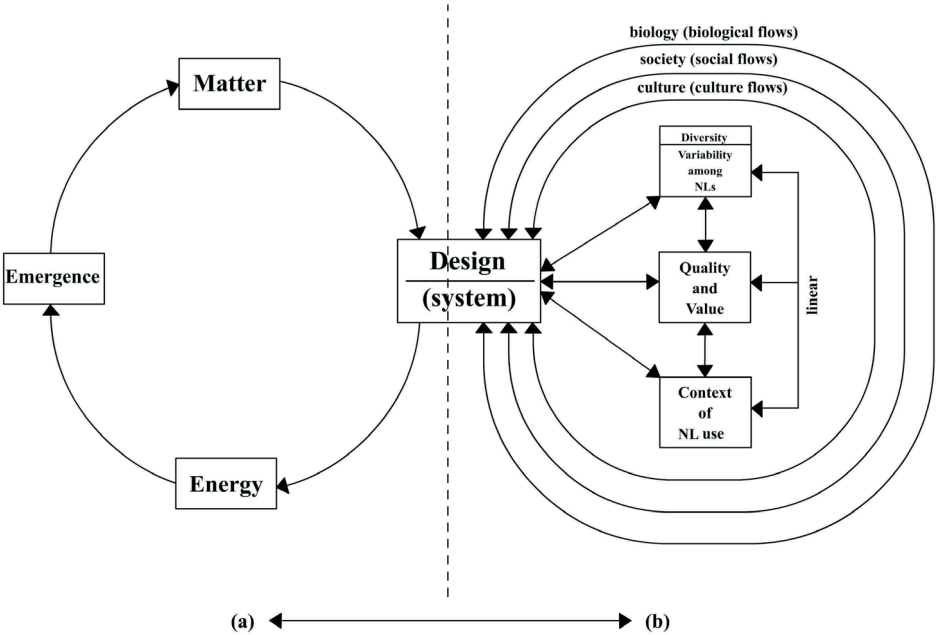


Diagram nr 1

In the Diagram, the circular components (a) and (b) and the linear components contained within the linguistic ecosystem are linked (i.e. they converge) through the interface of the system, at the integrative 'Design' node, where, among other designs, the particular design of language is assumed to be generated and additionally supported by means of the horizontal flow dynamics indicated by the horizontal arrow "←→".

The above holistic and dual (i.e. linear-circular) nature of language is referred to here as derived within the ecosystem characterized both by the dynamics of the afore distinguished flows and design parameters working synergistically (hence the flow-design-synergy approach, abbreviated as FDS), respectively. In this approach, the flow dynamics and the principles of self-organization (which may also be referred to as 'autocatakinetics', cf. e.g. Swenson, 1997) jointly generate different kinds of designs, including the universal design of human language as well as the particular and diversified designs of different

natural languages. It is therefore assumed that, apart from being studied by ecolinguistics which approaches language and language behaviour as basically a solid-like (i.e. embodied) but necessarily open system (cf. von Bertalanffy, 1968) which remains under the variable pressure of the linear factors of language-external (i.e. social-cultural) and communicator-internal (i.e. biological-mental) contexts of language use, subjectively felt and assessed parameters of quality/value of language as well as communicative and ethnic variability resulting in the existence of a still sizable global pool of different ethnic languages (cf. Grimes, 2000), both language as a universal code and language behaviour should also be approached by a branch of linguistics that may be referred to as 'rheolinguistics' (or 'linguistic rheology', based on 'rheology', i.e. the science of the flow and deformation of matter, derived from the Greek term 'rheos', 'to flow', cf. Reiner, 1960; Puppel, 2009a).

This newly postulated approach to language may be tentatively defined as the one which deals with language as a rheological entity, that is, as the one which is subjected to the variable conditions of flow (i.e. flow dynamics), and which thus approaches language as a form of embodiment which is a continuously changing (i.e. liquid-like) phenomenon, with language properties being viewed as resulting from the interaction of the flow of the feeding base with those of the linguistic ecosystem. More precisely, it is hypothesized here that language as such is generated by the flow characteristics of energy, emergence and matter, all converging in the open System node where real embodiment (or 'entitiation') takes place additionally under the conditions of the biological, social, and cultural flows with their variable velocities, which are collectively responsible for generating a highly variable language design as an outcome of the said convergence.

Such an approach allows one to look at any natural language as a kind of a 'viscoelastic' liquid-like design (cf. Barnes et al., 1989/2005), that is, as characterized by both viscosity and elasticity, which, once generated, is always realized as a context-sensitive, highly variable, for ever changing (i.e. adaptive) and resilient entity (i.e. defined as having the general ability to recover from deformations which may be introduced to the particular design, cf. Holling, 1973; Peterson et al.,

1998; Walker et al., 2004). However, as a functional whole, any natural language would always be regarded as representing inherent quality and value to its users.

Within the FDS approach outlined above, language as a design may be viewed as being co-determined by flow dynamics and as continuously changing its shape in a non-linear manner (i.e. as a complex self-organizing entity, cf. Solé and Bascompte, 2006) when exposed to a given stress condition, which causes a particular deformation, or a set of such conditions. More precisely, any NL, while usually being in contact with another language in the natural language global arena, may be viewed as generally being subjected to two different types of flow, that is, either to 'turbulent flow' (i.e. showing resistance) or 'laminar flow' (i.e. showing no resistance) flow (cf. e.g. Acheson, 1990), whereby the two contacting languages (or, more properly, the communicators who belong to the linguistic communities in the contacting languages) may either bilaterally or unilaterally determine the areas of particular concentration of contact (e.g. the lexical level) and 'lend' each other the various lexical forms more or less unobtrusively, that is, with or without any subconscious and intuitive or fully conscious and organized resistance on the part of the members of the contacting linguistic communities. Since the stress conditions, most typically being of the turbulent kind, occur all the time in the context of inevitable language contact in the open natural language global arena, a given natural language's viscosity, defined as the degree of its overall integrity and equilibrium at a given point of time, is affected and inevitable changes are introduced to the particular natural language design at its respective points (e.g. in the lexicon as a domain which typically remains most susceptible to such changes). One may thus say that these changes, which are introduced to a particular NL by way of disturbing its lexical integrity and punctuating the above equilibrium (cf. Gould and Eldredge, 1977), contribute in this way to the maintenance of its elasticity and the resilience of both the entire language design and of a particular natural language.

3. A rheolinguistic frame for further studies (?)

The model briefly described above is based on the fundamental assumption that language as such as well as the particular NLs have been generated by the genus *Homo sapiens* and are maintained by the dynamics of the different flows which characterize both the feeding base and the derived linguistic ecosystem. The concept of the flow which is central to the FDS approach outlined above is further assumed to supplement the already established ecolinguistic approach to language in that it allows to view language as resulting from the flow dynamics characterizing the synergy of the biological, social, and cultural flows.

In turn, each of these flows may be characterized by its own velocity such that the velocity of the biological (i.e. genetic) flow may have two velocities, namely it is the slowest in phylogeny, for it comprises the almost imperceptible changes occurring in the temporally protracted processes of phylogeny, and is relatively fast in ontogeny, for it comprises the perceptible changes occurring in the processes of ontogenetic development of every individual human organism (see e.g. Gould, 1977). On the other hand, the social flow, meant to indicate the existence of a general mechanism of generating an online network of social and easily breakable linkages among the human communicating agents, may be regarded as a relatively faster flow. Finally, the cultural flow, being most essential for ongoing linguistic changes, may be likened to the phylogenetic flow in terms of its velocity, for cultural changes occurring in various local cultures, for example, as a result of local and global invasions (cf. Lövei, 1997), seem to require more time before they become firmly established in the framework of cultural institutions as forms of cultural embodiment. Therefore, there is reason to couple the relatively slow biological (i.e. with respect to phylogeny) flow velocity with that of the cultural flow. The synergy of the biological and cultural flows in terms of their velocity, mediated, as it were, by the faster social flow velocity, is therefore assumed to be an important indicator of the credibility of the nature-culture dichotomy postulated above.

In summary, it has been suggested here that it is high time for linguistics to consider the incorporation of the rheological perspective

into research on the functioning of language and various NLs understood as designs existing vis-à-vis the various highly variable external and internal environmental factors as being a part of linguistic ecosystem services. In this way, the rheolinguistic approach may non-trivially assist the ecolinguists in providing new knowledge on the most relevant issue of language-environment relationship. More precisely, it may serve as a basis for a deeper understanding of the ecolinguistic problem of NL contact and resilience and of the need to maintain natural language diversity and NL habitat fragmentation within the open and highly changeable natural language global arena. Thus, it may finally be stated that with the aid of the flow-design-synergy approach in accounting for the functioning of any NL under conditions of contact in the open natural language global arena new light may be shed on the overall nature of the functioning of the linguistic ecosystem.

REFERENCES

Acheson, D.J. 1990. **Elementary fluid dynamics**. Oxford: Oxford University Press.

Barnes, H.A., J.F. Hutton and K. Walters. 1989/2005. **An introduction to rheology**. Amsterdam: Elsevier.

Crystal, D. 2000. **Language death**. Cambridge: Cambridge University Press.

Diamond, J.M. and T.J. Case. (eds.). 1986. **Community ecology**. New York: Harper and Row.

Fill, A. and P. Mühlhäusler. (eds.). 2001. **The ecolinguistics reader: language, ecology and environment**. London: Continuum.

France, K.E. and J.E. Duffy. 2006. "Diversity and dispersal interactively affect predictability of ecosystem function". **Nature** 441. 1139-1143.

Garner, M. 2004. **Language: an ecological view**. Frankfurt am Main: Peter Lang Verlag.

Garner, M. 2005. "Language ecology as linguistic theory". **Kajian Linguistik dan Sastra** 17.33. 91-101.

Gould, S.J. 1977. **Ontogeny and phylogeny**. Cambridge, Mass.: Harvard University Press.

Gould, S.J. and N. Eldredge. 1977. "Punctuated equilibria: the tempo and mode of evolution reconsidered". **Paleobiology** 3.2. 115-151.

Grimes, B.F. 2000. **Ethnologue: languages of the world**. 14th ed. Dallas, TX: Summer Institute of Linguistics.

Hale, K. 1997. "Some observations on the contributions of local languages to linguistic science". **Lingua** 100. 71-89.

Haugen, E. 1972. **The ecology of language**. Stanford, CA: Stanford University Press.

Holling, C.S. 1973. "Resilience and stability of ecological systems". **Annual Review of Ecology and Systematics** 4. 1-23.

Kremen, C. 2005. "Managing ecosystem services: what do we need to know about their ecology?". **Ecology Letters** 8. 468-479.

Lövei, G.L. 1997. "Global change through invasions". **Nature** 388. 627-628.

Mikkelson, G.M. 2003. "Ecological kinds and ecological laws". **Philosophy of Science** 70. 1390-1400.

Mühlhäusler, P. 2000. "Language planning and language ecology". **Current Issues in Language Planning** 1.3. 306-367.

Odum, E.P. 1953/1959. **Fundamentals of ecology**. Philadelphia: W.B. Saunders.

Peterson, G.D., C.R. Allen and C.S. Holling. 1998. "Ecological resilience, biodiversity, and scale". **Ecosystems** 1. 6-18.

Phillipson, R. 1992. **Linguistic imperialism**. Oxford: Oxford University Press.

Puppel, S. and J. Puppel. 2005. "Zagadnienie percepcji języka naturalnego w triadzie: język ojczysty-język globalny-język sąsiedni na przykładzie triady język polski-język angielski-język niemiecki w ujęciu ekolingwistycznym: próba typologii". (The problem of natural language perception in the triad: native language - global language - neighbouring language: towards an ecolinguistic typology). **Scripta Neophilologica Posnaniensia** Tom VII. 55-95.

Puppel, S. 2007a. **Ochrona języków naturalnych**. (Natural language protection). Poznań: Katedra Ekokomunikacji UAM.

Puppel, S. 2007b. "Tężyzna języków naturalnych". (Natural language robustness). In Chałacińska-Wiertelak, H. and K. Kropaczewski. (eds.). **Dyskurs wielokulturowy**. Łódź: Drukarnia i Wydawnictwo „PIKTOR". 7-15.

Puppel, S. 2009a. "Natural language robustness-, natural language 'viscosity'-, and teacher population density-dependence as co-indicators of success in foreign/second language teaching and learning: a combined ecolinguistic-rheolinguistic approach to English". In Wolny, R.W. (ed.). 235-241.

Puppel, S. 2009b. "The protection of natural language diversity – fancy or duty?". **Scripta Neophilologica Posnaniensia** Tom X. 97-109.

Reiner, M. 1960. **Deformation, strain and flow: an elementary introduction to rheology**. London: H.K. Lewis.

Romaine, S. 2007. "Preserving endangered languages". **Language and Linguistics Compass** 1. 1-2. 115-132.

Solé, R.V. and J. Bascompte. 2006. **Self-organization in complex ecosystems**. Princeton, N.J.: Princeton University Press.

Swenson, R. 1997. "Autocatakinetics, evolution, and the law of maximum entropy production: a principled foundation towards the study of human ecology". **Advances in Human Ecology** 6. 1-47.

Van Lier, L. 2004. **The ecology and semiotics of language learning: a sociocultural perspective**. Dordrecht: Kluwer Academic Publishers.

Varela, F., E. Thompson and E. Rosch. 1991. **The embodied mind: cognitive science and human experience**. Cambridge, Mass.: The MIT Press.

von Bertalanffy, L. 1968. **General systems theory: foundations, development, applications**. New York: George Braziller.

Walker, B., C.S. Holling, S.R. Carpenter and A. Kinzig. 2004. "Resilience, adaptability and transformability in social-ecological systems". **Ecology and Society** 9.2. 5. [online] URL: http://www.ecologyandsociety.org/vol9/iss2/art5

Weinreich, U. 1953. **Languages in contact: findings and problems**. The Hague: Mouton.

Wolny, R.W. (ed.). 2009. **On time: reflections on aspects of time in culture, literature and language**. Opole: Wydawnictwo Uniwersytetu Opolskiego.

Notes on Contributors

Anna Bączkowska

Ph.D. in linguistics

research interests: English language studies, cognitive linguistics, psycholinguistics, law and jurislinguistics

Adiunkt in Department of English Philology, Kazimierz Wielki University, Bydgoszcz, Poland

email: lodiensis@poczta.onet.pl

Marta Bogusławska-Tafelska

Ph.D. in linguistics

research interests: psycholinguistics, ecolinguistics, consciousness studies

Adiunkt in Department of English Philology, University of Warmia and Mazury, Olsztyn, Poland

email: martabt@ibnet.pl

Monika Cichmińska

Ph.D. in linguistics

research interests: English language studies, Cognitive Linguistics, cognitive semantics

Adiunkt in Department of English Philology, University of Warmia and Mazury, Olsztyn, Poland

email: monikac@cso.pl

Anna Drogosz

Ph. D. in linguistics

research interests: English language studies, cognitive linguistics

Adiunkt in Department of English Philology, University of Warmia and Mazury, Olsztyn, Poland

email: drogosz000@poczta.onet.pl

Iwona Góralczyk

Ph. D. in linguistics

research interests: English language studies, cognitive linguistics

Adiunkt in Department of English Philology, University of Warmia and Mazury, Olsztyn, Poland

email: jangoral@wp.pl

Aleksandra Górska

PhD in pragmalinguistics

research interests: Computer-mediated communication, Computer-mediated discourse, Conversation Analysis, Discourse Analysis, Pragmatics, Language and Gender

Adiunkt in Department of English Philology, University of Warmia and Mazury, Olsztyn, Poland

email: aleksandra.gorska@uwm.edu.pl

Barbara Kryk-Kastovsky

professor ordinarius

research interests: pragmatics, historical pragmatics, discourse analysis, cross-cultural communication

Professor in Department of English, University of Vienna, Austria

email: Barbara.kryk-kastovsky@univie.ac.at

Stanisław Puppel *professor ordinarius*

research interests: English language studies, ecolinguistics, psycholinguistics, communication studies

The Head of Department of Ecocommunication, Adam Mickiewicz University, Poznań, Poland

email: spuppel@amu.edu.pl

Sabina Świderska M.A. in psycholinguistics

research interests: psycholinguistics, ecolinguistics

email: szajana@wp.pl

Katarzyna Wiśniewska

M. A. in psycholinguistics

research interests:
psycholinguistics, ecolinguistics,
methodology of foreign
language education

email : katarzyna.mail@wp.pl