LANGUAGES IN CONTACT VOL. 2

Ways to Protolanguage 3

edited by
Piotr P. Chruszczewski
John R. Rickford
and
Katarzyna Buczek
Aleksandra R. Knapik
Jacek Mianowski
guest editors
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book series: Languages in Contact. Vol. 2

proofreading: Christian A. Dumais, Paulina Bożek
editorial reading: Barbara Woldan
cover design: Konstancja Górny
DTP: Dorota Bazan

ISBN 978-83-60097-20-5

WYDAWNICTWO WYŻSZEJ SZKOŁY FILOLOGICZNEJ WE WROCŁAWIU
50-335 Wrocław, ul. Sienkiewicza 32
tel. (+48 71) 328 14 14, fax (+48 71) 322 10 06
http://www.wsf.edu.pl, e-mail: wsf@wsf.edu.pl

Komisja Nauk Filologicznych PAN, Oddział we Wrocławiu
50-449 Wrocław, ul. Podwale 75
www.pan.wroc.pl

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Introduction

The present volume unveils the vast scope and the huge potential of contact linguistics and protolanguage studies. It is demonstrated here how language contact and protolanguage can be approached from the perspectives of epistemology, sociology, culture studies, cognitive studies and cognitive linguistics. Interpreting and language training are also addressed. The epistemological and the socio-cultural aspects are studied by Bertolotti and Upchurch. The works by Boguska-Kawałek and Kłos can also be "classified" in this group, as they focus around the phenomenon of discourse. The social and the civilizational motives underlie the contributions by Stępkowska and Iwanowski – the former refers to interpreter social competence (hence at least indirectly also to interpreter training), while the latter promotes a civilizational rationale for language education. The group of articles that relate to cognitive studies includes texts by Adornetti and a collective work by Oliveira da Motta Sampaio, Improta França and Rezende Maia. The label "cognitive" as used here is only a working category, and the content of each of the above-mentioned contributions illustrates a vast spectrum of research undertaken in this domain. Krzeszowski's work stays in close relation to cognitive linguistics, but its content directly pertains to the studies of prelanguage, since it discusses selected terminological problems that these studies should take heed of. Ultimately, the articles by Dunbar, Napierała, Słoboda, Skrzypczak, Tamas and Wach focus on issues of protolanguage, language change and contact linguistics. This overwhelming variety of topics provides insight into the conceptual richness of the domain of contact linguistics and studies on protolanguage. It is hoped that the broad thematic scope of the volume can be inspirational for a large number of researchers of language, human communication (including text studies and translation), culture and literary studies, as well as broadly understood education.

Konrad Klimkowski
(The John Paul II Catholic University of Lublin)

Ines Adornetti
Roma Tre University, Italy
University of L'Aquila, Italy

A Neuro-Cognitive Perspective on the Production and Comprehension of Discourse Coherence

Abstract. This paper analyzes the cognitive foundations of discursive coherence. The theoretical models that equate language with grammar and linguistic processing with sentence processing explain discourse coherence in terms of the linear relations of cohesion between consecutive sentences. Against such models, this paper shows that discourse coherence cannot be interpreted in reference to the cohesive ties between the individual sentences. Through the discussion of theoretical arguments and empirical data, it is shown that coherence is not dependent on linguistic features but is rather a property that is processed by cognitive systems that are not specific for language. The hypothesis is that discourse coherence primarily concerns the organization of thoughts rather than the organization of language, and that it is dependent on executive functions responsible for action planning and monitoring.

Keywords: cognitive pragmatics, coherence, cohesion, discourse processing, executive functions, neurolinguistics.

Introduction

In this paper, we analyze a peculiar property of language: coherence of discourse. Specifically, assuming the point of view of cognitive sciences, we examine this property through the study of the mental capacities at the basis of its processing. This type of analysis allows us to highlight specific aspects of the construction of discourse and to give more general consideration to the nature of human verbal skills and better ways to investigate them. In fact, through the study of the cognitive processes

that govern the construction of discourse coherence, it is possible to show the key role that cognitive pragmatics should have in the study of the features of human communication.

Discourse processing is an issue that has been ignored for a long time in cognitive sciences. The reason lies in the fact that in cognitive sciences, the highest level of linguistic analysis is represented by grammar (more specifically, by syntax), and the prevalent idea is that to explain linguistic processing means to explain the processing of the syntactical features of the individual sentence (the relationships of the internal traits of the sentence). Our goal in this article is to show that such a perspective is largely unsatisfactory because it fails to account for some fundamental properties of human communication, such as those that guarantee the contextual appropriateness of linguistic utterances as coherence of discourse. Through the discussion of theoretical arguments and empirical data, we show that coherence does not depend on linguistic devices but is rather a property that is processed by cognitive systems involved in the organization of behavior in general. Specifically, our hypothesis is that coherence is a property that primarily concerns the organization of thoughts rather than the organization of language, and that is dependent on executive functions responsible for action planning and monitoring. A hypothesis of this type has two important consequences with respect to the classical tradition in cognitive sciences: the critique of the idea that grammar (syntax, specifically) constitutes the essence of language (*e.g.*, Chomsky 1975; Pinker 1994), and calling into question the idea that the processing of the sentence is the essence of language processing *tout court* (*cf.* Crocker *et al.* 2001).

1. The classical model of cognitive sciences and the primacy of grammar

The hypothesis proposed in this paper is opposed to a model of language very influential in contemporary cognitive sciences whose main point of reference is Noam Chomsky. In Chomsky's model of language, it is possible to stress two concepts that are particularly relevant to the topics discussed in this article: the priority of syntax on other dimensions of language and the primacy of the sentence on any other linguistic expressions (*e.g.* Chomsky 1975). According to Chomsky, knowledge of language

coincides with knowledge of grammar and in particular with knowledge that allows the speaker/hearer to produce/understand the sentences (*e.g.* Chomsky 1986). From this point of view, language processing coincides with microanalysis – namely, with the analysis of the internal traits (lexical and morpho-syntactic elements) – of the single sentence.

Although the ability to produce and understand sentences constitutes an important part of linguistic competence, in this work, we criticize the idea that the sentence is the essential constituent of language and that, consequently, the phrasal processing (microanalysis) can explain the overall processing of language. We show that processing based on microanalysis fails to account for some fundamental aspects of language such as the appropriateness of verbal expressions. In fact, when one moves from the level of the sentence to the level of discourse (macroanalysis), a basic property of language emerges – coherence – and calls into question the pragmatic dimension before the grammatical one (Adornetti 2012, 2013; Cosentino *et al.* 2013; Ferretti, Adornetti 2011; Ferretti *et al.* 2013).

Coherence can be generally defined as the conceptual organizational aspects of discourse at the suprasentential level (Glosser, Deser 1990). What governs the coherence of discourse? The prevalent idea, especially among linguists, is that coherence of discourse (oral or written) depends on the cohesion between pairs of consecutive sentences, namely, on the linear relationships between the content of adjacent sentences (*e.g.* Halliday, Hasan 1976; Reinhart 1980; Bublitz 2011). In a text, cohesive relationships are accomplished through grammatical and lexical mechanisms. Grammatical cohesion includes elements such as reference, substitution, ellipses, and conjunctions; lexical cohesion is based on repetition (repetition, synonymy, *etc.*) and location (co-occurrence of lexical items). What is important to stress for the purposes of our argument is that in this perspective, cohesion is a necessary condition of coherence. Bublitz (2011), for example, argued that the coherence of a text is not given except through cohesive ties because they help to ensure the unity of the text and act as signals that the speaker offers to the listener to show him or her the way to follow in order to interpret the verbal utterances in a coherent way (*cf.* also Tanskanen 2006). The idea, in other words, is that discourse coherence relies on linguistic elements and capacities.

2. The primacy of global coherence on local coherence

Although cohesive devices play an important role in the construction of discursive coherence, in our opinion, they are not a necessary condition of coherence. Central in this regard is the distinction between *global coherence* and *local coherence* (*cf.* Glosser, Deser 1990). The former is the manner in which discourse is organized with respect to an overall goal, plan, theme, or topic. Agar and Hobbs (1982: 7) stated that "the requirements of a global coherence say 'Given the overall goals I am trying to accomplish what can I say next that will serve them?'". The latter refers to the conceptual links between individual sentences or propositions that maintain meaning in a text or discourse. According to Agar and Hobbs (1982: 7) the requirements of a local coherence say "Given what I just said, what can I say that is related to it?". Cohesion is responsible for local coherence. The relevant point is to clarify whether local coherence is a necessary condition for global coherence. From our point of view, global coherence does not depend on the local; the cohesive bonds between adjacent sentences are not a necessary requirement of the overall coherence of the discourse. Specifically, our hypothesis is that global coherence is independent of cohesive devices since it is a property related, first of all, to the organization of thoughts (it is the way in which thoughts are connected to each other) rather than to the organization of linguistic relationships between sentences. Since cohesion is just the surface expression of a deeper level of coherence that concerns the organizational level of thoughts, our idea is that discursive coherence can also happen without the help of linguistic elements.

One of the strongest and most convincing arguments in support of the idea that global coherence does not depend on the cohesive bonds between pairs of consecutive sentences is offered by Giora (1985). The author argued that coherence does not rely on cohesion and that cohesion is a by-product of coherence. Central to this hypothesis is the distinction between *sentence topic* and *discourse topic*. According to Giora, the difference between cohesion and coherence lies in the fact that the former is the result of linear relationships between sentences and is based on the notion of sentence topic. Coherence, on the other hand, depends on the notion of discourse topic, a list of features shared by the sentences of discourse that do not depend on linear relationships between consecutive sentences. Consider the following example:

a. I bought a Ford. The car in which President Wilson rode down the Champs-Élysées was black. Black English has been widely discussed. The discussions between the presidents ended last week. A week has seven days. Every day I feed my cat. Cats have four legs. The cat is on the mat (Enqvist 1978: 110–111).

In (a), the sentences are linked through the mechanism of cohesive repetition. However, the set of sentences, despite the abundance of cohesive ties, does not constitute a unitary whole. The reader cannot help but judge the text as inappropriate. As pointed out by Giora (1985: 701) "The inappropriateness […] lies in that it is not clear what they discuss. [it] does not seem to make up a discourse interpretable as discussing some topic." To use Enqvist's (1978) words, this discourse is "pseudo-coherent:" the cohesive formal links that characterize the surface level of the text do not adequately reflect the relationships of coherence that underlie the text in terms of textuality and contextuality. Consider, instead, the following text:

b. George's high pass was headed to the right. The forward shot at once without dribbling and made a goal. The referee declared the kick off-side (Enqvist 1978: 111).

Unlike (a), there are not cohesive ties between adjacent sentences in (b). However, the text is pragmatically appropriate because the topic under discussion is clear. These examples show that the linear concatenation of sentences does not guarantee the overall coherence of the discourse and that it is possible to have coherent discourse even in the absence of cohesive ties. In other words, they show that local coherence is not a necessary condition for the global coherence.

3. Evidence from pathologies: the case of subjects with traumatic brain injury

The results of several neuroscientific and neuropsychological studies support the idea that global coherence does not depend on the skills involved in the processing of individual sentences. These studies showed, in fact, the existence of a dissociation between the capacities at the base of the microanalysis of language and the capacities that underlie the macroanalysis (*e.g.* Davis *et al.* 1997; Marini *et al.* 2008). Particularly relevant to

our topic is the research on the discursive capacities of individuals with traumatic brain injury (TBI), which has shown that TBI subjects generally do not present serious difficulties processing individual sentences (they have no problems processing lexical items and grammatical aspects) and local coherence, but they have deficits in the organization of global discourse (*e.g.*, Coehlo 2002; Coehlo *et al.* 2012; Davis, Coehlo 2004; Galetto *et al.* 2013; Hough, Barrow 2003; Marini *et al.* 2011; McDonald 2008). Consider, for example, the following transcript of a discourse of a TBI patient:

> c. I have got faults and. my biggest fault is. I do enjoy sport. it's something that I've always done. I've done it all my life. I've nothing but respect for my mother and father and. my sister. and basically sir. I've only come to this conclusion this last two months. and. as far as I'm concerned. my sister doesn't exist. (Perkins *et al.* 1995: 305).

As Perkins stressed, in (c) "each utterance is well formed […] However, as a piece of discourse it lacks coherence because of its sudden inexplicable topic shifts" (Perkins 2007: 16). Particularly important for the purposes of our argument is the fact that, as pointed out by Gloser and Deser (1990) and Hough and Barrow (2003) among others, cohesion is minimally damaged while global coherence is severely compromised in TBI subjects. This is evident in the following snippet of conversation discussed by Perkins (2007: 86) in which C, a man with TBI, is talking with T, a speech and language therapist, about trade unions.

> C: I admit this government we've got is not doing a good job but the unions are trying to make them sound worse than what they are
> T: mm
> C: they . they . cos I'm a Tory actually but I do vote . if there's a . er . a communist bloke there I will vote communist but . it all depends what his principles are but I don't agree . with the Chinese communism . and the Russian communism
> T: right
> C: but I believe every . should be equal but . I'm not knocking the royal family because you need them
> T: mm
> C: and they they they bring people in to see take photos

Despite the local sequential links between trade unions–government, government–Tory, Tory–communist, communism–Chinese/Russian communism, communism–equality, equality–Royal Family, Royal Family–tourist attraction, C shows a form of topic drift: he is unable to monitor what has already been talked about or to relate each individual utterance to some overall coherent plan or goal.

The results of this research led to the hypothesis that global coherence "appears to be controlled by higher-order processes whereas lexical cohesion may be driven by more automatised linguistic processes that are not disrupted after TBI" (Hough, Barrow 2003: 189). In the next section, we explain what the higher-order processes (disrupted in TBI) are responsible for in the control of discourse coherence.

4. Executive functions and coherence production

According to many scholars, the problems of discourse coherence that affect individuals with TBI are due to their deficits of executive functions caused by lesions in specific areas of the frontal lobes (*e.g.* Biddle *et al.* 1996; Hough, Barrow 2003; McDonald 2008). The term *executive functions* is an umbrella term that encompasses a wide range of cognitive and behavioral skills (Alvarez, Emory 2006; Banich 2009; Barkley 2012; Jurado, Rosselli 2007). From a general point of view, it is possible to characterize executive functions as the higher-order cognitive processes, mainly mediated from the areas of the prefrontal cortex (the anterior portion of the frontal lobes) that are needed to guide behavior toward a goal in nonroutine contexts and in complex and conflicting situations (Banich 2009; Gilbert, Burgess 2008). For example, according to Lezak (1982), executive functions allow us to formulate goals, to plan, and to carry out the plans effectively. Welsh and Pennington (1988: 201–202) defined executive functioning as the capacity "to maintain an appropriate problem-solving set for attainment of a future goal." According to Fuster (2008: 178), executive functions are needed to organize temporal-oriented behavior, language, and reasoning.

The general idea that emerges from the short list of the above definitions is that executive functions are involved in the planning and execution of goal-oriented behaviors. Two components of executive functioning play a key role in this regard: action planning and monitoring. Action

planning is the ability to create and carry out goal-oriented behaviors through the identification and hierarchical organization of the elements necessary to achieve a goal (Lezak *et al.* 2004). This ability involves a conceptual (abstract) formulation stage and an execution phase (for a discussion, *cf.* Morris, Ward 2005). The conceptual stage includes processes such as the identification of the ultimate goal of the action, the sequencing of the final goal into sub-goals, and the prediction of the consequences of the actions needed to achieve the sub-goals. The execution phase is characterized by processes such as the carrying out of the plan, the verification of the correct execution of each action, and the correction of possible errors.

Particularly relevant to the production of discourse coherence is the phase relative to the conceptual formulation of the plan (coherence, as we said, is the way in which the arguments of the discourse are organized with respect to a general theme or plan). Numerous studies have shown that the prefrontal areas more clearly involved in this phase are the dorsolateral regions (*cf.* Fincham *et al.* 2002; Srovnalova *et al.* 2012; Tanji *et al.* 2007). In an experiment by Crescentini and colleagues (2012), for example, healthy individuals were subjected to functional magnetic resonance imaging (fMRI) while performing the Tower of Hanoi test, one of the neuropsychological tests commonly used to measure action planning abilities. This test involves the use of an instrument consisting of three pegs in which three disks of different color and size are inserted. The subject has to move the disks in order to get the configuration specified by the examiner (ultimate goal) in the fewest possible moves (sub-goals). The results of the experiment have documented significant activation in the dorsolateral prefrontal cortex during the initial stages of the task, that is, during the subject's generation and evaluation of the abstract sequences (sub-objectives) of the responses to be put in place for the achievement of the final objective.

To successfully execute the plans, a constant monitoring of the task in progress is also needed. The monitoring can be defined as "the capacity to hold abstract coded representations of events that are expected to occur, so as to mark their occurrence or non-occurrence (*i.e.* monitor their relative status in relation to each other and the intended plan)" (Petrides 2005: 789). This capacity, for which the main neural substrate is the right lateral prefrontal cortex (Stuss, Alexander 2007; Vallesi, Crescentini

2011; Vallesi 2012), requires one to calibrate the effects of actions on the environment, to detect errors, to enable corrective actions if there is a mismatch between the behavioral responses (effects) and the mental representations (goals and expectations) of those responses, and to revise the subsequent actions. Action monitoring is, therefore, a key process in the organization of the temporal behavior; without an effective monitoring, no sequences of action could reach a goal successfully.

Numerous studies have shown that individuals with TBI usually have problems with action planning and monitoring (*cf.* Duncan 1986; Humphreys, Forde 1998; Zalla *et al.* 2001, 2002). Because of these problems, their behaviors appear confused and disordered; they are not able to conceptually organize and, therefore, to accomplish a goal-oriented behavior through the execution of a series of action sequences. For example, Zalla and colleagues (2001) have shown that persons with TBI with impairments in the anterior and dorsolateral prefrontal cortex have difficulty in the formulation and evaluation of a coherently structured conceptual plan of action, and that these difficulties are reflected in the execution of the corresponding behaviors. Our proposal is that the problems of discursive coherence of TBI patients are due to their deficits of action planning and monitoring.

In research on the spontaneous narrative skills of children and adults with traumatic brain injury, Biddle and colleagues (1996) explicitly put the disorders of global coherence of TBI subjects in relation to their deficits in executive planning and monitoring. The authors wrote:

> the narrative impairments of the population of adult and children with TBI in this study appeared to be result of the problems with planning, production and monitoring discourse. […] It is possible that the disruptions evident in the narrative of the children and adults with TBI were related less to language impairment than to difficulties with the executive processes utilized in discourse production. […] In other words, their deficits appeared less related to basic language skill deficits that to impairment in higher order processes required for the planning and organization of language. (Biddle *et al.* 1996: 465–464)

Similarly, McDonald (2008: 254) pointed out that "the global coherence of text may be affected by executive disorders that impair the ability to plan and sequence behavior to meet specific goals." More recently, Coelho and colleagues (2012) documented a causal relationship between

deficits of the cerebral areas involved in planning and deficits in discourse coherence. As we have seen, the main neural substrate of action planning is the dorsolateral prefrontal area. The study by Coelho and colleagues showed that TBI patients with injuries to the left dorsolateral prefrontal area had enormous difficulty managing the global coherence of discourse. Specifically, the patients omitted critical information and relevant details in their narratives and were not able to maintain the overall sense of the story. The results of this research are thus important evidence in support of the role of executive processes of the frontal lobes in the production of coherent discourse.

5. Executive functions and coherence comprehension

Neuroscientific research has shown that the prefrontal areas are involved not only in the production of discourse coherence but also in its comprehension (*e.g.*, Ferstl, von Cramon 2001, 2002; Ferstl *et al.* 2002; Kim *et al.* 2012; Zalla *et al.* 2002). Ferstl and colleagues (2002; *cf.* also Ferstl, von Cramon 2001), for example, analyzed and compared the comprehension of coherence of patients with lesions on the right temporal lobe, patients with lesions on the right frontal lobe, patients with lesions on the left frontal lobe, and patients with bifrontal lesions. In the experiment, subjects were presented 120 pairs of sentences in which the second (the target) was pragmatically linked to the first (the context). The relationship between sentences could not be derived solely on the basis of associative links between content words; rather, comprehension required the use of general world knowledge. Each target occurred in two versions; the cohesive version contained one or two lexical items (*e.g.*, pronouns or conjunctions) that explicitly signaled the connection between the sentences. In the incohesive version, these so-called cohesive ties were omitted or replaced so that the relationship between the two sentences had to be inferred based on pragmatic information alone. The incoherent conditions were created by switching the context sentences of two coherent trials. As for the coherent conditions, the target sentences in the incoherent conditions appeared both in cohesive and incohesive versions. After reading the sentence pairs, participants were asked to give an opinion on the coherence, indicating whether the two sentences were pragmatically linked together (through a yes/no judgment). Table 1 illustrates the four

experimental conditions. When the coherence between sentences is only implicit – that is, when there are not linguistic (cohesive) elements that signal the pragmatic connection between consecutive sentences – the subject, in order to comprehend, has to struggle to grasp the meaning of the sentences. For this reason, the condition most interesting to identify the possible systems responsible for the comprehension of coherence is represented by coherent–not cohesive items.

Table 1.[1]

COHERENT	INCOHERENT
Non-cohesive pairs	
Mary's exam was about to start. The palms were sweaty.	Laura got a lot of mail today. The palms were sweaty.
Laura got a lot of mail today. Some friends had remembered the birthday.	Mary's exam was about to start. Some friends had remembered the birthday.
Sometimes a truck drives by the house. The dishes start to rattle.	The lights have been on since last night. The dishes start to rattle.
The lights have been on since last night. The car doesn't start.	Sometimes a truck drives by the house. The car doesn't start.
Cohesive pairs	
Mary's exam was about to start. *Therefore, her* palms were sweaty.	Laura got a lot of mail today. *Therefore, her* palms were sweaty.
Laura got a lot of mail today. *Her* friends had remembered *her* birthday.	Mary's exam was about to start. *Her* friends had remembered *her* birthday.
Sometimes a truck drives by the house. *That's when* the dishes start to rattle.	The lights have been on since last night. *That's when* the dishes start to rattle.
The lights have been on since last night. *That's why* the car doesn't start.	Sometimes a truck drives by the house. *That's why* the car doesn't start.

The results of the experiment showed that in such cases, patients with left prefrontal lesions and bifrontal lesions had more difficulty than others. These patients made, in fact, more mistakes than others, and these mistakes were related mainly to the coherent–not cohesive pairs. According to the authors, "one possible explanation for these frontal non-aphasic language deficits is that discourse production and text

1 According to Ferstl, Guthke, von Cramon (2002): 294.

comprehension require the use of executive functions, such as structuring, monitoring, and problem solving" (Ferstl *et al.* 2002: 292). The results of this research have been confirmed by subsequent studies conducted in healthy subjects through neuroimaging techniques (*e.g.*, Yarkoni *et al.* 2008; Siebörger *et al.* 2007; Kim *et al.* 2012; Loeches-Martín *et al.* 2008).

Conclusions

In this article, we analyzed some aspects of the pragmatics of language from a cognitive point of view. Specifically, we examined the mechanisms underlying coherence, arguing that giving an account of such a property is needed to move from the level of sentence analysis to the level of discourse analysis (from microanalysis to macroanalysis). Through reference to the results of the research conducted on the discursive abilities of head injury patients, we argued that the processing of discursive coherence is strongly related to executive functions. From this point of view, coherence appears to be a fundamental property for both the conceptualization (and subsequent execution) of appropriate actions and the organization of coherent discourse. Given the close relationship between the organization of the action and its actual execution, stressing the role of executive functions in the processing of coherence is a way to emphasize the idea that language is grounded in the pragmatics of action. Therefore, in a perspective of this kind, in which linguistic processing is supported (in part) by the same capacities and devices that regulate the organization and the execution of actions, the coherence of language is a specific case of the more general coherence of behavior.

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Tommaso Bertolotti
University of Pavia, Pavia, Italy

Distributing Knowledge and Cognition in Gossiping Interactions

Abstract. Gossip has been the object of a number of different studies in the past 50 years, rehabilitating it not only as something worth being studied, but also as a pivotal informational and social structure of human cognition: Dunbar (2004) interestingly linked the emergence of language to nothing less than its ability to afford gossip. Different facets of gossip were analyzed by anthropologists, linguists, psychologists and philosophers, but few attempts were made to frame gossip within a properly epistemological framework (for instance Ayim (1994)). My intention in this paper is to set the bases for providing a consistent socio-epistemological account of gossip, understood as broadly evaluative talk between two or more people, comfortably acquainted between each other, about an absent third party they are both at least acquainted with. Hence, relying on recent multidisciplinary literature about the topic, and considering language as a distributive artifact, I will suggest the parsimonious modeling of gossip as a soft-assembled epistemic synergy, understanding synergy as a function-dominant interaction able to project a higher organizational level – in our case, the group as group-of-gossips. I will argue that the aim of this synergy is indeed to update a Knowledge Base of social information between the group as a projected whole and its members. The final part will instead focus on the epistemological labeling of the inference characterizing gossip: my contention is that the ever-present evaluative dimension in gossip – be it tacit or explicit, concerning the objects or the partners of gossip – is best defined through abduction. Consequently, it will be possible to characterize gossip as a group-based abductive appraisal of social matter.

Keywords: knowledge, gossiping interactions, epistemic synergy.

1. Gossip studies and group cognition

Whereas originally marginalized and despised, the practice commonly known as *gossip* became, in the past 50 years, a worthy study object in a number of different fields. The revaluation of gossip is indebted towards two main disciplines: anthropology on the one hand, and cognitive/evolutionary studies on the other. Anthropologists focused on gossip as a means of social regulation (see for instance Gluckman (1963) and Yerkovich (1977)), but the phenomenon often maintained a sense of geographical and chronological distance: keeping gossip as an anthropological topic seemed to shield "decent" Westerners from the (sometimes violent) implications of these studies. Conversely, evolutionary psychology and sociobiology immensely boosted gossip's reputation by showing its relevance as far as it concerns the development of language and sociality (Dunbar 2004; Wilson *et al.* 2002): gossip was presented as a *natural* tool for the enforcement of a determinate order within the group. Dunbar, specifically, maintained that gossip evolved along the lines of grooming to allow hominids the possibility to cope with life in large social groups: in his view, the origin of gossip is strictly connected with the development of language itself. Such arguments, together with the sociobiological perspective of Wilson *et al.* (2002), stressed the pragmatic-moral origin of gossip as a collective device that – by circulating social information – would monitor, report and punish deviants and free riders.

The difficulty of a non-ethical philosophical analysis of gossip[1] lies in the fact that philosophers like to begin their investigation by delimiting the object as best as possible: as far as gossip is concerned, in fact, one could not easily break it down to a basic unit, and it is therefore easier (and more useful) to frame it as a functional dynamic phenomenon. Few things are relatively straightforward when conceptualizing gossip: that gossip is a practice that is based on *language*, that it depends on the presence of a certain *group* of people, and that the identification of a bit of

1 Philosophy has already dealt with the *moral* nature of gossip, for instance most of the excellent collection *Good Gossip* (Goodman and Ben-Ze'ev 1994) is essentially a book of applied ethics. The main philosophical issue with gossip was to decide whether it is decent, acceptable, or not, and I will make occasional references to the issue of morality since, coherently with the recent trends, I acknowledge that a discourse on gossip may not totally prescind from a discourse on morality.

discourse as gossip is fugitively dependent of the acknowledgement on a whole superior network of gossiping interaction. Consider this brief example that could be conceived as a typical example of gossip:

> *A*: "I'm sure I saw C at the restaurant the other day, holding hands with a woman who wasn't his wife."
> *B*: "It couldn't be his wife indeed, she's visiting her mother for the weekend."
> *A*: "Poor girl! Does she realize what kind of schmuck she's married to?"

This makes sense as gossip because and only if we assume the existence of a group to which the three concerned individuals belong, and which is crossed by a number of other similar bits of conversation. Indeed, gossip has been associated to the presence of a determinate group to the point of being labeled as a group-serving behavior (Wilson and Dugatkin 1997; Baumeister *et al.* 2004; Dunbar 2004). My interest, yet, will focus on the analysis of gossip not from a merely psychological or linguistic perspective, but seeing it as a cognitive mediator and a collective tool for managing a certain kind of knowledge: therefore, I will approach gossip as it relates to groups understanding them as peculiar "knowers," composed by a community of individuals that *epistemically* behave as parts of a group.

2. The distribution of gossip as an epistemic synergy

To make this analysis as clear as possible, I would like to spend a few lines refuting some possible misunderstandings concerning previous studies on gossip and the *group mind hypothesis* (in short, GMH), made popular by sociobiological studies. In a nutshell, the existence of the group mind is a theory relating to the acceptance of groups as a *level* of natural selection, just like the cell, the organism and so on. Groups as *superorganisms* exhibit their own degree of fitness (which is then mediated upon the organisms), but the fact that they individually perform at their best should be taken as consequence of the existence of a coordinating "group mind" (Wilson, Dugatkin 1997; Wilson *et al.* 2002). This hypothesis is clearly on the socio-cognitive organization of eusocial animals such as ants, bees, termites, *etc.*

The group mind hypotheses, albeit quite handy to explain gossip, has been met coldly outside of sociobiology. I will not worry explicitly about such criticism, because a useful notion comes at play here allowing to shift from a cognitive ground to a more philosophical one: the concept of "synergy" (Kelso 2009). I suggest that non-eusocial groups are not best captured as epistemic and cognitive agents by the GMH, because they should be considered as "soft" cognitive systems. Coherently with the terminology employed by Anderson *et al.* (2012) to define cognitive systems, colonies of eusocial animals can be said to display a group mind inasmuch as their cognitive dynamics are "component-dominant" and not "interaction-dominant." That is to say that the group mind in a beehive, or in a colony of termites, relies on the cognition of single individuals whose contribution is determined by their genetic inheritance: Sendova-Franks and Franks (1994) studied this phenomenon among ants as "social resilience." In this sense, eusocial animals do not compose "soft" cognitive systems, because components cannot be easily detached and reattached. Conversely, "other systems, such as flocks of birds, are more fluidly put together. In the latter case, it does not matter which particular birds are part of the flock – any old bird will do – and each bird is capable of taking up each position in the flock" (Anderson *et al.* 2012: 716). In this case, what we witness is a synergy: "a functional grouping of structural elements (molecules, genes, neurons, muscles, (individuals), *etc.*) which, together with their supporting metabolic networks, are *temporarily* constrained to act as a single coherent unit" (Kelso 2009: 83).

It is important to bear in mind that the GMH is not an epistemological hypothesis but an evolutionary and biological one: my hypothesis stands at a different level and this is why I suggest that the epistemology of cognitive group phenomena can be captured by the concept of *epistemic synergy* in a more convincing and theoretically parsimonious way than by the GMH. The latter hypothesis is particularly cumbersome from an ontological perspective inasmuch as it may get to require the *actual* existence of groups as levels as selection – endowing groups with the same kind of existence displayed by cells and multi-cellular organisms, hence requiring the further hypothesis of an *actual* group mind. Seeing human groups in their cognitive performances (and in the underlying epistemic ones) as synergies accounts for their temporary

and often contingent character, and for the fact that in many cases pluralities of human agents (and also other social, but not eusocial, animals) indeed behave *as one*. Framing peculiar cognitive phenomena as epistemic synergies provides a parsimonious theoretical framework that is able to yield interesting results.

My suggestion, in order to unravel the question about the structural nature of gossip without getting lost in ontological debates about the existence of groups, *etc.*, is to set off from what is indisputably "real" in gossip, that is the *gossip itself*. Indeed, if we say that gossip is taking place it is because acknowledging the distribution, in a determinate physical and chronological extent, of a body of knowledge which is hosted in a linguistic form. Clark (2008) and Mithen (1996) got us accustomed with the notion of language as being something embodied and distributed, both in our neural structures, and in the external environment – in the shape of written language and acoustic waves as far as orality is concerned. Under this perspective, gossip is an artifact in Andy Clark's meaning: a distributed base of knowledge (mostly socially concerned) serving the brains and the conversations of a number of people. Can this artifactual view of gossip help us shed light about the relationship between gossip itself and the human beings relying on it?

2.1. Gossip and the group's Knowledge Base

If – epistemologically speaking – gossip makes sense only as the cognitive effort of a group (understood as an epistemic synergy) producing a language-based amount of shared social knowledge, then it might be appropriate to inquire whether groups can be seen as the actual subjects of gossip. Here the meaning of subject is the grammatical one, that is to say, it is groups that perform gossip.

One could argue that this is not the case, because clearly it is individuals who gossip about each other. Yet, as I suggested, gossip is ultimately about updating and sharing a collective Knowledge Base, composed of shared information about people and shared evaluation (also moral) of the information.

The pragmatic group-serving effects brought about by gossip, namely the enforcement of norms and rules due to the possible report of misbehaviors and free riders (Dunbar 2004; Beersma, Van Kleef 2011) are an effect of the epistemic structure of gossip. Through gossip individuals

enrich the Knowledge Base of the group they belong to (KB^G), and in return have their individual Knowledge Bases (KB^I) updated by the information gained by other members.

We could say that the relationship between KB^G and the multiple KB^I is an *epistemic osmosis*. By this expression, I refer to the way some knowledge is circulated according to its *gradient of relevance and update*: an update in KB^I will be transferred to KB^G if the former has not received it yet, and once KB^G is updated, the new information will reverberate (through subsequent gossiping interactions) to all the remaining Individual Knowledge Bases.

Beersma and Van Kleef (2011) experimentally proved that the presence of a witness, likely to issue a judgment and hence gossip, does indeed reduce the local occurrence of misbehavior. The reason resides in the process of epistemic osmosis: the "deterring" effect brought about by the process we are about to describe. Let us remember that for gossip to be effective, it must be pervasive. That is to say, if we take *m* to be a misbehavior (for instance, cheating) carried on while another member of the group (for instance, Individual 1) is present, the resulting situation could be schematized as follows:

1. Misbehavior *m* is witnessed by Individual 1, and stored in its Knowledge Base.
2. If *m* is stored in Individual 1's KB, and if no more up-to-date instance is present in KB^G, then *m* will be transferred to KB^G.[2]
3. Once received by KB^G, misbehavior *m* can possibly be transferred to all other connecting Individual Knowledge Bases.

The efficacy of gossip as an informative device resides in the interplay between (2) and (3), which could be metaphorically seen as establishing a *potential difference* allowing the formation of a flux. Indeed, the device functions only if a member of the group may, basing on her first and second-hand experience, believe (2) to be reasonably adequate. (2) therefore must meet a dual condition: on the one hand it must be *accurate*, on the other hand it must be *thought to be happening* (in other words, things must go as stated by (2) and group members must be aware of it). The interplay between (2) and (3) is epistemologically *self-enforcing*: if (2) is accurate, and known to be accurate, then it is also believed, but if (2) is believed, then it affects (3) even in

2 It is the mechanism we described as *epistemic osmosis*.

those cases in which (2) does not happen: it is still possible. Resuming the explanation so far, for gossip to be effective, agents must have good reasons to believe that any misbehavior recorded by a member of the group becomes an object of gossip and thus *necessarily* part of the Group Knowledge Base.

Indeed, the various individual Knowledge Bases contribute to forming KB^G in virtue of the very *possibility* that KB^G exists. That is to say, gossip as an epistemic synergy exists because information is known by individuals in virtue of the fact that it is part of the distributed repository.

The *possibility* in item (3) is relevant as well. It signifies that a member of the group might not have received information *m* because of constraints due to the fact that the whole epistemic osmosis is taking place in a framework of bounded rationality, where time and pragmatic possibilities play a pivotal role. Seeing it from a member's perspective, it is as if I could be *sure* that the group – postulated as an abstract *knower* depending on the KB^G – knows about my misbehavior *m*, but it might be the case that a fellow of mine has not received the update *yet*.

Gossip, though, remains effective because any member, *in virtue* of being part of the group (and thus part of the synergy that produces the KB^G) is *entitled* to knowing *m*, and therefore she could be reasonably expected to know *m*: this state could be defined as an *epistemic prerogative* shared by all members of the group.

This epistemic *asymmetry* between the perceived *necessary character* of KB^G ("The group knows everything") and the *possibility* of the single individual Knowledge Bases ("Single members may not know everything") partly roots the strategic success of gossip at a group level and its poor epistemic value at an individual level. *The knowledge of the group as an epistemic synergy is superior to that of each single individual, but is actualized only by its projection in the single, Individual Knowledge Bases, in all of their being limited and constrained*.

Summing up, in this subsection we contended that only groups, considered as *epistemic synergies*, can be the subject of gossip. Single individuals are the subjects of individual instances of gossip, but they acquire meaning as gossip only in reference and in virtue of their membership to the group. Therefore, from the epistemological perspective, it can be argued that groups gossip, through individuals.

3. Gossip as an artifact for making appraisals

Having hopefully made clear the relationship between gossip and groups starting from the knowledge dynamics at work in gossip, my aim in the remainder of this paper is to propose a view about how this knowledge is used. In the previous section, I modeled gossip as a kind of epistemic osmosis between the Knowledge Bases of different individuals (members of a group), aimed at maintaining a group Knowledge Base that is projected as a kind of "repository" of the knowledge (eminently social) of the group. I will now suggest that gossip is not only a tool for managing the linguistic storage of social knowledge, but also to activate it: thus, gossip proves to be an effective artifact to mediate and distribute cognition.

As we will see, while for every member gossiping coincides with knowing about the group, for the group as an epistemic synergy gossip is about *self-knowledge*.

3.1. Gossip as inquiry

It can be said that the present take on gossip was brilliantly foreshadowed by Peircean scholar Maryann Ayim (1994), in her article *Knowledge Through the Grapevine: Gossip as Inquiry*. Ayim relies on the characterization of science depicted by Charles Sanders Peirce: "the pursuit of those who are devoured by a desire to find things out" (Peirce 1931–1958, 1: 8).

> Gossip's model captures several aspects of Peirce's notion of a community of investigators. Describing what he sees as the causes of "the triumph of modern science," Peirce speaks specifically of the scientists' "unreserved discussion with one another, …each being fully informed about the work of his neighbour, and availing himself of that neighbour's results; and thus in storming the stronghold of truth one mounts upon the shoulders of another who has to ordinary apprehension failed, but has in truth succeeded by virtue of the lessons of his failure. This is the veritable essence of science" (Peirce 1931–1958, 7:51). (…) If Peirce is right that the unreserved discussions with one another are a cornerstone in the triumph of modern science, then gossip, by its very nature, would appear to be an ideal vehicle for the acquisition of knowledge. Gossips certainly avail themselves of their neighbours' results, discussing unreservedly and sharing results constitute the very essence of gossip. (Ayim 1994: 87)

Ayim observes – anticipating the success of social epistemology – that the epistemic ground and the social one are deeply intertwined in gossip, just as they are in science. After all, part of the success of a scientific endeavor rests in the asymmetry between what a scientist may individually know, and what Science knows. Science, just as the Group Knowledge Base, does not exist *in se*, but in the minds of individual scientists and in the knowledge externalizations (in books, universities, lectures) produced by scholars and scientists. Here the main difference is that gossip (usually) does not rely on material repositories that gossipers can access.[3]

3.2. Gossip as abduction

The analogy, though, is not only about the presence of a community – which was already noted as crucial in the previous section – but also about the inferential component as well. The root, Ayim contends (1994: 89), has to be traced back to the Peircean notion of *abduction*: "The good scientist, as described in the work of Charles Sanders Peirce, will be likely to start with a hunch, or retroduction, (or *abduction*) as Peirce calls it, a tentative hypothesis appealing because of its great explanatory capacity."

Ayim does not further investigate the abductive nature of gossip as its inferential basis, but there is more to be said on the matter. Let us consider the famous Peircean schema of abduction (Peirce 1931–1958, 5: 189):

A. The surprising fact C is observed.
B. But if A were true, C would be a matter of course.
C. Hence there is reason to suspect that A is true.

As I have already noted, gossip is often thought to have an "evaluative" component. For gossip to be evaluative one often thinks that it should embed a clear moral judgment of the information: what if the evaluative component of gossip should rather refer to the action of making an appraisal rather than stressing the judgmental feature? This is not to underplay the moral role of gossip, which must be necessarily considered, but the aim is to investigate the inferential ground affording

3 Things change when such a repository exists, as in the case of gossip mediated by Social Networking websites (Bertolotti 2011). Modifications onto the very structure of gossip may lead to violent phenomena such as cyberbullying, as described by Bertolotti and Magnani (2013).

the moral evaluation itself. Let us consider another intuitive example of gossip, bearing in mind the Peircean schema of abduction.

> Jason: "Guess what! Petra must be having an affair!"
> Lynda: "No way! How do you know?"
> Jason: "I saw her this morning at the station, passionately holding a man that was not her husband…"

The *evaluation as abductive appraisal* is clearly present in this very likely example of gossip:

A. Petra was passionately holding a man (who is not her husband) at the station. (*The surprising fact C is observed.*)
B. But if Petra was having an affair, then she would be passionately holding a man who is not her husband. (*But if A were true, C would be a matter of course.*)
C. Hence Petra must be having an affair. (*Hence there is reason to suspect that A is true.*)

The result of this abductive appraisal is now offered to the Knowledge Base of the Group, and it will be repeated among those who, in the same group, know Petra. What about the evaluation? In this case the evaluation is an appraisal of the state of things in the group's (social) world. The necessity of an explicit moral evaluation for gossip to be *morally evaluative* is further reduced by the existence of "thick concepts," that is concepts that are imbued with a moral content and cannot be accepted neutrally (Putnam 2002): words such as *affair*, *adultery* and so on, even if expressed without explicitly blaming the subject, universally evoke a set of moral rules that is enforced (or favored) within the group, while some other words can express *locally thick* concepts, *i.e.* they can be laden with moral evaluation only within a particular subculture or group. If we think that the fact that Petra is passionately holding a man who is not her husband is worthy of being told, it is because it is unusual, and by referring it we also – more or less tacitly – convey the opinion that we would not want to be in the shoes of Petra's husband.

Ayim, optimistically but not without a certain reason, stresses how this hypothetical (since abductive) nature of gossip should make it a viable way for achieving truth on social matters. The fact that (abductive) gossip can be withdrawn is compared to how scientists hold scientific truth – that is, provisionally.

> On this analysis of the scientific process, gossip may appear to be even more analogous to science in its procedure for arriving at the truth, with gossipers, ever ready to attribute no security whatever (6.470) to the beliefs and claims of others, subjecting them to the harshest of critical analyses, adopting such claims and beliefs "only …on probation" (7.202), insisting on the stringent tests that Peirce saw as a vital component of scientific progress, and standing "ready to abandon one or all as soon as experience opposes them" (1.635). The difference between science and gossip lies not in their procedure, then, but in the type of subject matter that will characteristically interest them. (Ayim 1994: 90)[4]

Here, Ayim seems to see only one side of the coin. What she refers to is that gossip, as a dynamic – usually quite fast-paced – information exchange, can warrant for an extreme openness towards the constant renegotiation of what is held to be true. Coherently with this, we can very well imagine that the precedent interaction is enriched by additional information, stressing the *non-monotonic*[5] dimension of gossiping collective inferences.

> Jason: "Guess what! Petra must be having an affair!"
> Lynda: "No way! How do you know?"
> Jason: "I saw her this morning at the station, passionately holding a man that was not her husband…"
> John: "Oh no, that was her brother. She muttered something about not being able to come to the corporate picnic yesterday because he was visiting…"
> Patricia: "That's impossible. My aunt and Petra's mother were very close friends, Petra is an only child."

The contributions of John and Patricia are crucial for establishing the *provisional truth* that will then be received by KB^G. If John's were conclusive, then there would be no rumor that Petra is having an affair. It seems more reasonable that a married woman hugs her brother at the station than a lover, if the former is in town. The matter would be settled were it not for Patricia's remark, which refutes John's defense. In this sense, the abductive nature of gossip can indeed be seen as a *collective*

4 Brackets refer to paragraphs in Peirce (1931–1958).

5 In logical jargon, a kind of reasoning is considered "monotonic" if increasing the premises does entail the same consequence (think of deduction). Conversely, in non-monotonic reasoning (as in the case of abduction), increasing the number of premises might entail a different consequence.

inference to the best explanation: performed by many agents instead of one (hence collective), it is an abduction involving the formation of a set of sentential hypotheses that are accepted as plausible (at the beginning of our case, Petra could have been holding either her lover or her brother), and then evaluated (also by resorting to moral knowledge) so that the *most plausible* is accepted, that is the one able to "explain" more. That is the *best* explanation, even if – as usual when dealing with abduction – we have to note that the adjective "best" has to be taken in a Pickwickian sense: actually abduction never reaches the status of best hypothesis, we have to intend the word "best" in a contextual and provisional way (Magnani 2009).

Conclusions

In this short paper I proposed a new vision of gossip, both consistent with evolutionary/cognitive findings, and with the recent conceptions of language as an artifact, distributed and aimed at some end. Starting from the acknowledgment of gossip as a shared artifact produced by a collectivity, it can be said that the activity of gossip is not carried out by individuals alone, but by groups *through* individuals, who are able to gossip only in virtue of their membership to a group. Indeed, gossip is about the *collective update of a Knowledge Base pertaining to the group*, and to which all members can access in virtue of being members of a group. If understanding the artifactual nature of gossip can be of help in understanding the relationship between gossip and the gossiping group, it can be of help also to understand its instrumental role beyond the functional perspective. Gossip is not only about sharing facts with moral evaluation but also about making *inferences* about the social state of things in a group: these inferences, often performed in a dynamic collective interplay, are best defined as *abductions*. This perspective on gossip, as I suggested at the beginning of this paper, is interestingly consistent with the recent development in language studies, stressing the artifactual dimension of language. Seeing language, and therefore gossip, as a distribution of knowledge into one's environment does indeed spark an interesting insight: if indeed it is possible to indicate the group as dependent from a shared depository of gossip, it can be argued that the *distribution* massively affects the distributor, rather than *vice versa*.

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Joanna Boguska-Kawałek
Adam Mickiewicz University, Poznań

The Discourse of Avant-Garde Art as an Expression of Primordial Emotions of Man

Abstract. This paper departs from the conviction of some scholars that protolanguage developed as a reaction of individuals to the stimuli of the environment, and, along with all sorts of non-verbal means, facilitated them the expression of affective states of their mind. At the same time, it argues that certain parallels can be noticed between the beliefs concerning human protolanguage and the demands on the means of expression in art, its mission, and goals formulated by members and theorists of the avant-garde movement. This in turn can lead to important conclusions about human nature in general, and a human's need of expressing feelings and emotions in particular. Assuming that in the early stages of the development of mankind's protolanguage, it probably enabled individuals to experience, to name, and to communicate different – positive as well as negative – feelings (as satisfaction, joy, safety, agreement or danger, fear, pain, hunger, anger, guilt, shame, blame, hatred, embarrassment, distrust, and the like), the works of artists, according to the manifestos of the avant-garde and the discussions in the professional press, have to express the primordial emotions of their creators.

The subject matter of this article constitutes the discursive exponents of artists' attitudes towards the inspirational source of their creativity. The basis of this analysis stems from the selected programs formulated by representatives of the avant-garde and their reflections in journalistic texts and private correspondences.

Keywords: protolanguage, emotions, creativity, textuality.

1. Avant-garde artists' search for the primordial

For the purpose of understanding the ideas underlying the artistic activity of the avant-garde artists, it is necessary to review the definitions and considerations regarding the movement by art critics who published their works in the 1970s and 1990s. Renato Poggioli ([1968] 1971: 4), an Italian literary critic, in his influential book *The Theory of the Avant-Garde*, argued that the movement should be viewed as an ideology which is always a social phenomenon. He pointed out that the movement of the avant-garde developed in different countries in various social and political conditions, yet its common features were the ideas of revolution and social issues, thus it can be stated that it was of social, developmental and evolutionary character. Poggioli ([1968] 1971: 6–9) further explained the connection between art and society, art's mission and its role for society and its connection with political radicalism.

Extremely enlightening for the discussion at hand are the observations of the famous art critic, historian and philosopher Donald Kuspit in his work *The Cult of the Avant-Garde Artist* from 1993, who explained that primordial art was "one that seems freshly fundamental because it articulates the fundamentals of the lifeworld and the self" and was "a quintessential art" (*cf.* Kuspit 1993: 15). Using Kuspit's words, avant-garde art was believed, in the context of the political and social situation at the turn of the 19th century, to express "a wish to regress to the primordial beginning to escape the decadent end" and that the primordial was "realized" and "articulated" by "the provocation or scandal of deformation or distortion" (*cf.* Kuspit 1993: 29–31). According to the critic, the works of the avant-garde artists eventually bring on the "therapeutic effect" by a "provocatively distorted work of art," by a seeming contradictoriness, ugliness or shock, which evokes strong emotions (*cf.* Kuspit 1993: 32). Thanks to the collection of texts by artists and art critics compiled by Herschel Chipp in *Theories of Modern Art. A Source Book by Artists and Critics*, published in 1968, readers understand that artists believed that their mission was to help humanity through their artistic activity; also, for example, Hans Arp, a German-French artist, explained that they "searched for an elementary art that would, […], save mankind from the madness of these times" (quoted after Chipp 1968: 114).

2. Theories of language emergence, basic emotions and social conditions for expressing feelings

Interestingly, there are theories of language emergence which emphasise the importance of the human need for expressing emotions in the development of their means of communication. Mario Pei, an Italian-American linguist, in *The Story of Language* (see Pei [1949] 1965: 22) presented six theories which support that view. In particular, he mentioned: (1) the "bow-wow" theory which states that language began as imitation of nature's sounds, (2) the "ding-dong" theory which holds that language evolved due to, as he called it, a mystic correlation between sound and meaning, (3) the "pooh-pooh" theory which has it that language arose from sounds expressing surprise, fear, pleasure, or pain, (4) the "yo-he-ho" theory, according to which language evolved from sounds of physical effort, (5) the "sing-song" theory holding that language emerged from primitive chants, and (6) the "ta-ta" theory which has it that language evolved from imitation of body movement. All these proposals dealing with the origins of language argue additionally for taking into account the social context of verbal communicative encounters.

Accordingly, Chris Knight, a contemporary British anthropologist and political activist, presents in his article "The Origins of Symbolic Culture," published in 2010, a review of works by psychologists, archaeologists, anthropologists and neuroscientists concerning the emergence of language. He assumes, basing his conclusions on historical and archaeological evidence, that language evolved in response to the requirements of social interaction and social needs of the human species to create "moral, religious and other cultural illusions" (*cf.* Knight 2010: 193). The authors whose research he refers to have put forward or contributed to theories of language origin. The focus here will be on Knight's ideas and conclusions, from which it may be inferred that symbolic culture evolved due to the complexity of basic human emotions, such as interest and joy or happiness, sadness or anger, disgust or fear, he lists after neuroscientist Carroll E. Izard (*cf.* Izard's (2007: 261) article "Basic Emotions, Natural Kinds, Emotion Schemas, and a New Paradigm"). In Knight's opinion, the need to express emotions ultimately led to the emergence of language.

What is valuable about Knight's (2010) article is the fact that it extensively discusses and assesses 13 hypotheses provided by recognized scientists and scholars from the relevant domains of study. The hypotheses in question have been given meaningful titles by their creators: (1) Philip Chase, an anthropologist, was convinced that "Symbolism enforces co-operation between strangers," (2) Richard Sosis, an American anthropologist, stated that "Costly ritual enforces cooperation between strangers," (3) Merlin Donald, a Canadian psychologist and cognitive neuroscientist, believed that "Mimesis" encourages communication, (4) Dan Sperber, a French social and cognitive scientist, was of the opinion that "To qualify as symbolic, a signal must be false," (5) Roy Rappaport, an American anthropologist, formulated the statement that "In the beginning was the Word," (6) Jerome Lewis, an anthropologist, lecturer in Social Anthropology, hypothesised that "Hunting, mimicry and play" had influence on language emergence, (7) Michael Tomasello, an American developmental psychologist, expressed his opinions on "The cultural origins of human cognition," (8) Andrew Whiten, evolutionary and developmental psychologist, a professor of Evolutionary and Developmental Psychology at the University of St. Andrews, believed in "The evolution of deep social mind," (9) Christopher Boehm, evolutionary anthropologist, professor of Biological Studies, University of South Carolina, expressed his views in sociological terms "From counterdominance to reverse dominance," (10) Robin Dunbar, a British anthropologist and evolutionary psychologist, also tried to explain the emergence of language through "Social brain, gossip and grooming," (11) Sarah Hardy, an American anthropologist and primatologist, viewed "The origins of mutual understanding" as the incentive for communication, (12) Kristen Hawkes, an American anthropologist, was of the opinion that "Grandmothering and show-off hunting in human evolution" contributed to the development of linguistic abilities of man, and (13) Camilla Power, a British anthropologist, came up with quite an innovative approach with her idea of "Female cosmetic coalitions."

As it appears, neuroscience has significantly contributed to research into emotions and examined the mechanisms of the emergence of emotions and the need to express them, with the conclusion that the basic emotions are universal for the human species and termed the basic group as primordial emotions, already specified after Izard (2007: 260–264).

Therefore, it must be highlighted that a number of neurological experiments have addressed the issue of emotion-related phenomena and Izard postulates that emotions are properties of an individual which enable social functioning, and which influence and motivate the actions of an individual (see especially Izard 2007: 263).

What is more, Knight makes it a crucial point to emphasise reproductive strategies and the importance of procreation for the emergence of symbolic culture and language. According to Knight and Power in their article "Social Conditions for the Evolutionary Emergence of Language" (2011), many theories pertaining to the development of language treat the issue of sexual relationships and reproductive strategies marginally while others overlook them. What the researchers believe to be true is the idea of creating coalitions within female groups to protect the interests of other females in the group and the "tendencies to resist being dominated – counterdominance" (Knight, Power 2011: 348) and also forming alliances between females and some members of male groups consisting of sons and brothers. The need to form such coalitions and alliances results from a wide range of concerns and the ability to infer mental states of other members of the species which Knight and Power term as mindreading, as well as from subtle emotions the human species developed which evolved into empathy.

At this point it seems necessary to point out that when coalitions or friendships or other kinds of social bonds determining participation in some kind of a social group are considered, then the insightful work by Steven Watson *Strange Bedfellows* requires attention for the reasons of explaining the dependence on one another and the needs for communicating and sharing emotions. In the view of Watson, a cultural historian of the American avant-garde, the majority of such circles were based on sexual relationships between the members who sought comfort and safety granted through expressing and sharing emotions both by means of language and art. One example of such an artistic circle, according to Watson, is New York's Greenwich Village, which he describes as

> [b]oth a geographical entity and a state of mind, the Village was where individuals could go to reinvent themselves through psychoanalysis, feminism, fashion, revolutionary politics, and unorthodox sexual relationships. (Watson 1991: 7)

3. Artistic activities of man as the expression of basic emotions

As it follows from the definitions of art reviewed in the 2010 article by Andrzej Bator, art critic and theoretician, Polish critics came up with the claim that art perceived as the pursuit of truth is a universal human activity prime to discursive thought, and artistic activity is considered prime to the scientific, philosophical or religious activity of man. As Bator (2010: 36) concludes, the aim of art is exploring reality in the scope unattainable for language means.

The art of an avant-garde artist is described by Kuspit (1993: 15) as the most primordial art in that it celebrates the fundamentals of life and emotions of the self. The idea expressed by Nikos Stangos (1994) in *Concepts of Modern Art* follows that the movement of the avant-garde is a unique phenomenon encompassing a number of movements within which might supply an explanation to the complexity of human nature and the human need to express basic emotions (see Stangos [1974] 1994: 7). The denominations of the avant-garde movement taken into consideration include postimpressionism, symbolism, fauvism, expressionism, dadaism and surrealism, in which emotions are exposed with a varying extent. Assuming that expressing emotions has been all prevailing in human artistic activities, it might be hypothesised that a parallel process could have been a contribution to the expression of human emotions in language. The important aspects of their artistic activity emphasised by artists themselves comprise originality, individuality, primitivism and the need to go back to the dawn of time, to the beginning of humanity, which might serve a therapeutic purpose for humankind.

It is believed that the avant-garde critics and artists recognized the priority of the need for expressing emotions in interpersonal encounters over any intellectual or cognitive content. In order to illustrate this assumption, two works, *i.e.*, *Theories of Modern Art* by Herschel Chipp and *100 Artists' Manifestos. From the Futurists to the Stuckists* edited by Alex Danchev (2011) are referred to. While reading the theoretical considerations of post-modern artists or manifestos, one ponders over questions whether the particular expressions support the views that artists were aware of the natural human need to express both positive and negative emotions, that emotions motivate human activities, that they have an impact on the activities of others, that they are connected

with experiencing the social reality of man, that they are connected with creating and experiencing works of art.

Below are selected samples quoted where the relevant parts expressing primordial emotions have been marked in bold print. The examples have been numbered to make the analysis more clear.

Artists and theoreticians of art maintained that emotions, and in particular the primordial ones, expressed through artistic activity may: firstly, result from sensual experiences of man, secondly, be connected with experiencing colours, sounds and shapes, thirdly, be the effect of social experiences of man, fourthly, result from experiencing nature, and fifthly, result from creating and experiencing works of art.

The following comprises of selected expressions formulated by, for instance, Paul Gauguin [1848–1903], a French Post-Impressionist artist; Wassily Kandinsky [1866–1944], a Russian painter and art critic; André Fontainas [1865–1948], a Belgian Symbolist poet; Charles Baudelaire [1821–1867], a French poet and art critic; and Ricciotto Canudo [1879–1923], an Italian film critic.

The quotations below are the examples that

(I) emotions result from the sensual experiences of an artist:

> Any idea can be formulated, but not so **the sensation of the heart**. What efforts are not needed to master **fear or a moment of enthusiasm**! Is not love often instantaneous and nearly always blind? And to say that thought is called spirit, whereas **the instincts, the nerves, and the heart are part of matter**. (*cf.* Gauguin, quoted after Chipp 1968: 62)

(II) emotions are connected with experiencing colours, sounds and shapes:

(i) Colour, being itself enigmatic in the sensation which it gives us, can logically be employed only enigmatically. One does not use **colour** to draw but always **to give the musical sensations which flow from itself, from its mysterious and enigmatic interior force**. (*cf.* Gauguin, quoted after Chipp 1968: 66)

(ii) A first encounter with any new phenomenon exercises immediately **an impression on the soul**. … *It is evident therefore that color harmony must rest ultimately on purposive playing upon the human soul: this is one of* ***the guiding principles of internal necessity***. (*cf.* Kandinsky, quoted after Chipp 1968: 153)

(III) emotions are the effect of the social experiences of man:

> … the idol is there not as a literary symbol but as a statue, yet perhaps less of a statue than the animal figures, less animal also, combining my dream before my cabin with all nature, **dominating our primitive soul, the unearthly consolation of our sufferings to the extent that they are vague and incomprehensible before the mystery of our origin and of our future**. (*cf.* Gauguin, quoted after Chipp 1968: 75–76)

(IV) emotions result from experiencing nature:

(i) Look at the immense creation of nature and see whether there are not laws to create, with very different aspects which are yet similar in their effect, all human sentiments. (…) **All our five senses arrive directly at the brain, conditioned by an infinity of things which no education can destroy**. (…) The straight line indicates the infinite, the curve limits creation, without taking into account the fatality of numbers. (*cf.* Gauguin, quoted after Chipp 1968: 59)

(ii) The landscapes that compose their profound, subdued harmony are organized not so much for crude picturesque effect as for the purpose, almost always achieved, of creating warm, brooding **wellsprings for the surging emotions**. (*cf.* Fontainas, quoted after Chipp 1968: 73)

(iii) … seeking to **express the harmony between human life and that of animals and plants** in compositions in which I allowed the deep voice of the earth to play an important part. (*cf.* Fontainas, quoted after Chipp 1968: 73)

(V) emotions result from creating and experiencing works of art:

(i) Baudelaire's theory of "correspondence', stated in the poem "Correspondence" of 1857, was also deeply influential on the poets and painters. It was, briefly, that **a work of art was to be so expressive of basic feelings and so evocative of ideas and emotion** that it would rise to a level on which all the arts were interrelated; sounds would suggest colours, colours sounds, and even ideas would be evoked by sounds or colours. (*cf.* Chipp 1968: 49–50)

(ii) **Painting** is the most beautiful of all arts. **In it, all sensations are condensed; contemplating it, everyone can create a story at the will of his imagination and – with a single glance – have his soul invaded by**

the most profound recollections; no effort of memory, everything is summed up in one instant. (*cf.* Gauguin, quoted after Chipp 1968: 61)

(iii) What artists ask of the evolution of art are **new emotions**, through the discovery of **new modes of expressing the artistic emotionalism of a time**. (*cf.* Canudo, quoted after Danchev 2011: 69)

(iv) In our age of excessive individualism, every artist has to create his **interior world** and his exterior representation. He has an obligation to **give concrete expression to this particular vision of life** and **the right to express it**. (*cf.* Canudo, quoted after Danchev 2011: 70)

Conclusions

Having researched the above theories and scientific postulates concerning the emergence of language together with the theories and comments of avant-garde art, one can conclude that expression of emotions seems a very strong drive and motif for human communicational activities. On the basis of the examples of artists' and critics' comments and postulates, it becomes evident that they were acutely aware that the need for expressing human moods and feelings is a natural response and a vital incentive for interaction. They emphasised the importance of emotions in their artistic programs, in comments about their own works of art, as well as highlighted the role of the works of art in the interaction with viewers, listeners and readers. The avant-garde artists and art critics in their writing captured the psychological conditioning of man for the sensual experiencing of social reality.

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Robin Dunbar
University of Oxford, UK

How, Why and When Language Evolved

Abstract. Archaeologists, psychologists and linguists all assume that language evolved to allow humans to exchange information mainly about the physical world. We use it to exchange bits of useful information ("There are buffalo down at the lake today") or to allow us to instruct others (usually children) in some functionally useful art form (*e.g.* how to make stone tools or how to use a bow and arrow to kill a prey animal). As plausible as this may seem, there is in fact no evidence to justify this view, and those who espouse it have never troubled themselves with finding any supporting evidence. This is not to say that we do not use language for both these purposes; rather it is to raise an important question about what language is designed to do. The fact that we can do these things, and that grammar (by allowing us to structure complex sentences) makes this possible, does not mean that they are the core functions of language – either when it first evolved or now. They may simply be emergent properties of language – something that, inadvertently, language allowed us to do, and which then took on a life of its own.

For the last two decades, the alternative view has been that language evolved for essentially social reasons – to allow us to bond large social groups (the so-called "gossip hypothesis"). (Note that the term 'gossip' is used here in the very general sense of the exchange of personal social information, not the more everyday sense of negative or destructive gossip.) Of course, the gossip hypothesis does not preclude the possibility that language is used for instruction any more than the conventional instructional hypotheses preclude the possibility that language can be used for social purposes. The defenders of each hypothesis readily acknowledge that the other function exists. They simply disagree about which is the original functional of language and which is the derived function.

Keywords: language evolution, information exchange, social bonding, gossip hypothesis, instructional hypotheses.

Introduction

Archaeologists, psychologists and linguists all assume that language evolved to allow humans to exchange information mainly about the physical world. We use it to exchange bits of useful information ("There are buffalo down at the lake today") or to allow us to instruct others (usually children) in some functionally useful art form (*e.g.* how to make stone tools or how to use a bow and arrow to kill a prey animal). As plausible as this may seem, there is in fact no evidence to justify this view, and those who espouse it have never troubled themselves with finding any supporting evidence. This is not to say that we do not use language for both these purposes; rather it is to raise an important question about what language is *designed* to do. The fact that we can do these things, and that grammar (by allowing us to structure complex sentences) makes this possible, does not mean that they are the core functions of language – either when it first evolved or now. They may simply be emergent properties of language – something that, inadvertently, language allowed us to do, and which then took on a life of its own.

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The fact that we have two alternative hypotheses for something is always good news: it allows us to test between alternatives and decide which one is right. When we have only one hypothesis, we are reduced to searching for confirmatory evidence (evidence that confirms our favored hypothesis), and we invariably ignore the alternative hypothesis completely. With two incompatible hypotheses in the same frame, we can search for ways of testing between them, and if these are genuinely

incompatible hypotheses our tests will allow us to distinguish between them uncontroversially. In this case, our two hypotheses are: (1) language evolved for instructional purposes, and later acquired social functions *vs.* (2) language evolved for social functions, and was later used in instructions contexts. Some people have been tempted to try to escape this dilemma by suggesting that language evolved for both purposes simultaneously, and that we cannot distinguish between them. However, this is not only just a lazy 'cop out,' it is also heuristically unhelpful: when we have two hypotheses that can be forced into opposition, we should exploit the opportunity this offers because rigorous testing between hypotheses (something philosophers of science refer to as 'strong inference') always leads to scientific progress. In contrast, ducking out and accepting the easy compromise never does – and may even lead to further confusion if it really is the case that only one hypothesis is true. Of course, it is perfectly possible that this compromise solution *is* true (language did evolve to do both jobs simultaneously), but we will not know that for sure if we simply assume it to be true without any evidence. The best strategy is always to force the two hypotheses into competition with each other and then test between them. If they really are both true (as the compromise solution assumes), then our attempts to test between them will always yield negative or inconclusive results. If after many attempts to test between them we are still unable to come to a definitive conclusion, *then* we can reason that the compromise solution is probably true. At least at this point we now have solid empirical grounds for our conclusion.

There is, however, another reason why we should be sceptical of the compromise solution. Evolutionary biologists are very reluctant to consider that a trait evolved for more than one function. This is, of course, a heuristic device rather similar to the one I described above as strong inference. However, it rests on the important biological assumption that two functions imply two separate mutations, and two major mutations at the same time are extremely unlikely. Most cases where we find two or more functions being subserved by a trait arise because of evolutionary windows of opportunity: the trait evolved because of one key function, and once it was in place it acquired a secondary function. This second function may even take over the trait and exaggerate it beyond

recognition – sexual selection is particularly effective at doing this – and this may, of course, make it difficult to identify the original function. However, this does not obviate the fact that we need to think carefully in evolutionary terms how traits evolved. The biologists' usual solution to this problem is to ask which function is crucial to the trait's survival: in other words, if we remove one function, will the trait disappear (or at least not be expressed so strongly)?

Let me add one additional caveat. Biologists, of course, instinctively prefer comparative studies as the way to test for evolutionary function. This is always difficult when, as in the case of language, only one species actually has the trait. In this context, I will simply assert that any attempts to claim that honeybee 'languages,' dolphin whistles or chimpanzee gestural communication are relevant here are nonsense. However similar these look to human language, and however true it may be that they represent precursors of human language, they are *not* language in any meaningful sense that would allow us to test the functions of *human* language.

In this paper, I will first offer two examples of how we might go about testing between the functions of language. These are in no sense conclusive, I suspect, but at least they represent an attempt to grapple with the problem, and so offer us a way forward. I will then argue that our best bet is to build a jigsaw of explanatory claims that interlink to make a coherent story. This has two merits. One is that the more embedded these separate explanatory strands are in a single framework, the more they provide support for each other and for the underlying hypothesis on which they are based. Secondly, it sets the explanatory bar high: alternative hypotheses have to be able to rise to the same challenge, and if they fail, that in itself counts as evidence against them.

Testing between competing hypotheses for the function of language

We have, in principle, two alternative hypotheses: language evolved to subserve social functions and language evolved to subserve instrumental functions. However, the social functions hypothesis actually comes in three distinct forms. I will identify these: the social gossip

hypothesis (Dunbar 1993, 1996), the social contract hypothesis (Deacon 1995) and the mating strategy or Scheherazade hypothesis (Miller 1999). We have undertaken two experimental tests that sought to discriminate between these four hypotheses. Both of these experiments used memory for the contents of a story as the measure of how salient the contents were for participants. The logic of the design was this: if language evolved for a particular purpose, that purpose would likely have been around much longer than the others, and hence would have remained the key constraint on evolutionary deviations towards other functions; as a result, the mechanisms that underpin language would be better designed to support that function, and so would naturally still be reflected in a tendency to attend to and remember any facts associated with that function.

In the first study, Mesoudi *et al.* (2006) ran two separate transmission chain experiments in which four subjects were asked to pass on to the next person in the chain a piece of text (about 55 words long) that they had read. In each case, the subject first read the text, and then wrote it down as best as they could remember it and passed this written text on to the next person in the chain. The texts differed in content to reflect the different hypotheses. One text was purely factual (a description relating to the history or climate of the city of Denver, Colorado, in the USA), but the other texts involved descriptions relating to a particular student named Nancy (these ranged from salient facts about her going swimming to gossip about a relationship she was having). The content of the three texts in one experiment and the four texts in the second experiment could be described as being, respectively, about physical, individual, social and gossip facts. These experiments thus had a between-subjects design. In both studies, the facts of the gossip and social stories were remembered significantly better than facts of the individual (Nancy's efforts to get to the swimming pool) or physical stories (Figure 1). The conclusion was social content was a more natural environment for linguistic humans than physical factual stories, irrespective of whether the factual stories were about physical places (Denver) or a person (Nancy). More importantly, there was no difference between the social and gossip versions of the story, suggesting that salacious gossip *per se* does not make stories any more memorable (at least when we do not know the person concerned).

In a follow-up experiment, Redhead and Dunbar (2013) used a simplified design (how much a subject remembers having read a story once, with no transmission chain involved) with a more complex set of five stories, each of which was identified with a different hypothesis for the function of language. Each subject was shown all five stories, so this experiment used a within-subject design. These were the transmission of instrumental facts (in this case how bees make honey) and the three social hypotheses (gossip, social contracts and the Scheherazade hypothesis). The gossip hypothesis came in two forms: a story about a social friendship and one about romantic relationships. Importantly, the Scheherazade hypothesis was tested using a linguistically flamboyant version of the instrumental story (how bees make honey), thus allowing a Scheherazade effect to be distinguished from the social effect. These stories averaged around 65 words in length, and as in the Mesoudi *et al.* (2006), every effort was made to ensure that the stories contained the same number of facts, average number of syllables per word (except for the Scheherazade story, where this was the key factor), *etc.* The results from this study revealed that the three social content stories were remembered significantly better than the two instrumental factual stories (Figure 2). Stories about romantic relationships and social contracts were remembered slightly better than the story about a friendship, but the difference was not significant.

In another study, Mickes *et al.* (2013) showed that subjects were significantly more likely to remember online posts from Facebook (essentially social content) than to remember either people's faces or sentences from books. In a follow-up experiment, they showed that this effect could be enhanced by asking subjects to comment on a personal social event related to the text they read (a Facebook post of a sentence from a book): although they interpreted this as implying that there was nothing special about the Facebook posts as such, in fact the data emphasise how important the social meaning of the words is for making them salient to us.

Thus, these three studies, using different experimental designs and different materials, all point to the fact that the social content of speech makes it much more memorable: the human mind seems designed to pay special attention to social utterances and so to remember them better. On the assumption that the design reflects function, these studies all

suggest that language may have evolved for an essentially social purpose (the exchange of information about relationships) and only secondarily been adapted for use in the exchange of instrumental factual content. This could, of course, have happened quite soon after language evolved, but the point is that this function is an exaptation and not the original adaptation. Interestingly enough, the Redhead and Dunbar (2013) study strongly suggests that Miller's Scheherazade hypothesis is also an exaptation – a later exploitation of an evolutionary window of opportunity offered by the fact that language already existed.

An alternative approach to this problem is to use a critical tests methodology. The critical tests method was originally developed by Newton in his studies of physics during the 17th century, and it provides a very powerful way of taking apart competing hypotheses. The essence of it lies in finding contexts in which the competing hypotheses make contrasting predictions so that the actual data can only support one hypothesis. Cases in which several of the hypotheses make the same prediction are useful, of course, but less informative because they do not allow us to draw a definitive conclusion. We can still count up the number of correct predictions each hypothesis makes and this tells us something useful, but the more valuable analysis is the number of critical tests that any given hypothesis gets correct. Table 1 lists a series of predictions that the four hypotheses make for different aspects of language and speech. The critical tests are marked by an asterisk (*). If we count up the number of correct predictions, then the gossip hypothesis comes out well ahead of all the others, although the Scheherazade hypothesis does quite well; more importantly, however, the gossip hypothesis is the only hypothesis that gets any critical tests correct, and it correctly predicts all four of these. Thus, this analysis suggests that the primary function of language is the exchange of social information (*i.e.* gossip).

Mentalising, language and culture

Language is not just a matter of grammar, even though grammar plays an important role in allowing us to code complex thoughts into speech utterances. At least as important is the fact that the speaker *and* the listener have to work very hard to understand just what it is that the speaker is trying to say: the speaker has to monitor the listener

and make sure they are getting the message, and the listener has to figure out just what the speaker is intending. Both these tasks require high order mentalising skills. We are, of course, thoroughly familiar with the low order mentalising skill commonly described as theory of mind. Theory of mind, as displayed competently by 5–6 year old children, is a sophisticated cognitive skill, but needs to be seen against the backdrop of what adults can do in this respect. Theory of mind is equated with second order intentionality (the capacity to understand what someone else believes), but normal adult humans can cope successfully with fifth order.

Fifth order intentionality (the equivalent of A *believes* that B *believes* that C *believes* that D *believes* that E *believes*…) has two important consequences for human communication. One is that it may be no coincidence that the levels of intentionality that adults can cope with is the same as the level of embedding that we can cope with in sentences. If this is so, then working with fewer orders of intentionality would result in our being able to generate less complex sentences, and our capacity to tell complex stories or to convey complex information would be greatly reduced. Table 2 illustrates this.

The second consequence has to do with the number of minds that we can be kept separate in our minds. Fifth order intentional competence means that, in addition to our own mind ("I believe that [something is the case]"), we can keep track of four other minds at any one time. Dunbar *et al.* (1995) and Dezecache and Dunbar (2012) found that the upper limit on the size of freely forming conversation groups is four individuals: conversations tend to break up into two or more sub-conversations if the number of people involved is greater than this. Similarly, Stiller *et al.* (2004) found that Shakespeare typically has four speaking parts in each scene for his plays, and Krems and Dunbar (2013) showed that the same is also true of contemporary films. Thus, not only does this limit on mentalising competences constrain the number of other people you can keep track of in a conversation, but it necessarily also limits the complexity of the stories we can tell. A storyteller who is fifth order intentional will only be able to construct a story involving three other mind states (given that the audience uses up one order of intentionality between the storyteller and the action), whereas a storyteller who is sixth order intentional will be able to

manage four characters in the story. The second pushes the audience (or reader) to their cognitive limits, and is thus likely to make a more engaging story for the audience.

A species that can cope with fifth order intentionality will thus have a significantly richer cultural life than one that can aspire only to fourth order intentionality. It will also have a richer religious life because it can create more complex accounts of the spiritual world than a species that can only handle four orders of intentionality (Dunbar 2008). As Table 3 suggests, being able to cope with the extra order of intentionality makes the difference between what I call 'social religion' and 'communal religion,' where a communal form of religion is one that allows its members to be mutually committed to the religion.

When *did* language evolve?

Determining when language evolved has always been difficult. Archaeologists have typically focussed either on evidence for symbolism (after all, it does not make sense to have symbolic constructs like *gods* or *ancestors* that you cannot communicate about) (*e.g.* Noble, Davidson 1991) or on evidence for brain lateralisation (on the grounds that the language faculty is lateralised in the brain) (*e.g.* Falk 1987; Uomini 2009). Palaeoanthropologists have assumed that evidence for brain lateralisation (the left side in which language and speech are localised is bigger than the right) is evidence for language. In reality, the claims made for both symbolism and lateralisation are not without their problems. Convincing archaeological evidence for symbolism (such as cave paintings and Venus figurines, which are interpreted as symbolically representing some real life concept) only appears in the Upper Palaeolithic (mostly after 30 000 years ago, in fact), and all this can really do is give us a latest possible date: people might have been talking to each other for millennia before anyone thought of turning their symbolic utterances into physical objects. Similarly, lateralisation probably has as much to do with control over the throwing arm as anything else, and is in any case much older and more widespread than palaeoanthropologists seem to realise.

There have been two recent attempts to use genetics to help us out here. One has been the FoxP2 gene story (Enard *et al.* 2002; Fisher, Marcus 2006) and the other is the more recent claims made on behalf of

the myocin gene MYH16 (associated with large jaw muscles in the apes, but inactivated in modern humans with our small ones) (Stedman *et al.* 2004). Initial estimates suggested a date of origin for FoxP2 of around 60 000 years ago – which obviously made some archaeologists happy since it conveniently just precedes the earliest evidence for symbolic art in the European Upper Palaeolithic Revolution dating from around 50 000 years ago. However, FoxP2 was later found in the Neanderthal genome (Krause *et al.* 2007), and interpreted as evidence for language in this species. This would suggest an origin for FoxP2 at around 800 000 years ago, the date when the Neanderthal and AMH genetic lineages parted company. However, similar FoxP2 genes were subsequently found in birds (Haessler *et al.* 2007), suggesting that its real function may have more to do with control over vocal articulation (and imitation?) rather than language as such. This rather suggests that FoxP2 tells us about speech rather than language.

In contrast to the FoxP2 story, estimates for the time of origin of the human form of the myocin gene give a value of 2.4 million years ago (Stedman *et al.* 2004). This was taken to imply that language evolved as early as *Homo ergaster*. Since no one has ever suggested that early *Homo* had language, this seems implausibly early. In reality, it is difficult to see the myocin gene as having anything to do at all with language. Indeed, Stedman *et al.* (2004) offer no account of why smaller jaw muscles should be necessary for language, instead relying on the fact that language and small jaw muscles co-occur in modern humans – as, of course, do any number of other traits that have absolutely nothing to do with language! So even if small jaw muscles are necessary for language, they are certainly not sufficient, and are much more likely to be associated with a change of diet. A more likely explanation is that small jaw muscles are one of the many things that have to be in place to make it possible for language to evolve at some much later date (Aiello 1996).

Even if these genetic approaches turn out to be unhelpful, there are other anatomical approaches that seem to be more helpful. One is neuroanatomical evidence for the control over the vocal apparatus; the second is the estimated social time demands across hominin evolutionary history; and the third is the pattern of evolving mentalising skills. None offers conclusive evidence on their own, but taken together they do converge on a common position.

The neuroanatomical evidence comes in two forms. Both are based on the fact that modern humans differ from all other primates. One concerns the size of the spinal cord in the thoracic region in the chest (in effect, the nerves that control the diaphragm and chest wall muscles) (MacLarnon, Hewitt 1999); the other concerns the size of the hypoglossal canal in the base of the skull (the aperture through which cranial nerve XII, which innervates the tongue and mouth, passes) (Kay *et al.* 1998). Both show significant enlargement relative to body size in modern humans compared to other primates, and this enlargement is plausibly associated with speech (control of the diaphragm to allow the long steady exhalations needed for speech in the first case, and control of the articulatory space in the second). (I will not bother to comment on the attempt by De Gusta *et al.* (1999) to discredit the hypoglossal canal argument: it confuses means with variances and has nothing to do with whether the species concerned had language. Kay *et al.* (1998) were essentially correct, despite their subsequent overhasty retraction of their claim.) Although the fossil data are somewhat patchy, both neurological datasets suggest that the australopithecines and early *Homo* had ape-like values whereas archaic humans (*Homo heidelberg* and the Neanderthals) and fossil anatomically modern humans all had human-like values (Figure 3). This conclusion is given additional support by the rather limited evidence on the position of the hyoid bone. This rather delicate bone essentially links the top of the larynx to the base of the tongue: it sits high in the throat in chimpanzees, but low in humans and this is thought to be crucial in allowing us to produce some of the sounds needed for human speech (notably vowels). Because it is so small and delicate, it rarely survives in fossils. However, one Neanderthal hyoid bone has been found *in situ*, and its position is low, as in modern humans (Arensburg *et al.* 1989).

The real issue, however, is whether these markers tell us about language or simply speech (the capacity to produce sophisticated vocalisations, irrespective of grammatical content). All we can say is that language could not have evolved earlier than this date (roughly 500 ka, coincident with the appearance of archaic humans), but it could well have been much later if these markers signal the capacity to vocalise rather than grammatical language-as-we-know-it.

Figure 3 plots these neuroanatomical data against the predicted social time requirements for the various hominin species, calculated

separately for each fossil specimen using its cranial volume to interpolate through a series of regression equations (for details, see Dunbar 2009). Primates bond their social groups through social grooming, and the amount of time that has to be devoted to grooming other group members is a linear function of group size (though *not* because individuals groom more individuals: in fact, as group size increases, individuals groom *fewer* other group members but do so more intensively). Notice that the neuroanatomical evidence for increased vocal control appears just where the social time requirement undergoes a major step change and breaches, for the first time, the 20% social time barrier. This barrier marks the upper limit for monkey and ape grooming time (Dunbar 1991; see also Lehmann *et al.* 2007). It is here, if anywhere, that the demands of social bonding become most challenging. So it is no surprise that the anatomy for vocal control undergoes a phase change at exactly this point in time. Again, however, the question of whether this identifies the point of origin of *language* or of some other form of vocal exchange (*e.g.* singing) is the substantive issue.

The third source of data (which concerns mentalising competences) may help us out here. We noted earlier that mentalising is crucial for language because both the speaker and listener have to work hard at understanding each other's intentions. The listener might be able to get away with third order intentionality ("I *believe* that you *intend* that I *understand* …"), but the speaker probably requires fourth order at minimum to keep one step ahead of the listener. We also noted above that there is a second reason why mentalising competences are important for language: the reflexive structure of mentalising bears an uncanny resemblance to the embeddedness of clauses in the grammatical structure of sentences (whose limits appear to be at fifth order embeddedness). In other words, language-as-we-know-it can only be achieved by individuals who can cope with fifth order intentionality.

Lewis *et al.* (2011) and Powell *et al.* (2012) have shown that mentalising competences correlate with the volume of the theory of mind network in the brain (which links the temporal lobes to the prefrontal cortex), but especially with the absolute volume of the orbitofrontal cortex. More importantly, it seems that mentalising competences more generally across primates correlate with frontal lobe volume, although the evidence here is more tentative (Dunbar 2009). If we use the latter

relationship to estimate mentalising competences for individual fossil hominin species, we get the pattern shown in Figure 4. As a group, the australopithecines cluster around second order intentionality, along with the other great apes; early *Homo* populations all sit at third order intentionality, with archaic humans (including Neanderthals) just about able to manage fourth order. Only fossil anatomically modern humans (like their living descendants) can achieve fifth order.

What this tells us is that even if the Neanderthals and other archaic humans did have language, the quality of these archaic humans' language must have been very different to that of modern humans – in a word, rather primitive. Archaeologists have tended to assume that Neanderthals must have had fully developed language (language-as-we-know-it), in part because their mode of hunting (in which several adult males surround and spear a large and dangerous prey) implies cooperation. But, as the chimpanzees so eloquently tell us, you do not need language to do that. And it seems that you probably do not even need high level mentalising skills, either.

The bottom line on all this is that, taken together, these very different sources of information tell us that only anatomically modern humans could have had language-as-we-know-it, and hence that this cannot have evolved earlier than 200 000 years ago. It is possible that archaic humans (*Homo heidelbergensis*, *H. neanderthalensis*, *H. denisova*, *etc.*) had some form of language, but it would undoubtedly have been conceptually and grammatically primitive compared to that of modern humans and would have severely restricted the kinds of cultural innovations they could have produced (a point that is obviously well supported by the archaeological evidence that suggests that Neanderthal material culture was never in the same league as that of modern humans: Klein [1989] 1999). There is no reason at all to think that any early *Homo* species (*H. ergaster*, *H. erectus*, *H. georgicus*, *etc.*) had any form of language.

Conclusions

Testing historical hypotheses for the evolution of traits is always difficult, especially when the trait is unique and found only in one species. I have nonetheless suggested several ways in which we might be able to test between alternative hypotheses for the function(s) of language.

These suggest (1) that language evolved (and is certainly still predominantly used) for social functions, (2) that language is associated with specialised cognitive functions like mentalising skills and (3) that language (or at least language as we have it now in modern humans) probably evolved very late (*i.e.* with the evolution of modern humans around 200 000 years ago). Testing hypotheses in this way is especially important because the study of language, in particular, have been bedevilled by a tendency to make untested assumptions about the functions of language. These in turn have tended to colour our view of when language might have evolved in ways that have been both unwarranted and misleading.

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Legends to Figures

Fig. 1. Effect of story type on ability to recall in a transmission chain experiment for four members (generations). The four story types are: gossip (filled circles), social (unfilled circles), individual (unfilled squares) and physical facts (triangles) (see text for details). After Mesoudi *et al.* (2006)

Fig. 2. Recall of propositions in five different types of stories representing alternative hypotheses for the principal function of language: gossip hypothesis (social and romantic stories), social contract hypothesis, Scheherazade hypothesis and instrumental hypothesis. After Redhead, Dunbar (2013)

Fig. 3. Predicted grooming time for individual fossil specimens of each major species, plotted against date, calculated by interpolating cranial volumes (transformed to neocortex ratios) into the regression equations relating neocortex ratio to group size and group size to grooming time. The box plots give the median and the 50% and 95% ranges for each species. At the top of the graph is shown the distribution of primate-like and human-like thoracic vertebral and hypoglossal canals. Note that the Neanderthal brain volumes have been corrected for the differential effects of latitude on this taxon, following Pearce *et al.* (2013). The dashed vertical line indicates the apparent point at which human-like canals appear. After Dunbar (2009)

Fig. 4. Estimated mentalising competences (indexed as the limit on achievable order of intentionality) for individual fossil hominin species. The box plots give the median and 50% and 95% intervals calculated for individual specimens (following Dunbar 2009). Second order intentionality marks the limit for great apes; fifth order marks the norm for adult humans. Note that the Neanderthal brain volumes have been corrected for the differential effects of latitude on this taxon, following Pearce *et al.* (2013). After Dunbar (2009)

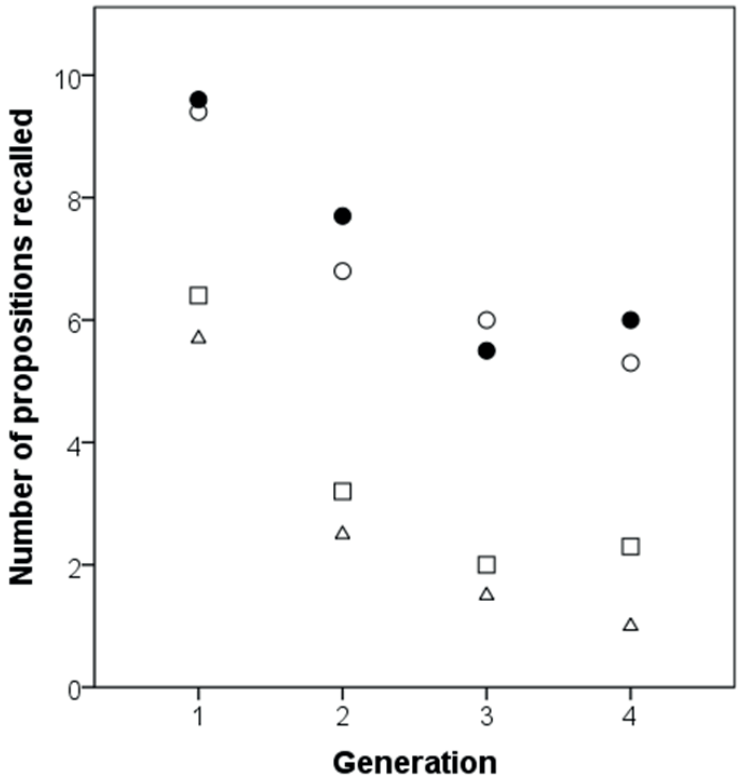

Figure 1

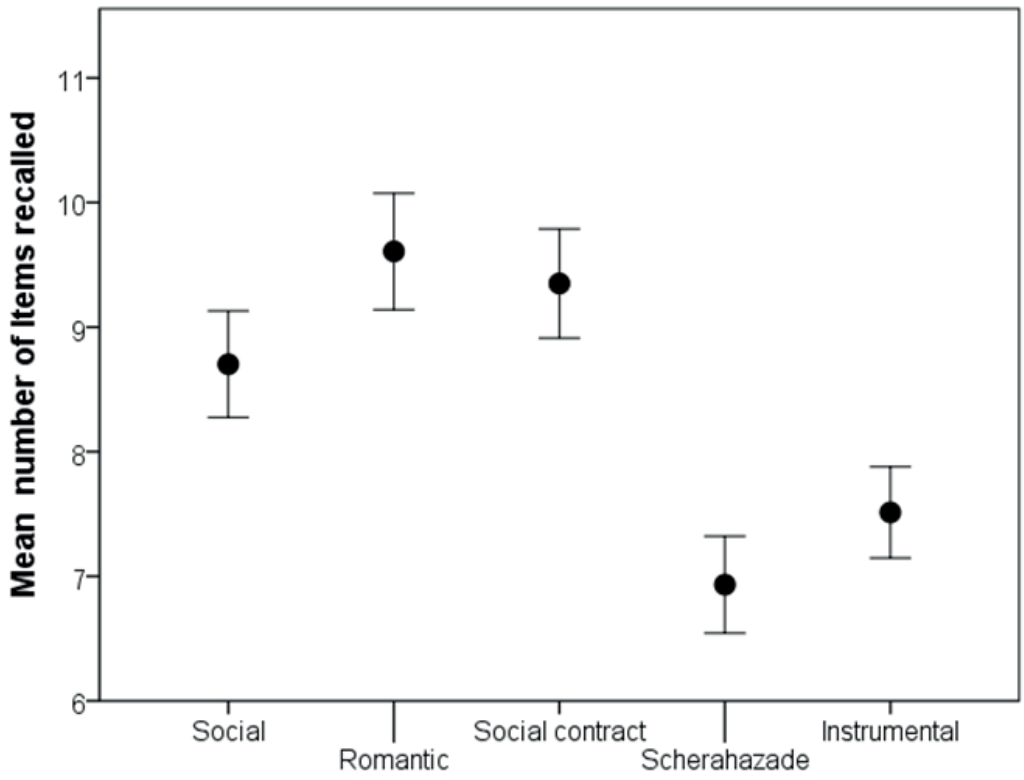

Figure 2

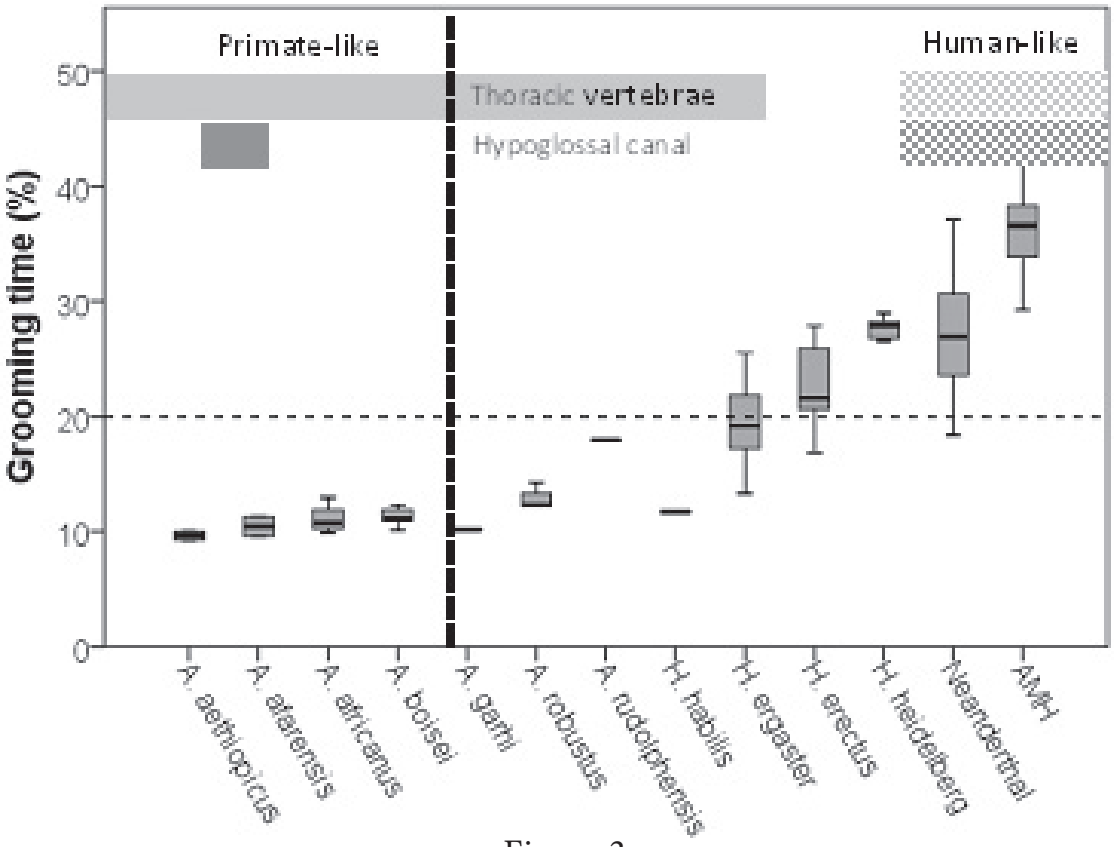

Figure 3

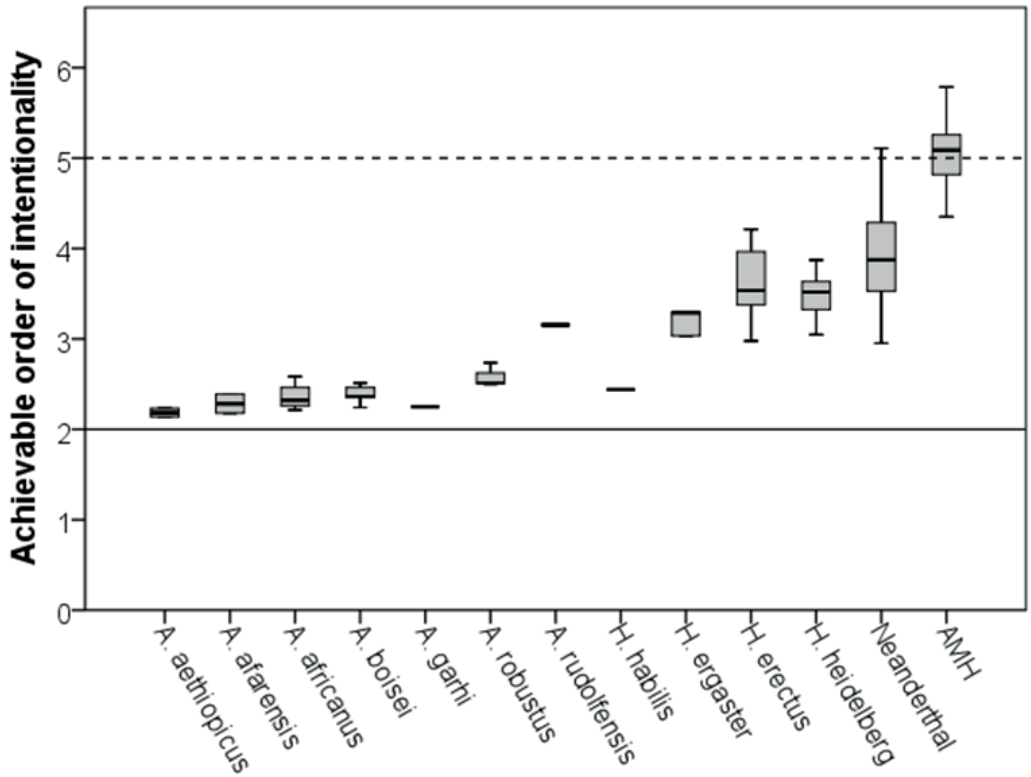

Figure 4

Table 1. Critical test of hypotheses for language evolution. The body of the table gives the predictions that each of the four main hypotheses proposed to date would make in respect of the individual traits in the left-hand column

	Instrumental Hypothesis	Social Hypotheses			Observed findings
		Gossip	Contracts	Scheherazade	
Sex difference in use	*M>F	*M<F	M=F	M=F	M<F
Mates talk more than other dyads	no	no	no	*yes	no
Frequency of daily use	low	high	low	high	high
Context specificity	high	*low	high	high	low
Nighttime use	no	yes	?no	yes	yes
First appearance in fossil record	early	*late	early	?early	late
Task-oriented	*yes	no	no	no	no
Used mainly in social contexts	no	yes	yes	no	yes
Uain topics of conversation	*tasks	*social	*contracts	*mating	social
Number of tests [or critical tests] confirmed	1 [0/3]*	9 [4/4]	3 [0/1]	5 [0/2]	

* critical tests that unequivocally differentiate one hypothesis from all the others; number of critical tests confirmed (and number of tests available) is given in parentheses at foot of table for each hypothesis
After Dunbar (2009)

Table 2. The complexity of sentences (and hence stories) that can be constructed with different orders of intentionality

Intentionality Order	Sentence
1st	"I believe"
2nd	"[I believe that] : [this is the house]"
3rd	"[I believe that] : [this is the house [that Jack built]]"
4th	"[I believe that] : [this is the house [that Jack built [which is made of straw]]]"
5th	"[I believe that] : [this is the house [that Jack built [which is made of straw [that caused it to collapse]]]]"

After Dunbar (2008)

Table 3. Forms of religious belief made possible by different levels of intentionality

Intentionality Level	Statements of belief that can be handled	Form of Religion
1st	I believe that god […exists]	none
2nd	I believe that god is willing […to intervene if you disobey his laws]	supernatural fact
3rd	I intend that you believe that god is willing […to intervene…]	personal religion
4th	I intend that you believe that I want god to be willing […to intervene…]	social religion
5th	I intend that you believe that god understands that I want him to be willing […to intervene…]	communal religion

After Dunbar (2008)

Marek Andrzej Iwanowski
Uniwersytet Warszawski

Cywilizacyjne potrzeby nauczania języków Azji Wschodniej oraz studiów nad kulturą regionu

Abstract. In this work the early contacts between the widely understood circles of the Mediterranean and Chinese (China, Japan and Korea) civilizations, by land (the Silk Route) and sea ways, were presented. In the outline, the history of the canal on the Suez isthmus counting over 3800 years, which enabled communication by sea way between the Mediterranean civilization and India, and indirectly enabled the contacts with the Chinese civilization, was presented. The selected traces of those contacts in the culture of the Central-Eastern Europe and Japan were shown. The early contacts of the Poles with Japan, beginning from Wojciech Męciński, coat of arms Poraj (1598–1643) and the Jesuit Michał Boym (1612 or 1614–1659), remarkable European sinologist who first considerably described China and many times took up the question connected with Japan, ending with of Bronisław Piotr Piłsudski (1866–1918) who was the precursor of the research of the culture and the language of Ainu people and the other peoples of Sakhalin. In the outline, the reception of the Japanese themes in the Polish culture and the interest in Poland in the process of the modernization of the Japanese economy and culture after the Meiji restoration (1868) was described. The attention was paid to the protection of the national interest resulting from the patriotism of Japanese. The need of the reform of the teaching of the languages of Eastern Asia and studies of the cultures of the Eastern Asia, following the example of the Japanese studies with particular regard to the reform of teaching of the Japanese language, was described. The essence of the reform is the proposal of the transfer from the academic level to the secondary level of the initial stages of teaching of the Japanese language and the preliminary knowledge about the culture of Japan, which will allow to raise the level of the studies to the level comparable to the philological studies of the European languages.

Keywords: Chinese civilization, silky route, Suez canal, the Polish-Japanese contacts, teaching of Japanese language, Japanese studies, reform.

Od około trzech tysięcy lat liczba ludności szeroko pojętych kręgów cywilizacji śródziemnomorskiej oraz chińskiej jest mniej więcej równa. W czasach Cesarstwa Rzymskiego oba kręgi cywilizacyjne liczyły po około 60 milionów osób, co łącznie stanowiło nieco ponad połowę ludności świata.

Do kręgu cywilizacji chińskiej zaliczam tu wiodące cywilizacje, które rozwinęły się na terenie dzisiejszych Chin, Japonii i Korei. Bardziej historyczne niż legendarne dzieje Chin można datować od dynastii Shang (ok. 1700–1122 r. p.n.e.), dla Korei takie datowanie zaczyna się mniej więcej od 1122 roku p.n.e.[1], a dla Japonii należałoby przyjąć 552 rok n.e.[2] W procesie historycznym największy wpływ wywarły centra cywilizacji znajdujące się na terenie dzisiejszych Chin, skąd rozprzestrzeniało się pismo chińskie oraz wyrażany nim system pojęć, systemy religijne, sposoby administracji, wiele rzemiosł i umiejętności artystycznych. Wszystkie te przejawy kultury były dostosowywane do warunków miejscowych.

Skromne rozmiary pracy spowodowały konieczność selekcji materiału, z tym że akcent został położony na sprawy japońskie. Niemniej wnioski dotyczą w równej mierze nauczania na kierunkach sinologii, japonistyki oraz w pewnej mierze koreanistyki.

W czasach starożytnych bezpośrednie kontakty między kręgami cywilizacji śródziemnomorskiej oraz chińskiej były bardzo utrudnione. Odległość kilkunastu tysięcy kilometrów między centrami obu cywilizacji można było najszybciej przejść w ciągu nieco ponad roku, istniało jednak duże ryzyko utraty życia lub zdrowia z powodu dzikich zwierząt, nieprzyjaznych plemion przy oazach, braku wody na bezkresnych stepach i pustyniach, mrozu i upałów związanych ze zmianami pór roku[3]. Na północy – w tajdze – wędrówkę spowalniały śniegi i wody roztopowe, w Azji centralnej – wiele wysokich łańcuchów górskich, a na południu, w rejonie dzisiejszych Indochin – nieprzebyte dżungle. W takich warunkach handel wymienny był słaby i odbywał się etapowo z udziałem wielu pośredników.

1 Przybycie chińskiego banity Jizi i jego ludzi na Półwysep Koreański.

2 Władca państwa Yamato przyjmuje dary od władcy państwa Kudara. Początek recepcji buddyzmu.

3 Na pustyni i w wysokich górach w ciągu doby amplituda temperatur przy gruncie może sięgać 50 stopni Celsjusza. W górach wpływ temperatury powietrza na wędrowca mogą potęgować porywiste wiatry.

W czasach monarchii Seleucydów (312–63 p.n.e.) powstały zawiązki lądowego jedwabnego szlaku. Karawany złożone z baktrianów (lub rzadziej dromaderów) niosących towary oraz kupców i wojowników na koniach przemierzały szlaki od Antiochii i Babilonu, przez Baktrę do doliny rzeki Wei w Chinach. Najważniejsze odgałęzienie szlaku biegło do doliny rzeki Indus. Na szlaku wyrastały nowe miasta, w których handlowano towarami uznawanymi za cenne. Były to minerały i metale, szlachetne i półszlachetne, takie jak jadeit, nefryt, srebro i złoto. Handlowano wyrobami rzemiosła, najczęściej ozdobami. W cenie były chińskie jedwabie, perskie dywany, materiały barwione (fenicka purpura), miecze ze stali typu damasceńskiego. Ludność kultury śródziemnomorskiej szczególnie oczekiwała przypraw korzennych i olejków aromatycznych z Indii, a Chińczycy – dorodnych koni z Baktrii. Najważniejsze jednak było przenikanie ludzi, rzemieślnicy przybywali w nowe miejsca ze swoimi umiejętnościami, będącymi pilnie strzeżoną tajemnicą rodową, mnisi i kapłani rozprzestrzeniali swoje religie, które pozwalały ideowo cementować nowo powstające państwa. Jedwabnym szlakiem do Chin dotarły takie religie, jak buddyzm z Indii, islam z Arabii, chrześcijaństwo (nestorianizm) z Syrii. Największy wpływ wywarł buddyzm, który następnie rozprzestrzenił się do Korei i Japonii.

Seleucydzi odepchnęli handel Ptolemeidów (304–30 p.n.e.) od szlaków lądowych metodą nakładania wielokrotnie płaconych ceł miejscowych oraz utarczek zbrojnych. Ptolemeidzi odziedziczyli po poprzednich władcach Egiptu tradycję morskiego handlowania z portami położonymi nad wybrzeżami mórz Śródziemnego i Czerwonego. Statki biorące udział w tym handlu miały możliwość dwukierunkowego przepływania między morzami kanałem, który prowadził od peluzyjskiej odnogi Nilu do Jezior Gorzkich, a następnie pogłębionym naturalnym kanałem do zatoki Morza Czerwonego, zwanej dzisiaj Zatoką Sueską. Po przyprawy i pachnidła Ptolemeidzi wysyłali do Indii małą liczbę niezbyt dużych statków, gdyż żegluga przybrzeżna była uciążliwa ze względu na konieczność wiosłowania przeciwko prądom morskim, a dobijanie po drodze do brzegu mogło spotkać się z nieprzyjaznym przyjęciem ludności podległej Seleucydom. Przełom nastąpił, gdy Hipallos, grecki żeglarz i nawigator, odkrył sposób wykorzystania wiatrów monsunowych do żeglugi z Morza Czerwonego do Indii i z powrotem (Uhlig 1996: 82). Podróż nowym sposobem była szybka, trwała około

dwóch tygodni, ale w Indiach – zależnie od terminu przybycia – na zmianę wiatru trzeba było czekać nawet kilka miesięcy.

Starożytni historycy zostawili ważne wskazówki dotyczące kanału łączącego morza, jednak w ślad za kapłanami egipskimi mylili imiona faraonów – budowniczych kanału. Niepewne są też uwagi dotyczące nieukończenia budowy przez poszczególnych władców, gdyż kanał, sukcesywnie zamulany i miejscami zasypywany przez burze piaskowe, wymagał ciągłej konserwacji, a ta była tak kosztowana, że nie każdego władcę było na nią stać. Już zatem po kilkudziesięciu latach kanał mógł wyglądać jak dzieło niedokończone. Dodatkowo – wielokrotne budowany i odbudowywany – nie zawsze przebiegał tą samą trasą. Grecki podróżnik, geograf i historyk, Strabon (ok. 63 p.n.e.–ok. 24 n.e.), podaje w dziele *Geografia* (1932–1967: 76), że pierwszym budowniczym kanału przed wojną trojańską był faraon Sesostris (Rys. 1). Właściwe imię faraona brzmiało Senuseret i nosiło je trzech faraonów z XII dynastii, a każdy z nich był wielkim budowniczym kanałów. W omawianym przypadku prawdopodobnie chodzi o Senusereta I, który wespół z ojcem panował od roku 1956 p.n.e., a samodzielnie w latach 1947–1914 p.n.e.

Grecki historyk Herodotus (ok. 484–ok. 426 p.n.e.) w *Historii* (1920–1975: 470)[4] wspomina o budowie kanału przez faraona Necho. Następnie kanał był poprawiany m.in. przez Dariusza I, Ptolemeusza II Filadelfosa oraz Trajana. Rzymianie[5] corocznie pływali do Indii i Cejlonu flotą złożoną zwykle z ponad 300 statków, z których każdy miał wyporność od 800 do 2000 ton. Były one zbyt duże, by przepłynąć kanał, dlatego odpływano z portu Berenike znajdującego się blisko ujścia kanału do Morza Czerwonego. Statki o wyporności[6] porównywalnej lub nawet przewyższającej ładowność współczesnego pociągu towarowego przywoziły wyjątkowo szeroką gamę towarów indyjskich, cejlońskich i chińskich. Transportowały m.in. wielkie zwierzęta, jak słonie i nosorożce, czy towary masowe, jak naturalny cement.

Z powodu burz piaskowych kanał bywał miejscami niedrożny. Ostatecznie został zamknięty w roku 767 r. n.e. przez kalifa Al-Mansura, by odciąć zbuntowanym miastom Al-Hidżazu zaopatrzenie w zboże,

4 Herodotus II.158.

5 Były to głównie statki senatorów rzymskich obsługiwane przez załogi fenickie (z dawnej Kartaginy).

6 Dokładniej rzecz ujmując, chodzi o maksymalną bezpieczną ładowność statku.

a u Europejczyków zmniejszyć zainteresowanie kanałem (i Egiptem) jako fragmentem drogi do Indii i Chin. Tradycję pływania po Oceanie Indyjskim przejęli Arabowie, którzy od około X wieku zaczęli podejmować rejsy od Eufratu i Egiptu aż do Chin. Handlując na wybrzeżach od Mozambiku do Indonezji, rozprzestrzenili islam.

W połowie VIII w. plemiona słowiańskie w dorzeczach Dniepru i Wisły zaczęły przyjmować wpływy chińskie za pośrednictwem Kaganatu Chazarskiego, którego władcy założyli faktorie handlowe m.in. w chińskim Czang'anie (chiń. 長安 [长安] *Cháng'ān* 'wieczny spokój, wieczny pokój; stolica')[7] i Kantonie (chiń. 廣州 *Guǎngzhōu* 'szeroka wyspa na rzece') w celu formowania karawan z jedwabiem i kierowania ich do Europy. Koniec około stuletnich bezpośrednich kontaktów chazarsko-chińskich nastąpił wraz z wielkim powstaniem chłopskim (847–901) pod wodzą Huang Czao (chiń. 黃巢 *Huáng Cháo* 'Żółte [Ryże] Gniazdo', 起義 *qǐyì* 'powstanie w słusznej sprawie').

W 1241 roku Mongołowie przybyli zbrojnie na Węgry. Ponieważ w ich kancelarii zasiadali urzędnicy chińscy, płacili Węgrom monetami wzorowanymi na chińskich. Miejscowi podpisywali dokumenty odciskiem palca umaczanego w tuszu.

Bezpośrednie kontakty rusko-chińskie trwały około 100 lat podczas panowania mongolskiego na Rusi, kiedy to szlak jedwabny był używany bez przeszkód, wojownicy ruscy werbowani w przymusowych zaciągach służyli jako straże pałacowe w Pekinie (ostatni znany zaciąg datowany jest na 1334 r.), a chińscy urzędnicy jako wysokiej klasy fachowcy sprawowali obowiązki w całym mongolskim imperium, łącznie z Rusią.

Według tradycyjnej chińskiej Szkoły Form (chiń. 風水 *fēngshui* 'wiatr i woda') każda z czterech stron świata jest pilnowana przez mitycznego strażnika (chiń. 四象: *sì xiàng* 'Cztery Postacie'). Wschodu strzeże Lazurowy Smok (chiń. 青龍 *qīnglóng*), południa – Cynobrowy Ptak (chiń. 朱雀 *zhūquè*), zachodu – Biały Tygrys (chiń. 白虎 *baíhǔ*), a północy – Czarny Żółw (chiń. 玄武 *xuánwǔ* 'Czarny Wojownik').

Co najmniej od najazdu mongolskiego do końca XIX w. żywe były nazwy Ruś Biała (Белая Русь), Ruś Czarna (Чёрная Русь) i Ruś

7 Podane w pracy znaczenia wyrazów chińskich nie mają charakteru etymologicznego, lecz są utartymi odpowiednikami lub próbą przybliżenia chińskiego znaczenia na podstawie słownikowych znaczeń znaków chińskich (tzw. znaczenie strukturalne).

Czerwona (Красная lub Червоная Русь). Nazwa Ruś Czerwona zatem znaczyłaby Ruś Południowa, a współczesna Białoruś odnosiłaby się do Rusi Zachodniej[8] (Iwanowski 2012: 38).

Od mniej więcej VI w. krąg cywilizacji chińskiej do pewnego stopnia rozszerzał się na obszar Korei, Japonii i Wietnamu. Swoistym spoiwem było przede wszystkim pismo hieroglificzne, które wprowadzało wiele chińskich pojęć do ościennych języków. Przejmowano również buddyzm, sposób budowania miast, zasady administracji i wiele innych osiągnięć cywilizacyjnych, które z reguły były dostosowywane do zastanych warunków lokalnych. Od początku nowej ery do czasu rozwoju przemysłu w Europie krąg cywilizacji chińskiej znajdował się na porównywalnym poziomie z kręgiem cywilizacji śródziemnomorskiej, a nawet bywały okresy, gdy w konkretnych dziedzinach go przewyższał.

Przykładem może być kwestia wynalezienia i wykorzystania druku. Wiadomo, że już w 105 roku Chińczyk Cai Lun wytwarzał papier czerpany z łyka i kory drzewa morwowego. Pierwsze chińskie druki drzeworytnicze na papierze pochodzą z VII w. Z kolei najstarszy drukowany tekst, datowany na lata 704–751, jest buddyjskim zwojem z zaklęciami, który został znaleziony w Korei. Japońska cesarzowa Kōken, powracając na tron w 764 roku, zmieniła imię na Shōtoku i nakazała wykonać milion drewnianych stup, które zaopatrzono w talizmany dziękczynne, w postaci sutr wydrukowanych na papierze (Tubielewicz 1984: 74). W 1041 roku chiński kowal Bi Sheng wypalił z gliny czcionki ruchome dla pojedynczych znaków hieroglificznych. Wynalazek druku wędrował ku Europie przez Sinciang i Persję. Wynika z tego, że europejscy wynalazcy czcionki: Laurens Janszoon Coster w Haarlemie, Jan Gutenberg w Moguncji, Jan Brito w Brugii, Pamphilo Castaldi w Feltre oraz Prokop Waldfogel w Awinionie nie byli pionierami. Warto by zbadać w ramach interdyscyplinarnego projektu[9], na ile wiarygodne są ślady, że inspiracja dotarła do Europejczyków jedwabnym szlakiem.

Poczynając od I w., Partowie, a następnie ludy tureckie i Arabowie praktycznie odcięli Europejczykom możliwość swobodnego handlu drogą lądową z krajami Azji Wschodniej i Południowej. Ulepszenia

8 Samo słowo Ruś pochodzi prawdopodobnie z języka staronordyckiego od czasownika *róa* znaczącego ‘wiosłować’ (Ekbo 1981: 143–145, 2000: 64–69). Podobny źródłosłów ma zapewne angielskie *road* ‘droga’.

9 Projekt mógłby nosić nazwę „Gutenberg z Jedwabnego Szlaku”.

konstrukcji statków, a szczególnie karawel, dzięki którym mogły one płynąć, ostro halsując na wiatr, pozwoliły rozpocząć misję szukania drogi do Indii. Podjęto próby opłynięcia Afryki lub kierowania się na zachód.

W latach 1487–1488 Portugalczyk Bartłomiej Dias przepłynął z Portugalii do Przylądka Dobrej Nadziei w Południowej Afryce, a jego rodak Pedro de Covilhao w latach 1488–1490 pokonał drogę do tego przylądka z Indii. Całą trasę z Portugalii do Indii wokół Afryki przebył w roku 1497 Vasco da Gama. Portugalczycy wylądowali w 1543 roku na japońskiej wyspie Tanegashima.

Pierwsze transkrypcje alfabetyczne zostały opracowane przez jezuitów dla misjonarzy, a upowszechnione w słownikach japońsko-portugalskich. Były to słowniki: *Vocabulario da Lingoa de Iapam* 1603 r. (jap. 日葡辞書 *nippo-jisho*), *Arte da Lingoa de Iapam* 1604–1608 r. (jap. 日本文典 *nihon--bunten*) oraz *Arete Breve da Lingoa Iapoa* 1620 r. (jap. 日本小文典 *nihon shōbunten*). Dziś słowniki te oraz pisma misjonarzy są dla językoznawców ważnym świadectwem mowy Japończyków sprzed 400 lat, gdyż ówczesne tradycyjne pismo japońskie dużo mniej dokładnie notowało mowę i gramatykę, jako że pisma oparte na systemie znaków chińskich są bardziej semio- i grafocentryczne.

Jedno z pierwszych spotkań polsko-japońskich miało miejsce w Watykanie, gdzie w 1585 roku przebywało czterech młodych Japończyków--chrześcijan (Misja Tensho) wysłanych przez wojskowego przywódcę Japonii Odę Nobunagę (織田信長 *Oda Nobunaga*)[10] do papieża Grzegorza XIII. Na prośbę przebywającego w Rzymie polskiego biskupa Bernarda Maciejowskiego dokonali tłumaczenia fragmentu Psalmów Dawida. Tłumaczenie to zostało następnie podarowane Akademii Krakowskiej.

Od początku XVII w. w Japonii wydawane były edykty antychrześcijańskie, a po wymordowaniu na przełomie lat 1637–1638 37 000 chłopów, głównie chrześcijan, którzy, uciekając przed uciskiem fiskalnym, schronili się w opuszczonym zamku Hara-jō na półwyspie Shimabara koło Nagasaki, nastąpił okres dobrowolnej izolacji Japonii od świata zewnętrznego, trwający ponad 200 lat. Wzajemne kontakty były zakazane pod groźbą kary śmierci. W 1640 roku dokonano pokazowej egzekucji załogi portugalskiego statku, który zawinął do Nagasaki, a sam statek spalono. Wypuszczono z Japonii jedynie 13 załogantów, by mogli wiarygodnie przekazać światu opis zdarzenia.

10 Nazwiska japońskie zwyczajowo są podawane przed imieniem.

Wojciech Męciński herbu Poraj 11 sierpnia 1642 roku przybył w przebraniu Chińczyka do twierdzy Kagoshima na Półwyspie Satsuma na południu wyspy Kyushu w Japonii. Po dwóch dniach został znaleziony przez ludzi shoguna Hidetady i poddany torturom. Skonał 23 marca 1643 roku.

Jednym z pierwszych europejskich sinologów był jezuita Michał Boym. Do Chin dotarł w 1643 roku. Od 1649 roku przebywał na chrześcijańskim dworze cesarza Yongli z Południowej dynastii Ming. Jako poseł cesarza Yongli do papieża Innocentego X i władców europejskich wyruszył w podróż do Europy w 1651 roku Zmarł w Chinach 22 sierpnia 1659 roku w drodze powrotnej z poselstwa. Zostawił po sobie m.in. pierwszy dokładny 18-kartonowy atlas Chin oraz książkę *Relacja*[11], w której często podaje informacje o Japonii.

Maurycy August Beniowski, konfederat barski, zorganizował ucieczkę z Kamczatki na galeacie „Św. Piotr i Paweł". Wzięło w niej udział 96 zesłańców. Po drodze zawinęli do wielu miejsc, m.in. na japońską wyspę (prawdopodobnie Izu), Formozę, wybrzeże chińskie i do Makau. W 1776 roku Beniowski został obwołany przez Malgaszy królem wyspy (*ampansakebe*) Madagaskar. Zostawił pamiętniki, które szybko zostały przetłumaczone na wiele języków, w tym na polski. Osiadli we Francji rosyjscy uciekinierzy uzyskali od carycy Katarzyny pozwolenie na powrót do Rosji, po czym natychmiast zostali z powrotem zesłani na Kamczatkę, gdzie ich relacje spisał generał Józef Kopeć.

Wzmianki o Japonii znajdują się w książkach Władysława Łubieńskiego *Świat we wszystkich swoich częściach określon* (1740), zesłańca na Syberię Ludwika Sienickiego *Dokument osobliwego miłosierdzia boskiego* (Wilno 1754), generała Józefa Kopcia *Dziennik podróży Józefa Kopcia*.

W 1854 roku Japonię odwiedził Paweł Strzelecki, wybitny badacz Syberii, Australii, Nowej Gwinei oraz wysp Pacyfiku. W 1863 roku przebywał w Japonii Władysław Zbyszewski, twórca projektu powołania antyrosyjskiej floty kaperskiej na Morzu Japońskim. W 1882 roku w tokijskim muzeum etnograficznym był zatrudniony badacz Oceanii Jan Stanisław Kubary. Historyk sztuki Karol Lanckoroński przywiózł z Japonii bogatą kolekcję etnograficzną i zbiór dzieł sztuki. W 1892 roku konsulem francuskim w Jokohamie został Antoni Kłobukowski, autor

11 *Refertur iter R. P. M. Boym ex Sinis in Europam*, pozycja niewydana (fr. kompilacja wydana pt. *Briefve relation de la notable conversion des personnes royales et de l'état de la religion chrétienne en la Chine*, Paris 1654, drukarnia S. G. Cramoisy).

francuskojęzycznych artykułów o Japonii. Pod koniec XIX w. odwiedził Japonię arcybiskup Władysław Michał Zaleski, którego wielka ikonoteka botaniczna zawiera ryciny okazów flory Japonii.

W latach 1896–1906 Bronisław Piotr Piłsudski, jeden z najważniejszych badaczy kultury i języka ludu Ainu i innych ludów Sachalinu, opracował i pozostawił słowniki z podstawowym słownictwem trzech ludów, wykonał około 300 fotografii, a nawet nagrał na woskowe wałki fonograficzne próbki mowy Ainu, które firma Sony odczytała 30 lat temu. Był inicjatorem powołania Towarzystwa Japońsko-Polskiego.

Po tym, jak obrońcy wybrzeża kilkakrotnie doświadczyli klęski zadanej przez obce okręty, wojskowy rząd Japonii zawarł w latach 1854–1864 traktaty pokojowo-handlowe z mocarstwami europejskimi i USA, kończąc trwający około 240 lat okres międzynarodowej izolacji Japonii. Jako formalny początek ery restauracji Meiji uważa się posiedzenie w pałacu cesarskim 3 I 1868 roku, na którym zniesiono starodawne urzędy shōguna, kampaku i shoshidai (Tubielewicz 1984: 342).

Nowy rząd szybko zorientował się, jak słaba jest japońska gospodarka w porównaniu z gospodarką krajów europejskich czy USA. Postanowiono przenieść wzorce europejskie na grunt japoński. W pierwszym rzędzie zaczęto budowę przemysłu japońskiego. Recepcja obcych wzorców była ostrożna, zwracano uwagę, by zachować to, co istotne w dorobku kultury japońskiej. Kontrakty z obcokrajowymi instruktorami, nauczycielami i profesorami były terminowe i z reguły nie przedłużano ich, by przyjezdni zbytnio nie zapuszczali korzeni. Dążono do tego, aby obce wyznania w Japonii miały japońskich kapłanów, a przynajmniej, by na terenie Japonii były kierowane przez Japończyków. Owa dbałość o praktyczną suwerenność opłaciła się sowicie społeczeństwu i była wyrazem uczciwości rządzących wobec narodu.

W początkowym okresie restauracji Meiji, pod koniec XIX w., rząd wybudował fabryki i stocznie, a następnie posprzedawał je obywatelom za ułamek wartości, z tym że obcokrajowcy byli bezdyskusyjnie wykluczeni z możliwości kupna. Wiele z tych firm wyrosło z czasem na potężne konglomeraty przemysłowe, np. Grupa Sumitomo. Państwo pomagało w sprowadzaniu z Europy na terminowe kontrakty specjalistów w dziedzinach przemysłowych, wspierało import maszyn, urządzeń, wynalazków i kupowanie patentów, budowę nowoczesnego przemysłu, a szczególnie koncernów bankowo-przemysłowych jak

Mitsui, Mitsubishi czy Suminato. Chociaż do II wojny światowej Japonia stworzyła własny przemysł ciężki, dzięki czemu mogła budować największe statki świata, w eksporcie przeważały jednak produkty przemysłu lekkiego, a szczególnie wyroby jedwabne i bawełniane. Japońskiej ziemi nie sprzedawano obcokrajowcom, nawet pod presją okupacji kraju po 1945 roku, która była skutkiem pierwszej przegranej wojny w historii Japonii.

Załamanie gospodarki po II wojnie światowej było krótkotrwałe, gdyż do rządu wchodzili rodzimi inteligentni patrioci. W Japonii skutecznie utrudniano dopuszczanie do pracy w rządzie czy ministerstwach osób pochodzenia obcego (niejapońskiego), choćby nawet płynnie mówiły po japońsku.

Po zawarciu traktatu pokojowego z USA w 1952 roku Japonia weszła na ścieżkę szybkiego rozwoju gospodarczego. W 1967 roku stała się trzecią potęgą gospodarczą świata, po USA i ZSRR. Ważną częścią eksportu japońskiego stały się wyroby przemysłu elektronicznego. W latach 1968–2009 japońska gospodarka zajmowała drugie miejsce na świecie (po USA) pod względem produktu krajowego brutto po uwzględnieniu PSN[12]. Obecna długoletnia stagnacja jest po części wynikiem załamań gospodarki lat 1998 i 2008. Niemniej Japonia jest nadal najważniejszym partnerem handlowym dla 15 najbardziej rozwiniętych gospodarczo państw świata. Co prawda rząd japoński jest mocno zadłużony, ale nie w zagranicznych bankach, tylko u własnego społeczeństwa, co powoduje mniejszą zależność od obcego kapitału.

Chiny, Japonia i Korea Płd. przodują dziś w liczbie przyznawanych w ciągu roku technicznych patentów, a Korea Płd. wiedzie prym na świecie w liczbie patentów na głowę mieszkańca.

Współcześnie centrum myśli technicznej i realnej gospodarki nieuchronnie przesuwa się na Daleki Wschód. Już za kilkanaście lat Azja Wschodnia będzie niekwestionowanym światowym centrum cywilizacji, o ile kraje tamtego regionu nie zostaną wciągnięte w gorącą wojnę o zasięgu globalnym lub w międzynarodowe machinacje finansowe na dużą skalę.

W Polsce interesy prowadzi kilkaset firm japońskich, koreańskich i chińskich. Swoją filię ma w naszym kraju m.in. firma JETRO, której zadaniem jest koordynacja działań japońskiego biznesu za granicą Japonii.

12 PSN to akronim dla parytetu siły nabywczej, który jest miarą siły nabywczej ludności danego kraju.

Otwarcie portów Japonii spowodowało w Europie zainteresowanie kulturą tego kraju. Zauważono, że Japonia ma długą i ciekawą historię, kulturę tak wysoko zorganizowaną, że można mówić o odrębnej cywilizacji. Lata badań uczonych europejskich i japońskich pokazały, że niektóre rodzaje działalności artystycznej i rzemieślniczej ukształtowały się w Japonii bardzo wcześnie, a inne nabrały specyficznego kolorytu. Japończycy szczycą się najstarszym romansem świata, specyficznymi formami wiersza, wyrobami z laki, technologią wytwarzania mieczy, barwienia jedwabiu i wieloma innymi umiejętnościami, często doprowadzanymi do poziomu artyzmu.

Już pod koniec XIX w. bogaci patrioci polscy przywozili z Japonii kolekcje etnograficzne oraz zbiory przedmiotów starożytnych.

Do II wojny światowej zostało wydanych około 300 japoników w języku polskim. Początkowo były to najczęściej tłumaczenia z języków zachodnioeuropejskich. Dobrymi przykładami popularnych opisów Japonii i jej kultury, podawanych z punktu widzenia podróżnika, są przetłumaczone na język polski książki Oskara Lenza *Do wybrzeży Azyi Wschodniej* (1894) i André Bellessorta *Podróż do Japonii: społeczeństwo japońskie* (1903, cz. 1 i 2). Wśród polskich autorów na ten temat pisał Stefan Władysław Bryła (*Jeden dzień w Jokohamie* (1913), *Daleki Wschód* (1923)).

Pierwszy szeroki opis literatury japońskiej stworzył Julian Adolf Święcicki w *Dziejach literatury powszechnej* (1883–1887, t. 2). Zamieścił tam eseje o języku japońskim, religiach, geografii i historii Japonii, japońskiej literaturze ludowej, poezji, muzyce, malarstwie, rzeźbie i architekturze. Wiadomości te w formie skondensowanej zamieścił w *Historii literatury chińskiej i japońskiej* (1901)[13].

Moda na Japonię pojawiała się falami. Znany jest wpływ motywów japońskich na artystów działających w ramach nurtu zwanego Młodą Polską. Zenon Przesmycki zamieścił dwa szkice o sztuce japońskiej w *Chimerze* (1901), czasopiśmie o tematyce artystycznej. Wojna japońsko-rosyjska w 1905 roku wywołała w Polsce żywe zainteresowanie, gdyż Rosja była zaborcą Polski.

W pierwszej połowie XX w. zostało wydanych sześć przetłumaczonych z języka angielskiego książek autorstwa Harrie Irvinga Hancocka,

13 Święcicki, Julian Adolf (1901) *Historya literatury powszechnej w monografijach*. T. 2: *Literatura chińska i japońska: z ilustracyami.* Warszawa: Redakcya i Administracya [Biblioteki Dzieł Wyborowych] (Warszawa: A. T. Jezierski).

które opisywały japońskie systemy walki wręcz oraz ćwiczenia gimnastyczne, np.: *Japoński system fizycznego trenowania ciała dla młodzieży* (Hancock 1908).

Dużą popularnością cieszyły się tłumaczone z języka angielskiego powieści i zbiory opowiadań Lafcadio Hearna, których ukazało się co najmniej dziewięć, np. *Kokoro* (1906) i *Lotos: rzut oka na nieznaną Japonję* (1909, cz. 1 i 2).

Maria Juszkiewiczowa wydała siedem książek i książeczek z opracowaniami baśni i legend japońskich, np. *Duch wierzby: legendy i baśnie japońskie* (1924).

Poeta, tłumacz i dziennikarz, a nadto podpułkownik Wojska Polskiego, Remigiusz Kwiatkowski, zostawił kilkanaście książek związanych z tematyką dalekowschodnią, tłumaczenia poetów chińskich, koreańskich i japońskich, np. *Chiakunin-izszu: antologja stu poetów japońskich* (1913), popularne zarysy literatur wschodnich, np. *Literatura japońska* (1908), zbiory aforyzmów oraz zbiory bajek.

Wacław Sieroszewski – autor kilkunastu książek dotyczących Japonii – napisał powieść *Miłość samuraja* (1926) i zbiór esejów *Z fali na falę: Japonja w zarysie* (1931).

Stosunkowo mała liczba przekładów bezpośrednio z języka japońskiego miała związek z brakiem oficjalnych studiów japonistycznych. Od 1919 roku na Uniwersytecie Warszawskim prowadzone były kursy języka japońskiego, którego wykładowcy starali się poszerzać zakres nauczania o podstawy wiedzy o kulturze Japonii. Dużą rolę przy organizacji i przeprowadzaniu kursów odegrali Bogdan Richter – absolwent Uniwersytetu Lipskiego, bracia Czesław i Mieczysław Miszkiewiczowie, Umeda Ryōchū. Dwaj uczestnicy kursów, Jan Jaworski i Witold Jabłoński, po zakończeniu studiów uniwersyteckich i zatrudnieniu się na uczelni, w 1933 roku założyli na Uniwersytecie Warszawskim Zakład Sinologii[14], nie przerywając prowadzenia badań japonistycznych. Warto jeszcze wspomnieć o kursach języka japońskiego w Szkole Wschodnioznawczej działającej pod egidą Instytutu Wschodniego w Warszawie, gdzie trzyletni kurs języka japońskiego ukończył m.in. Wiesław Kotański, późniejszy wieloletni profesor japonistyki.

14 Tsuneo Okazaki (2012: 461). Z kolei Agnieszka Żuławska-Umeda w artykule *Japonistyka* wymienia Zakład Kultury Dalekiego Wschodu (na Wydziale Filozoficznym UW), gdzie w latach 1922–1932 miały być prowadzone kursy języków japońskiego i chińskiego oraz wykłady na temat kultur i literatur dalekowschodnich (Żuławska-Umeda 2007: 171).

Po II wojnie światowej w Polsce wzrastało zainteresowanie kulturą i osiągnięciami Japonii na skutek postępujących ułatwień w nawiązywaniu kontaktów na różnych płaszczyznach. Duże znaczenie miały Igrzyska Olimpijskie, które odbyły się w 1964 roku w Tokio. Dobrą renomę zaczęły zyskiwać produkty przemysłu japońskiego, przede wszystkim samochody, sprzęt elektroniczny i elektrotechniczny. Marki Suzuki, Honda, Sony, Mitsubishi stały się powszechnie znane.

Filmy japońskie można było obejrzeć w telewizji i kinie. Z wybitniejszych pokazano *Rashōmona*, *Piętno śmierci* i *Siedmiu samurajów* w reżyserii Akiry Kurosawy (jap. 黒澤明 *Kurosawa Akira*), *Tokijską opowieść* (1953) Yasujirō Ozu (jap. 小津安二郎 Ozu Yasujirō) i *Balladę o Narayamie* w reżyserii Shōhei Imamury (jap. 今村昌平 *Imamura Shōhei*).

Dzięki staraniom profesora Wiesława Kotańskiego w 1959 roku w ramach Katedry Sinologii UW powstał Zakład Japonistyki, który początkowo przyjmował co dwa lata kilkoro studentów, by w ostatnim czasie oferować miejsce około 60 osobom rocznie. Z biegiem lat powstały studia japonistyczne na Uniwersytecie Jagiellońskim, Uniwersytecie im. A. Mickiewicza w Poznaniu oraz Uniwersytecie Mikołaja Kopernika w Toruniu (Kubiak Ho-Chi 2012: 461–492).

Do 1973 roku praktycznie nie istniały drukowane, napisane po polsku podręczniki do nauki języka japońskiego, stąd wynikała konieczność przepisywania podręczników, wykładów i ćwiczeń. Z biegiem lat wykładowcy opublikowali książki na poziomie podręczników akademickich, takie jak *Historia Japonii* (Tubielewicz 1984), *Gramatyka japońska* tom I i II (Huszcza *et al.* 2003), *Historia literatury japońskiej* (Melanowicz 2011). W latach 1993–2003 nakładem Wydawnictwa Uniwersytetu Warszawskiego ukazało się 16 numerów czasopisma *Japonica* dotowanego przez Fundację im. Takashimy, a redagowanego przez japonistów UW. Bibliografia czasopisma *Japonica* zawiera 737 pozycji, na które składają się artykuły, recenzje, przekłady, noty i biogramy. Obecnie Wydawnictwo Uniwersytetu Jagiellońskiego wydaje serię pod tytułem „Literatura, język i kultura Japonii", składającą się z książek naukowych poświęconych zagadnieniom japonistyki.

Od 1973 zaczęły ukazywać się skrypty do nauki pisma japońskiego dla studentów japonistyki Uniwersytetu Warszawskiego (Tabela 1).

Tabela 1. Skrypty wydane w latach 1973–1981

Autor	Tytuł skryptu	Rok wydania	Liczba znaków *kanji*
W. Kotański	*Teksty do nauki pisma japońskiego*	1973	200
W. Kotański	*Drugi stopień nauki pisma japońskiego*	1976	300
T. Okazaki	*Trzeci stopień nauki pisma japońskiego*	1981	300

Spośród skryptów wymienionych w Tabeli 1 tylko ten wydany w 1973 roku zawiera tłumaczenia zdań ćwiczebnych na język polski. We wszystkich skryptach zdania ćwiczebne są zapisane transkrypcją łacińską w systemie Hepburna. W tamtych latach z technicznego punktu widzenia nie było możliwe podanie zapisu zdań ćwiczebnych za pomocą znaków *kanji*.

Rewolucja mikrokomputerowa oraz udostępnienie użytkownikom przez firmę MicroSoft interfejsu Japanese IME (Input Method Editor) spowodowało, że napisanie książki zawierającej znaki *kanji* pod względem technicznym stało się bardzo łatwe. Dlatego też trzy nowe skrypty pt. *Pismo japońskie* zawierają już zapis zdań ćwiczebnych podany nie tylko w transkrypcji Hepburna, ale również z użyciem znaków *kanji* (Tabela 2).

Tabela 2. Skrypty wydane w latach 2007–2010

Autor	Tytuł skryptu	Rok wydania	Liczba znaków *kanji*
I. Kordzińska-Nawrocka *et al.*	*Pismo japońskie*, tom 1	2007	625
B. Kubiak Ho-Chi *et al.*	*Pismo japońskie*, tom 2	2009	660
A. Kozyra *et al.*	*Pismo japońskie*, tom 3	2010	660

Jak wynika z powyższych tabel, w roku 1981 trzyletni kurs nauki pisma japońskiego obejmował naukę 800 znaków *kanji*, natomiast obecnie cały kurs nauki pisma jest zaplanowany tak, by studenci zapoznali się z podstawowym zestawem znaków *jōyō-kanji*[15]. Choć przeciętny absolwent promowany około 1973 roku miał kłopoty z pisaniem i mówieniem po japońsku, poziom jego umiejętności należało wówczas oceniać pozytywnie i z szacunkiem, gdyż wynik uzyskiwany był w określonych,

15 Zestaw nie obejmuje znaków specjalnych dla nazwisk i nazw miejscowych.

niełatwych okolicznościach. Po latach pojawiły się lepsze podręczniki, uczelnia udostępniła bardziej wyspecjalizowane laboratoria i sprzęt audiowizualny, studenci uzyskali dostęp do Internetu oraz japońskiego radia i telewizji; współcześnie częściej można spotkać w Polsce Japończyków lub w czasie studiów wyjechać na krótko do Japonii. Z biegiem lat Kadra Zakładu Japonistyki i Koreanistyki powiększyła się, wykładowcy uzyskali wiele nowych możliwości podnoszenia swoich kwalifikacji. Wszystkie te czynniki spowodowały, że obecnie absolwenci w momencie ukończenia studiów uzyskują wyższy stopień sprawności językowej niż ci sprzed czterdziestu lat.

Niemniej nauka języka japońskiego jest na tyle obciążająca, że studia japonistyczne bardziej przypominają intensywny kurs językowy, prowadzony na wysokim poziomie, niż studia uniwersyteckie. Można się o tym przekonać, porównując zajęcia japonistyczne z tymi na germanistyce, anglistyce, iberystyce itp., czyli związanymi z głównymi językami europejskimi. Podstawowa przyczyna tego stanu rzeczy tkwi m.in. w tym, że języki ligi indoeuropejskiej są w zasadzie dialektami hipotetycznego języka indoeuropejskiego, inaczej rzecz ujmując – są sobie bliskie, a przez to łatwiejsze do nauki niż języki wschodnioazjatyckie. Ponadto już podczas rekrutacji na studia wymaga się wysokiej oceny na świadectwie maturalnym z języka wiodącego na większości filologii związanych z językami indoeuropejskimi, a to gwarantuje podstawową sprawność językową już na samym początku studiowania.

Szukając wyjścia z sytuacji, należy zauważyć, że w perspektywie czasu porównywalnej z przeciętną długością życia człowieka niezwykle trudno jest zmienić charakter języka naturalnego dużego narodu. Zatem lepiej byłoby, omijając ten praktycznie nierozwiązywalny problem, spróbować przenieść część kursu języka japońskiego z poziomu zajęć uniwersyteckich na poziom licealny, wychodząc naprzeciw zauważalnemu zainteresowaniu tym językiem na etapie szkół przeduniwersyteckich. W dużych miastach już w szkołach podstawowych, gimnazjach i liceach pojawiają się sporadycznie klasy lub kursy zajęć dodatkowych z języka japońskiego. Warto zastanowić się nad możliwością wprowadzenia w wybranym liceum w każdym dużym mieście powyżej 300 000 mieszkańców po jednej klasie z językiem japońskim. Pozytywna decyzja spowodowałaby potrzebę napisania podręczników do nauki języka japońskiego dla licealistów, podręczników zaprojektowanych zgodnie

z zasadami glottodydaktyki i z uwzględnieniem grafocentryczności rozważanego języka. Napisanie podręczników byłoby bez wątpienia w zasięgu możliwości japonistycznej kadry dydaktycznej wyższych uczelni. Znalezienie odpowiedniej liczby nauczycieli nie powinno stanowić problemu, gdyż absolwentów japonistyki zdaje się być wystarczająco dużo.

W niniejszej pracy akcent położono na zagadnienia związane ze studiami japonistycznymi, niemniej te same problemy dotyczą studiów sinologicznych i koreanistycznych.

Pozostają do wykonania pracochłonne działania organizacyjne, w ramach których pierwsze kroki zamierza podjąć autor pracy.

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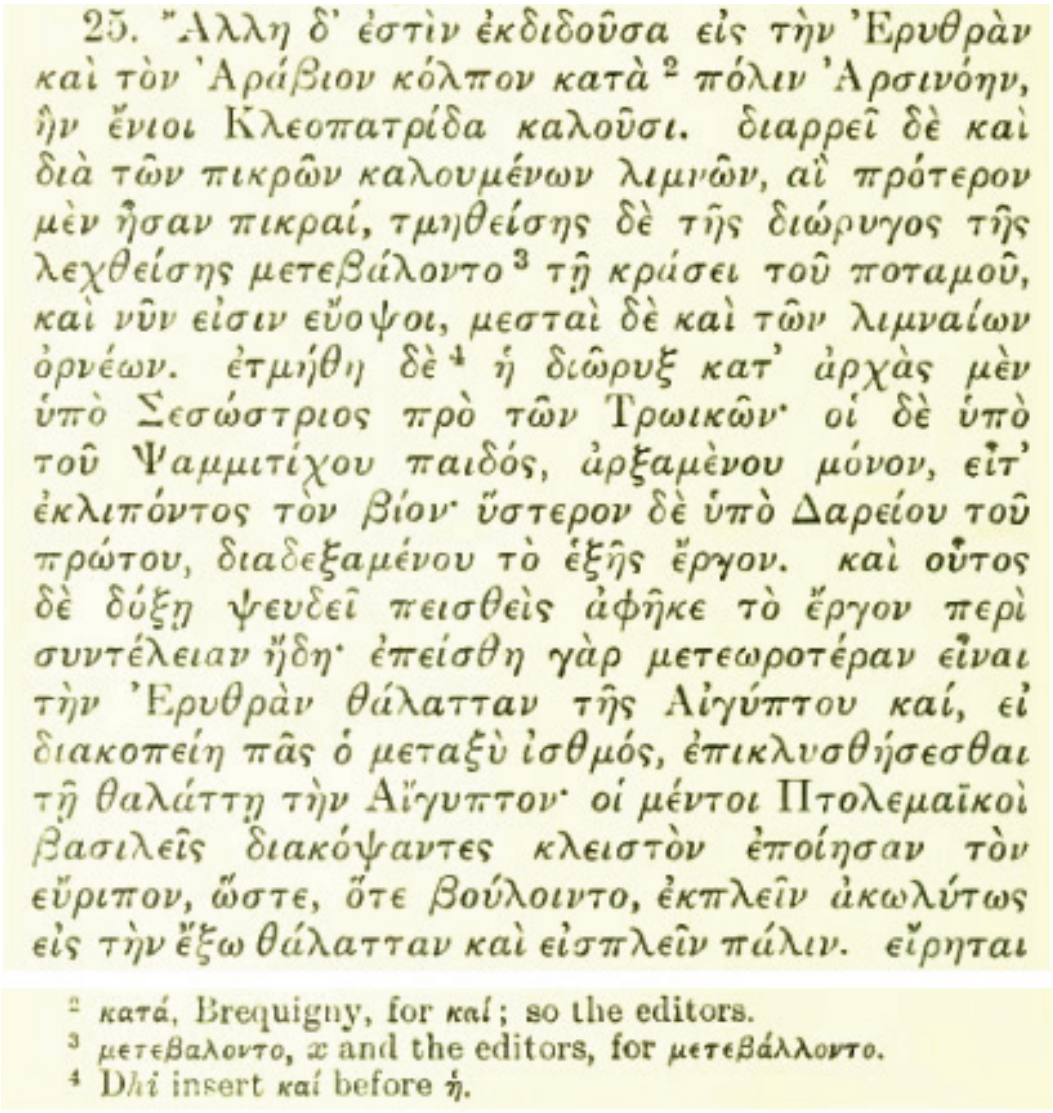
Aneks



25. Ἄλλη δ' ἐστὶν ἐκδιδοῦσα εἰς τὴν Ἐρυθρὰν καὶ τὸν Ἀράβιον κόλπον κατὰ [2] πόλιν Ἀρσινόην, ἣν ἔνιοι Κλεοπατρίδα καλοῦσι. διαρρεῖ δὲ καὶ διὰ τῶν πικρῶν καλουμένων λιμνῶν, αἳ πρότερον μὲν ἦσαν πικραί, τμηθείσης δὲ τῆς διώρυγος τῆς λεχθείσης μετεβάλοντο [3] τῇ κράσει τοῦ ποταμοῦ, καὶ νῦν εἰσιν εὔοψοι, μεσταὶ δὲ καὶ τῶν λιμναίων ὀρνέων. ἐτμήθη δὲ [4] ἡ διῶρυξ κατ' ἀρχὰς μὲν ὑπὸ Σεσώστριος πρὸ τῶν Τρωικῶν· οἱ δὲ ὑπὸ τοῦ Ψαμμιτίχου παιδός, ἀρξαμένου μόνον, εἶτ' ἐκλιπόντος τὸν βίον· ὕστερον δὲ ὑπὸ Δαρείου τοῦ πρώτου, διαδεξαμένου τὸ ἑξῆς ἔργον. καὶ οὗτος δὲ δύξῃ ψευδεῖ πεισθεὶς ἀφῆκε τὸ ἔργον περὶ συντέλειαν ἤδη· ἐπείσθη γὰρ μετεωροτέραν εἶναι τὴν Ἐρυθρὰν θάλατταν τῆς Αἰγύπτου καί, εἰ διακοπείη πᾶς ὁ μεταξὺ ἰσθμός, ἐπικλυσθήσεσθαι τῇ θαλάττῃ τὴν Αἴγυπτον· οἱ μέντοι Πτολεμαϊκοὶ βασιλεῖς διακόψαντες κλειστὸν ἐποίησαν τὸν εὔριπον, ὥστε, ὅτε βούλοιντο, ἐκπλεῖν ἀκωλύτως εἰς τὴν ἔξω θάλατταν καὶ εἰσπλεῖν πάλιν. εἴρηται

[2] κατά, Brequigny, for καί; so the editors.
[3] μετεβαλοντο, *x* and the editors, for μετεβάλλοντο.
[4] *Dhi* insert καί before ἡ.

Fotowycinek z *Geografii* (Strabon 1932–1967: 76) dotyczący budowy kanału łączącego Morze Śródziemne z Morzem Czerwonym

» There is another canal which empties into the Red Sea and the Arabian Gulf near the city Arsinoê, a city which some call Cleopatris. It flows also through the Bitter Lakes, as they are called, which were indeed bitter in earlier times, but when the above-mentioned canal was cut they underwent a change because of the mixing with the river, and now are well supplied with fish and full also of aquatic birds.

The canal was first cut by Sesostris before the Trojan War—though some say by the son of Psammitichus (2), who only began the work and then died—and later by Dareius the First (3), who succeeded

to the next work done upon it. But he, too, having been persuaded by a false notion, abandoned the work when it was already near completion ; for he was persuaded that the Red Sea was higher than Aegypt, and that if the intervening isthmus were cut all the way through, Aegypt would be inundated by the sea. The Ptolemaïc kings (4), however, cut through it and made the strait a closed passage (5), so that when they wished they could sail out without hindrance into the outer sea and sail in again.

(2) *i.e.* by Necos (Diodorus Siculus 1. 33. 9), or Necho, who lost 120,000 men in the effort (Herodotus 2. 158).

(3) So Diodorus Siculus (1. 33. 9).

(4) „Ptolemy II" (Diodorus Siculus 1. 33. 11).

(5) „At the most advantageous place he built a cleverly contrived barrier" (Diodorus Siculus 1. 33. 11). « , (Strabon 1932–1967: 77)

Tłumaczenie angielskie tekstu fotowycinka (Strabon 1932–1967: 77)

Paulina Kłos
University of Wrocław

Discourse as the Form of Protolanguage in the Creation of an Identity. On the Basis of the Late Works by Michel Foucault[1]

Abstract. "Against this speech which announces his death (...) Ulysses must sing the song of his identity"[2] – to speak against death is to build an identity. In the introductory paragraphs of the essay *Language to Infinity* Michel Foucault finds a discourse as a song of our identity set against the imminence of death. According to him, it is a discourse that calls our identity to being, it consolidates the self, it is the source of our conviction that we possess ourselves, that there exists the outright center of our consolidating powers that govern our thinking and control our finiteness. Discourse as a kind of story, fiction, narration is the instrument of the creation of our selves – it keeps them together, it helps not to dissipate the self into the fragments governed rather by the Derridian *Differance* than by the Deleuzian *The Same*. Discourse, according to Foucault, is the principle of the existence and development of the subject, in this sense we can say that the achieving and building of discourse is equivalent to the acquiring of the kind of proto-language that is indispensable for the preservation of the self, of the identity. "From the day that men began to speak toward death and against it, in order to grasp and imprison it, something was born (...)" – writes Friedrich Nietzsche. My thesis is that it was an identity that was born out of the implementing of the discourse into the instability and flux of everyday experience, and it was with this identity that the whole area of human communication appeared.

Keywords: discourse, Michael Focault, philosophy of language, identity.

1 The article is an altered version of a fragment of the Ph.D. thesis by Paulina Kłos (University of Wrocław, 2014).

2 Quotations derive from Michel Foucault (2000) *Essential Works of Foucault 1954–1984*. Vol. 2. London, New York: Penguin Books; 89–91.

Discourse for Michel Foucault is "a complex, differentiated practice, governed by analyzable rules and transformations" (Foucault [1969] 2011: 232). However, people sometimes perceive discourse as something open to interpretation, as something that is continuously developing and in this way they are completely in opposition with the view of discourse as the definite and determined system of rules and their modes of transformations. Nevertheless, Foucault ([1994] 2000: 148) writes that contemporary literary discourse is not so much an interiorization but "far more a question of a passage to the 'outside.'" The moment when thought is born and articulated appears to be placed in the exteriority with regard to a discourse, we can say that it is born in the space of the exteriority of a discourse. There is no interiority of speech, thinking happens in the sphere of exteriority. Thought that appears at the borders of a discourse, which is born out of this exteriority, is the expression of the outside. Foucault calls it "the thought of the outside" (Foucault [1994] 2000: 150). Language for Foucault ([1994] 2000: 152) is set "outside" of itself and in this position it gains distance toward itself. For Foucault ([1994] 2000: 152) thinking necessitates the void, the distance between the signs, in which the fragile formation of "I speak" may appear and be manifested. Discourse becomes in the moment of speaking, it is not pregiven. "The discourse about which I speak does not preexist the nakedness articulated the moment I say, 'I speak'; it disappears the instant I fall silent" (Foucault [1994] 2000: 148).

Discourse for Foucault is something that has no center in something that it talks about. Foucault ([1994] 2000: 153) proposes to find as a discourse and to call "a discourse" something that is directed toward itself only as taken as its outside. The thought originated in a discourse possesses itself only as something alienated from itself: "a discourse that constitutes its own space as the outside toward which, and outside of which, it speaks" (Foucault [1994] 2000: 153). Discourse born of this self – directedness assumed as gaining distance to itself, as separating the object of this auto-reflection from its subject appears as one "with no conclusion and no image, with no truth and no theater, with no proof, no mask, no affirmation, free of any center, unfettered to any native soil (...)" (Foucault [1994] 2000: 153). Such discourse does not amount to the formulation, discovering and description of the "thing of the conversation." Its sole object is constituted through self-reference,

which in effect brings into being its power of constituting. The metaphorical picture of such a productive power is "the mirror" – but not "mirror" taken as the frame in which resembled things are included – but "mirror" as the symbol of doubling, of the power of constituting, the power of creation by directing its productive resources to some part of a grasped reality. It is not this reality being emphasized, but the power of discourse which brings into being what is inside as if it would be outside. Mirror is a rule for a discourse that creates by the sole power it possesses, by directing it to itself as to its outside – this way it creates the thought of the outside, moving on the verge of its discursive possibilities.

Discourse and speech do not have the shape of the initial statement, the statement of the absolute beginning that names something that has not yet come to the surface of a language. This discourse is rather the always already started repetition of the murmur that surrounds the systematic field of discourse. Words of this discourse "welcome the outside it addresses" (Foucault [1994] 2000: 153). "(...) [T]his discourse [is understood] as a speech that is always outside what it says (...)" ([1994] 2000: 153) and that advances toward this what "has never received language" (Foucault [1994] 2000: 154) – Foucault assumes here two spaces, one which is given in the language, and the second that is given outside of it, that is given in language's "unthinkable," "unspeakable."

In presenting how the notion of discourse is understood by Foucault in his later writings, the essay titled *Language to Infinity* is particularly useful. The opening lines surprise us with the metaphor telling that a discourse is something that "has the power to arrest the flight of an arrow in a recess of time, in the space proper to it" (Foucault [1994] 2000: 89). "[T]he flight of an arrow" ([1994] 2000: 89) – is here the expression of the action, the movement, the movement toward its end, its purpose, its death. Discourse can "arrest" this movement, can close it "in the space proper to it" – to freeze it in a space, to embrace it in a form of a picture. Discourse can grasp the passage of time, the transgression, the transformation in the space, in a form. Time settled, time sedimented, the passing of the time grasped in the form that does not pass. Time is here visualized. Discourse is seen as the visualization of the passing of something that is only to be experienced and to pass.

At the beginning of the text titled *Language to Infinity* Foucault ([1994] 2000: 89) describes a hypothetical (yet literary) situation of Ulysses, who after returning back home from his long journey hears a very old song about his own history. This strikes him as if he would listen "to his own death: he covers his face and cries." Here we can see an identity that has to be created in the process of singing, in the process of communication. Foucault seems to write about the origins of our power to consolidate something that was described as a "subject" in the 19th century. The song of creation could be understood as the kind of protolanguage that still has yet to come and support our struggles in saving our identity.

According to Foucault and the writers that undertake the assumptions of the program of the antihumanism, the unity of a subject is only the function of the totalizing, centering powers of the rational thinking, that from the times of Plato tended to the unification of the dispersed and differentiated wielding powers in society and human being, under the guise of dialectics that unified the contradictions, that was able to create of the oppositions, the one, coherent, dialectically uphold, view of reality. Reality that in fact consisted of fragments, figures that were alien to it, particularities and accidental events, that could no way be united in one, annihilating the oppositions, system.

Foucault ([1994] 2000: 89–91) finds that discourse is set as a song of our identity against the imminence of death. Discourse is the form in which our identity can express itself. However, it is not like this that discourse expresses our identity, rather the other way round: it is the discourse that calls our identity to being. Hence, we can repeat after Jean-Francois Lyotard ([1979] 1986: 39) that it is the power of our little narration about ourselves that consolidates the self, moreover, this narration is the origin of our conviction that we possess ourselves, that there exists the outright center of our consolidating powers that governs our thinking and controls our finiteness. Discourse as a kind of story, fiction, narration, is the instrument of the creation of our selves – it keeps them together, it helps not to dissipate the self into the fragments governed rather by the Derridian *Differance* (Derrida [1967] 1997: 62–69) than by the Deleuzian *The Same* (Deleuze [1968] 2010: 22–27). Discourse, according to Foucault's *Language to Infinity*, is the principle of the existence and development of the subject, in this sense we can venture

the statement that the achieving and building of the discourse is equivalent to the acquiring of the kind of proto-language that is indispensable for the preservation of the self, of the identity. "Boundless misfortune (...) marks the point where language begins; but the limit of death opens before language, or rather within language, on infinite space" (Foucault [1994] 2000: 90). Foucault ([1994] 2000: 90) seems to say that our "song of identity" should start from this "infinite space," from this moment of *atopia*, the "place" that is between discourses, but, nevertheless, helps a discourse to appear. This "infinite space" is the resourcefulness of the language alone.

Discourse, as an event originated from the atopic place, from the moment "between" the rational discourses, from the moment of a-topos, being outside of each place Foucault ([1994] 2000: 89) calls the void that is opened in the time of experiencing by the approach of death. It is foreshadowing of a death that opens up the sphere from which a discourse can originate: "approach of death (...) hollows out in the present and in existence the void toward which and from which we speak" (Foucault [1994] 2000: 89). To find this place is to find the way to one's own identity, however "[n]obody can build you the bridge over which you must cross the river of life, nobody but you alone" (Nietzsche 1990: 165 cited in: Miller 1993: 70).

Undoubtedly, death is "the most own of our possibilities" – as Heidegger ([1927] 1994: 369) put it, and in agreement with Foucault ([1994] 2000: 90) when he states that "before the imminence of death, language rushes forth." However, it also happens that the power of language, of discourse is stronger than the power of human's understandings, after all, it can be as Mallarmé says: it is language alone that is speaking. The consolidating powers of language that inform the shape of our identity are overwhelming and embrace the whole incompleteness and accidentallity of human's fragments in the coherent and stable form. This way our finiteness and incompleteness is "objectified" on the virtue of the fundamentality of language. Paweł Pieniążek (2007–2013: 7) adds remarks about this "fundamentality:" we can say so about the language, about the words, because they suggest certain interpretation, because they are overwhelming, because there is nothing behind these interpretations. Interpretation is here infinite, because it is totally unfinished and never-ending – we can never refer to the basis, to the historical origin

of some of it: "There are no facts – only interpretations" – as Nietzsche ([1967] 1994 cited in: Pieniążek 2007–2013: 7) has said. Discourse helps in the constant creation of the identity to be performed only on this condition of the "being-unfinished" quality of the interpretation: "Headed toward death, language turns back upon itself; it encounters something like a mirror" (Foucault [1994] 2000: 90). Death as the "ultimate possibility" (Kalaga 1997: 32) is the final condition for the whole process of the construction of the discourse about yourself. Discourse for Foucault ([1994] 2000: 90) is not only the governing of the area of power and knowledge, concerning some historical period, especially when we analyze social inventions like prisons, hospitals, schools or churches. Discourse is also the totality directed to governing of the appearance of the self, its constant strive to preserve it against death. Language can be seen here as a tool of upbringing of the identity, its never-ending resourcefulness of its performance and creation.

Language that is used in a discourse works as if it was based on the rule of resembling itself infinitely in the mirror. It is very well shown on the example of Marquis de Sade's works, where language encounters its own impossibility, its own impotence. It is connected with the rule of a "mirror." This figuration presents the language that reveals its "absolute power" (Foucault [1994] 2000: 98), "but this is the moment in which language inevitably becomes impotent, when its breath is cut short, when it should still itself without even saying that it stops speaking. Language must push back to infinity this limit it bears with itself, which indicates, at once, its kingdom and its limit" (Foucault [1994] 2000: 98). In this movement language creates the terror and language of terror is the infinity of excess, however, it is also the moment when it stops talking, when it finds itself mute, expressionless, it stops itself on the border of the possibility of its infinite multiplication, it finds in itself a dearth, a lack, a void – built on the virtue of the rule of a mirror. Language that is infinite repetition as the sign of life is also the absence, the void constituted only by the movements of repetitions – there is nothing behind this structure, we always touch only the surface. Excess and lack are the limits of language – we can ask ourselves whether these limits indicate the influence of death. It is – writes Foucault ([1994] 2000: 99) that this "actual infinity of illusion (...) forms (...) the thickness of a work – the absence in the interior from which the work paradoxically erects itself." As a consequence of

the reading of the essay *Language to Infinity*, the conclusion appears that the origin of the appearance of a certain discourse is the moment when language encounters its limits, when it finds it impossible to talk about the problem further. Then, a whole series of new stories appears, new explanations arise, language loses its power to analyze the already existing problem, it finds itself impotent with regard to the given subject, hence it creates new areas of inquiry, erects "machines" or institutions charged with managing these new areas for new answers. The whole area of society's appliances arises because language alone cannot manage with the problem on the level of its analytical tools. It cannot provide the explanations on the virtue of analysis only, it then starts to create new "myths:" pictures that are still further rather than nearer from the solution of the identified previously problem. Language builds new stories, new symbols of its impotence. Myths are continuously created as an outcome of the activity of the force that is convinced about its possibility to find a solution. The appearance of new stories instead of explanations to the old problems is the moment of the appearance of a new discourse. Language pushed at its limits, language that cannot find the means for the exposition of its reasons resorts to the creation of a new riddle. Society then answers by supplying all the necessary methods and instruments to cover the necessities of a new theory: a madman appears as the subject possible for satisfying the needs of a theory about madness.

Of course, Foucault ([1994] 2000: 99) observes that everything has been said in the "library of the Babel," but, nevertheless, "standing above all these words is the rigorous and sovereign language that recovers them, tells their story, and is actually responsible for their birth." Discourse is such a story: born on the ruins of all possible explanations, regained and recovered in the new form that concerns the limits of language in a given subject. Discourse by Foucault ([1994] 2000: 100) is characterized hence by the one indispensable feature: it is deployed against death, it increases the distance between itself and a death, by constantly proliferating its figures. Language about which Foucault ([1994] 2000: 100) writes, and which is the component of a discourse, its proliferation being the condition of the discourse's appearance "postpones death indefinitely by ceaselessly opening a space where it is always the analogue of itself." We should remember three such conditions which make language's progress and passage a constant

simulacrum with its own rules of proliferation: a death, a mirror and a double. Discourse appears when these rules are obeyed and this way the void opens, giving birth to it.

Discourse is hence for Foucault ([1994] 2000: 100) the space where we can finally discover ourselves, but we find there ourselves infinitely strengthened through repetition, doubled, mirrored – thanks to the possibilities of our condition of finity, which reduces, doubles, resembles, produces only new explications of the old myths. In the discourse we are also speaking into the outside, in the direction of the outside, hence, according to the previous essay *Language to Infinity*, we can grasp ourselves in the activity of prolonging distance to and indirectly deferring death. A discourse for Foucault is not only the supply for theories for sustaining the prevailing discourse of the society, but discourse is here found as the tool for sustaining our beings, even if the power of the Outside that talks through us is sometimes not understandable and the language we produce as its outcome and the result of its influence is not enough for the infinity to be grasped. Our Language stays then mute, astonished, terrorized – as the works by Marquis de Sade ([1782] 1927), Artaud ([1938] 1958), Hölderlin (1913–1923 and 1943) and Nietzsche ([1883] 2005) show. They are the best examples of the power of language limited and determined, where its limits are also the best signs of its infinity, of its supply. In this sense discourse is not only a theoretical device, but the method of sustaining our beings in their progression toward death. Individual story – what Foucault supported for the whole life – individual explanation of his/her existence. It is the support, the background for the ability to perform everyday activities. Discourse – as it appears on the pages of *Essential Works* – is the source of every individual opening responsible for the participation in everyday life. We are all *Da-seins*, beings thrown into the world – this situation needs the support, and Foucault presents the rules of its working in the essays on language. The creation of individual discourse is such a support in the struggle to exist as an identity.

The main thesis concerning discourse, derived from the essay *The Thought of the Outside*, is that discourse should not amount to the dimension of interiority. The dimension of the Outside is something opposed to the dimension of interiority, of which most of the western tradition of philosophy is based. To find the appropriate language

freed of the commitments toward the consciousness we have to enter the "void" that is created by the self-reflecting, finding its limits, language – the void that is extensively examined in the essay *Language to Infinity*. In *The Thought of the Outside*, discourse is based on two elements: reflexive patience "always directed outside itself" and a fiction that "undoes its forms" (Foucault [1994] 2000: 153). Foucault writes ([1994] 2000: 154) that when "discourse ceases to follow the slope of self-interiorizing thought" it then "returns thought to the outside" and only then it "becomes a meticulous narration of experiences, encounters, and improbable signs." This way we get the picture of a discourse that concerns what happens between the conscious reflection, between the linguistically fixed events. Here discourse is about the un-space, a-topos, something that lies "between." It sustains "a discourse on the non-discourse of all languages; the fiction of the invisible space in which it appears" (Foucault [1994] 2000: 154). Discourse concerns the moments where everything begins – it is the newness, the opening, based on forgetting rather than reflection, hence it cannot also be a positivity, a presence, it is rather the "beyond" of the presence, its "between."

The conclusions from the chapter "The companion" in *The Thought of the Outside* go against the conception of a discourse as something that helps to build an identity of a person. Foucault ([1994] 2000: 163) underlies the importance of the seducing voice of the sirens, the voice of the attraction that appears in the interiority and which this way expropriates it from itself from within.

The voice of attraction is the calling of the voice of the Other, of the Outside hidden inside our interiority. This outside that inserts itself into ourselves "empties the place into which interiority customarily retreats and deprives it of the possibility of retreat: a form arises – less than a form, a kind of stubborn, amorphous anonymity – that divests it of its unmediated right to say I, and pits against its discourse a speech that is indissociably echo and denial" (Foucault [1994] 2000: 163). Hence, the discourse of identity, of self must from this moment take into account the power of attraction that is exerted upon it and opens inside it the space into which the outside with all its equipments enters. From this moment we have to accept the absence inside ourselves, the absence which will never allow us to stay quiet and safe, the power of expropriation of ourselves from our being is the element on virtue of which our

ability to form a discourse arises. It is just this seducing voice of the Outside that opens the space in us, not enough familiar to reconciliate with it, where the conflicting discourses are in the constant state of fight – this is the origin of power that supports human's identity. Discourse as something alienating and disquieting appears as the rule of progress.

Another notion important in the understanding of the workings of the language and discourse is a notion of "desert." "Desert" is the figure of "a language without an assignable subject" (Foucault [1994] 2000: 163), the empty place from which such a discourse can appear. This second, conflicted discourse in us is not an other „speaking subject." It is the power of a language at its limits, it is "the impossibility" to cross over it and an un-place in which language disappears. This „companion," as Foucault ([1994] 2000: 165) says, "has no name," is faceless, but is constantly reappearing in the form of questioning, it is "the discourse manifesting the impossibility of responding." To lose oneself in order to find oneself is hence to find oneself constantly questioned without ever the possibility of receiving an answer to appear and to find oneself related toward the voice of attraction which also can never be satisfied. The only advantage of this being related to this power is that the conflicted self must constantly build a discourse, must "speak so as not to die" (Foucault [1994] 2000: 89). The discourse is the condition and the result of the Outside entering the interiority of an identity. However, we should remember – admonishes Foucault ([1994] 2000: 166) – that the experience of the outside is not directed at the regaining of an identity. It is rather indirectly directed at the production of discourse – it is language that gains, and language that speaks: "any subject it may have is no more than a grammatical fold" (Foucault [1994] 2000: 166). Language as the stream of speaking laid bare and "the visible effacement of the one who speaks" (Foucault [1994] 2000: 166). Discourse – we can conclude in consequence – should have to share these qualities, but, and after all, it is the discourse that counts for Foucault. A given identity seems to be a place where the lines of different influences and micro-discourses intersect and intertwine, the place of the manifestation of a language, of a discourse that dominates in a given period of time.

As far as the identity is concerned, Foucault ([1994] 2000: 166) sometimes writes contradictory statements, *i.e.* this one when he states that: "we are quite far from the experience through which some are wont

to lose themselves in order to find themselves," because in other places he presents the conviction that we can find ourselves through losing ourselves first (Miller 1993: 144). However, this second utterance should be read through the lens of the Nietzschean philosophy, where the interiority that is going to be won is not the classical interiority deeply hidden in us. The interiority by Nietzsche according to Foucault ([1994] 2000: 273) is something that is rather exterior than interior, it is a fold of an exteriority, a surface of words that project our very being. The important role hence in the understanding and finding the identity, the self is the thought of the outside that was, according to Foucault ([1994] 2000: 150), first exposed in the writings by Marquis de Sade. Before this exposition the place where the human tried to gather oneself in the interiority of a thought was discourse alone, not the thought of the Outside (Foucault [1994] 2000: 150). It was de Sade that discovered the thought of the outside, without the subject, without the interiority. He does not look for the discourse that would be the justifying of an identity, if he is looking for something then it is the quest for a discourse that is self--justifying speech of the language alone. It is a language that expresses itself alone, that is not in the service an identity; discourse works in its own name, its supporting role for the identity is only conditional.

However, the answer to the sometimes equivocal expressions about the task of finding oneself or, just the opposite, to forget about oneself, could be – as Miller (1993: 147) proposes – the Foucauldian figure: the labyrinth. The labyrinth – is "a structure in which to hide, a line of defense" but also "a space of daimonic revelation, a place where a person might come to 'think differently,' it facilitated, as a literary device, self-effacement and self-expression simultaneously" (Miller 1993: 147). It is very important that the labyrinth exemplifies two forces not only present in all humans, but seemingly present in Foucault writing his quest for truth and his approach to discourse against death. To conceal and to reveal oneself at the same time, in the same figure of labyrinth is probably the element of the game directed against the power of death, and – what means the same – the source of the infinity of language inside us, the source of the thought of the Outside that from us rushes toward the outside in the form of a discourse.

We can notice that Foucault's position with regard to a discourse is informed by his convictions concerning the power of the nondiscursive area

pertaining to a human being, concerning the importance of the area of "the unthought" and the limit-experiences that release and open in a human being the spheres otherwise trained by institutions, conventions, rules that left human being docile and numb, as the automaton designed only to fulfill these prescriptions. Philosophy by Foucault underlined the moment of freedom in humans, but not freedom taken in the Sartrean way as a kind of terror inflicted on us. This is freedom that is connected with the moment of transcendence included in the Nietzschean philosophy of Overman. Impressed by the writings of Nietzsche, Foucault believed in the moments in human life that could awake man and surprise him at his own possibilities. It was the result of going beyond the moral divisions of good and evil that were described in Nietzsche's writings (Nietzsche [1886] 1997: 1–17). Human life is the quest for something sacred, not in a sense of religion, but in a sense that it transcends all the limits. The Overman in Nietzsche's writings is the man who comes after the last man, who is the symbol of defeat. The Overman – is "the interior tension in human life, the tension between this what is, and this dark, unknown, strange, new: this what transcends life. The life that defeats itself, the life that blows itself from inside" (Michalski 2007: 234).

The Freedom that allows to grasp itself in the writings by Foucault is not the Sartrean freedom but the Nietzschean one. Freedom that is the moment of the over-coming of the Overman: "The constant strive of going beyond this what is given, of going toward the unknown (...) creates also the distance to this what exists, it gives the freedom from all the situations" (Michalski 2007: 234–235). It produces bitterness in the aftermath of the leaving what was until the present moment mine, but at the same time it produces "the joy of the liberation, the sweetness of freedom" (Michalski 2007: 235). This is the freedom Foucault talks about, the moment of transcendence that is included in the limit-experience. Also the moment of writing, the moment of fiction in the work does not follow the rational path: "The work wells up from the unthought and the unthinkable" (Miller 1993: 162). Foucault alone writes about this moment of unthinkable, of this still unknown area of experience that it is just the source of his discourse on identity: "I have tried to define this blank space from which I speak, and which is slowly taking shape in a discourse that I still feel to be so precarious and so unsure" (Miller 1993: 161). Hence, the discourse is something that interweaves two elements:

rational, methodological, documented thread of the factographical truth, and the other moment that develops from the dark, unknown area in human being, the only area that is responsible for the higher truth about the human being, the truth that originates in which transcends humanity and everything that is "only" human. This second source of discourse makes it more fluent and fleeing, not so well referenced but it is just this moment that makes discourse overcomes what is relative and particular, it gives it the real universal value, not amounting to something good or bad but rather to the continuous strive to make oneself free to become what one really is, to overcome one's limitations.

All these moments present in the philosophy of Foucault have apparently impacted his idea of discourse. A "true discourse" should connect the fictive and scientific elements (Miller 1993: 211) and only in this way it can pay its heed to both, equally important spheres in human being: the rational and the irrational one, the one that helps him in functioning in a society and history, the other reminding him of his higher obligations toward himself and the others as an ideality that transcends all limits.

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Tomasz P. Krzeszowski
University of Warszawa
University of Social Sciences, Warszawa

What Are You Talking about? A View from the Outside

Science often talks about things that are poorly defined.
Blogger Uzza "From Babel's Dawn: Protolanguage after Toruń"

Abstract. While bearing in mind my level of proficiency on the subject of "protolanguage," I would like to make several points concerning the use of this term. Moreover, I would allow myself to share some observations formulated in the framework of what is generally called cognitive linguistics as initiated and cultivated by Langacker, Lakoff, Johnson and a number of other American and European scholars. I believe that the most fundamental commitment of cognitive linguistics is that meaning is embodied and thus it can be reduced to conceptualizations grounded in all kinds of motor-sensory experiences contingent on the structure and functioning of the human body (*i.e.* the human as the seat of the human mind). In brief, differences in conceptualization occur according to what Langacker calls dimensions of imagery. It can be argued that a considerable number of disputes and futile discussions have their roots ambiguities and polysemies of linguistic expressions including some fundamental terms. Such cases of linguistic misunderstanding are in a large measure responsible for creating communication barriers, which unless promptly removed, result in communication breakdowns. In sum, there may exist a certain terminological chaos, which leads to the dating imbroglio and is one of the sources of what is called communication barriers that appear in all kinds of discourses (*cf.* Krzeszowski 2006). The terminological barrier and its consequences, which all too often plague scientific discourse, can be gotten rid of through explicating the senses of ambivalent terms. Sometimes, however, communication barriers cannot be overcome, and what is meant to be a scholarly discourse degenerates into a quarrel or a brawl.

Keywords: protolanguage, communication barriers, terminology, conceptualizations of meaning, term ambivalence.

A somewhat apologetic introduction

I do not claim any expertise in matters pertaining to protolanguage in the sense in which the term **protolanguage** is used at this conference ["Ways to Protolanguage 3"] or indeed in any other possible sense. But my scanty and selective knowledge of the subject, based on having read some materials presented during the previous two conferences ["Ways to Protolanguage 1," "Ways to Protolanguage 2"], allows me to share with you some observations formulated in the framework of what is generally, even if not very fortuitously, called cognitive linguistics as initiated and cultivated by Langacker, Lakoff, Johnson and a number of other American and European scholars. The most fundamental commitment of cognitive linguistics is that meaning is embodied, which means that it can be reduced to conceptualizations grounded in all kinds of motor-sensory experiences contingent on the structure and functioning of the human body, and particularly the human brain as the central seat of the human mind.

Having thus declared my particular linguistic confession, let me immediately proceed to express my main and most fundamental reservation concerning the theme of this conference. The qualm has to do with the lack of consistency in following the **terminological principle**. The principle says that a given term ought to have one and only one sense in a given text. In a stronger version the principle demands that a given term ought to have only one sense in a given discourse. An even stronger version would require monosemy of terms in all kinds of texts and discourses connected with a given field. The terminological principle is well known, and in its weakest version is generally observed by all experts in a given field, but its stronger versions are virtually impossible to implement in practice. The rare cases when a particular author flouts the principle in his/her own text are due either to carelessness or, if deliberate, are meticulously justified and explicated. (Such is the case with the notoriously polysemous word "denotation," see Krzeszowski 2010.) The principle may be violated when references to texts written by other authors have to be made. In such cases it may turn out that the same word appearing in someone else's text is used in a different sense than in our own text. Such divergences should not come as a surprise because one and the same entity (thing, process, scene or whatever can be

an object of conceptualization) may be viewed in a number of different ways, depending on what is profiled, in what domain, from what vantage point and perspective, and in which scale and scope of conceptualization. In brief, differences in conceptualization occur according to what Langacker calls dimensions of imagery (see, for example, Langacker 1988). A considerable number of disputes and futile discussions have their roots ambiguities and polysemies of linguistic expressions including some fundamental terms. Such cases of linguistic misunderstanding are in a large measure responsible for creating communication barriers, which unless promptly removed, result in communication breakdowns. On the one hand, there may be no agreement as to what exactly is being profiled and in what domain, and, on the other hand, even if the object of description is properly identified, there may still be different possible ways of conceptualizing it. This is so because conceptualizations involve various different "domains of experience" and are manifested in our "capacity to *structure* or *construe* the content of a domain in alternative ways" (Langacker [1991] 2002: 5).

Language, *protolanguage* and other terms expressing various related concepts used in academic discourse (including the protolanguage conferences) are no exception. They, too, are results of conceptualizations along dimensions of imagery which are responsible for alternative construals of whatever undergoes conceptualization. The ultimate result of all this is what may be called terminological chaos which consists in using one word in many different senses (which may be metaphorically, metonymically or otherwise related) and in using many different words with very similar, often identical senses.

1. The terminological chaos and its sources

English and most other languages makes use of the metonymic and metaphorical relation between the concepts designating a part of a human body described as "the long soft piece of flesh fixed to the bottom of your mouth that you use for tasting, speaking, *etc.*" The metonymic part of the relation consists in the fact that only one function, *viz.* speaking, is highlighted when such words as *lingua*, *tongue* or *język* are used. The metaphorical element maps concrete, physical reality into abstract, mental reality whereby the abstract concept "language"

existing in the mental domain is partly conceived as a concrete object called *tongue*, *język* or whatever else in other languages, which exists in the three-dimensional physical space. In its metaphorical sense the English noun *language* is grammatically ambiguous between being uncountable and countable. In the former case the word cannot be preceded by the article *a* and does not take the plural form. In the latter case the nouns *language* behaves like other countable nouns. This difference is consonant with de Saussure's difference between *le langage*, which denotes the general concept and *la langue*, denoting a specific, language system. In languages other than English and French, for example Slavonic languages, this difference is not overtly signaled, either lexically as in French or grammatically as in English, but if necessary can be expressed periphrastically.

Having said all this about the grammatical ambiguity of the noun *language* and alternative construals, let us now take a look at a handful of examples of how the sense of the uncountable noun *language* is described, first in general dictionaries and encyclopedias, which presumably reflect how the word is commonly understood, and next, in selected texts by language experts, *i.e.* linguists.

A popular dictionary explication of the senses of the word *language*, exemplified by an abridged version of *OED*, reads:

1. the method of human communication, either spoken or written, consisting of the use of words in a structured and conventional way: *a study of the way children learn language*;
2. the style of a piece of writing or speech: *he explained the procedure in simple, everyday language*;
3. the phraseology and vocabulary of a particular profession, domain, or group: *legal language*;
4. (usually as **bad/foul/strong language**) coarse or offensive language: *the film contains some violence and bad language*;
5. a non-verbal method of expression or communication: *body language*;
6. programming language.

This explication is consistent with the fact that most words in natural languages are polysemous, *i.e.* their meanings constitute networks of senses interrelated by means of metonymic substitutions and figurative extensions resulting in metaphors (*cf.* Langacker 1988). Such structures

are also called radial (*cf.* Lakoff, Johnson 1999). The selected six senses of *language* are radially structured in the following way:

1 2 3 4

5

6

Sense 1 is central, and the remaining senses are metonymically and metaphorically related to it. Thus, sense 2 is a metonymy, whereby the word *language* is used to refer to some of its aspects, such as grammar, lexis, and style. Sense 3 is also a metonymy, whereby the word language is meant to refer to specific phraseology and vocabulary. Sense 4 is another metonymy, whereby the word *language* is meant to refer to bad, foul strong vocabulary. Sense 5 is metaphorical by virtue of a figurative extension based on the suppression of the property "verbal." Sense 6 is also metaphorical resulting from the suppression of the properties "human" and "verbal."

Linguists have never been too eager to formulate simple, short "definitions" of language. Those who ventured some quasi-definitions took into consideration only the first of these senses or offered even more general descriptions of the concept; some deliberately circumvented the issue and expressly refrained from providing any definitions or explications. The following representative sample exemplifies the three possibilities:

> *Method of communication*: "Language is **a purely human** and non-instinctive **method of communicating** ideas, emotions and desires by means of a system of voluntarily produced symbols" (Sapir 1921: 8).
>
> *Extreme generality*: "To many, language is the most important **form of human communication**, and this the broadest way of regarding it" (Whatmough 1956: 18–19).
>
> *Circumvention*: "I will begin by assuming that **everyone knows, in a general sort of way at least, what language is** and how it is used" (Lyons 1981: 17).

The reluctance to formulate precise definitions of language is convincingly explained in the following quotation from Whatmough (1956), which, dated as it is, well summarizes the situation:

> Now, to define language with precision is far less easy than to define acid or other chemical terms. This is because many scientific inquirers are interested in language, philosophers, psychologists, physicists, logicians, literary critics, neurologists, sociologists, as well as linguists, to name no others. There is also, just now, a widespread interest in language and meaning on the part of many intelligent men and women, no matter whether they regard an understanding of the nature and function of language as directly important for their daily work nor not. No wonder, then, if many different definitions are made by different thinkers. But there is need not be one, and only one, definition of language; and the different definitions advanced are not exclusive. They bring out different aspects of language, and supplement one another instead of excluding one another. Everything depends on the investigator's point of view and interest at the time that he makes his definition. (Whatmough 1956: 18–19)

Even if reluctant to provide definitions of language, linguists appear to agree that it is purely human. Moreover, linguists insist on distinguishing between *communication*, *language* and *a language*.[1] Obliterating these differences has an adverse influence on the understanding of other crucial terms, and in particular on the understanding of the term *proto-language*.

In the first place it appears necessary to re-emphasize the obvious fact that language in its non-extended senses is not an equivalent of the communication system. Communication through language is only one possibility. Thus, although the concept "language" logically entails (implies) the concept "communication," the opposite is not true: the concept "communication" does not entail (imply) the concept "language." Consequently, these two terms are non-equivalent. It necessarily follows that the fact that animals communicate merely means that they use some communication systems, but not that they use language. Likewise, the fact that predecessors of human beings used some communication system does not mean that they used language, protolanguage or proto-proto-language. If, in this context, one insists

1 Notably, Chomsky's famous definition concerning *a language* (countable) not *language* (uncountable) is conspicuously different: "From now on I will consider a language to be **a set (finite or infinite) of sentences**, each finite in length and constructed out of a finite set of elements." Chomsky (1957: 13) does not concern *language* (uncountable) but *a language* (countable). This fundamental distinction will be elaborated on presently.

on using the word *language*, the only legitimate way to do it requires the use of the prefix *pre-*, suggesting that the term *pre-language* stands for communication system which only *predates* but cannot be identified with the term *language* as defined and employed in contemporary linguistics. The following quotation from Chomsky is an excellent expression of this position:

> There is a field called 'evolution of language' which has a burgeoning literature, most of which in my view is total nonsense... In fact, it isn't even about evolution of language, it's almost entirely speculations about evolution of communication, which is a different topic. (Chomsky 2011).

This regimentation of the term *language* makes it possible to situate it in the system of other meta-terms used and sometimes abused in the discourse about *protolanguage*. Two sub-systems of meta-terms are particularly relevant at this point. In both the respective terms they are related by virtue of (entailment) implication:

1. language – a language – geographical and social varieties (dialects and such like) – idiolects;
2. protolanguage (or rather pre-language?) – reconstructed protolanguages – actually attested languages and their varieties.

The first system is organized along what might be called *individuality axis* with two poles: all human beings endowed with language at one extreme and an each and every individual particular human being with his/her idiolect entailing some variety, entailing a particular language (countable), and ultimately entailing language (uncountable). Between the two extremes there is an indefinite number of more or less clearly defined regions to a large extent correlated with various social institutions such as nation, speech community, family, partnership, *etc.*

The second system is organized along the *time axis*: past times – present time. The two systems reflect two different conceptualizations resulting from different ways of viewing language. Both views are possible, but only the first view stands a good chance of receiving empirical confirmation from linguistic data, either directly or through reliable reconstructions.

At this point it appears necessary to recall that contemporary linguistics aspires to being an empirical science investigating the following kinds of data:

I. Texts
  a. spoken
  b. written
  c. others (gestures, electronic devices, *etc.*)
II. Contexts (participants, settings, background information)

Investigators applying the data based approach inevitably start with texts produced by individual users and may reach for more data provided by contexts. It is impossible to determine *a priori* how much context may turn out to be indispensable to satisfy the demands of a particular investigator working with a particular theoretical framework model. At any rate, the relevant data (I and II) concerning modern living languages are in principle available. The situation is radically different when it comes to applying the second approach, organized along the time axis. Going back in time drastically *reduces* the amount of available data, first by totally eliminating II and next Ia, and eventually Ib. At the end of the day what remains are: reconstructions based on "laws" presumably governing linguistic change, inferences from contemporary phylogenetic evidence as applied to past ontogenetic phenomena, and finally illegitimate extrapolations.

What has been said so far pertains to any search for the origins of protolanguage (uncountable), which must be distinguished from protolanguages (countable). In contrast to the term *protolanguage* (uncountable) or its possible synonym *pre-language* standing for a vague a concept, the term *a proto-language* (countable) has a much clearer denotation. Bynon defines it in the following way:

> A protolanguage is no more than a theoretical construct designed to link by means of rules the systems of historically related languages in the most economical way. It thus summarizes the **present state of our knowledge regarding the systematic relationships** (emphasis supplied) of the grammars of the related languages. (Bynon 1977: 71)

So far several score of protolanguages have been reconstructed throughout the world, among them our native Proto-Indo-European including Proto-Germanic and Proto- (Balto-)Slavic.

Regrettably, the distinction between *protolanguage* and *a protolanguage* has not been consistently observed, at least with respect to terminology. The very title of the present conference does not leave a shadow

of a doubt that the noun *protolanguage* is used in its uncountable sense and corresponds to the respective sense of *language tout court*. This use of the term *protolanguage* is presumptuous in that it takes for granted what yet has to be empirically proved, namely that language was inherent in all kinds of communication between *Hominidae*, our ancestors, whether they are called *homo erectus*, *homo sapiens*, or whatever else. This accusation can be substantiated by the following quotations, some of which have their source in the materials resulting from the present series of conferences:

> It is hard to imagine a plausible evolutionary scenario in which language does not first appear in some primitive, or protolanguage, form. So even though there was wide disagreement on its nature, the Torun presentations tended to agree that there had been **a protolanguage**. However, there is an argument against it. A couple of years ago the linguist and expert on Noam Chomsky Massimo Piattelli-Palmarini wrote me in an e-mail:
>
> The protolanguage issue is quite moot, in my opinion. Animals can surely do categorization, and chimps (as David Premack has shown many years ago) can analyze objects into features (color, shape, texture *etc.*). Something like conjunction of features and a symbol-object correspondence can be granted. But in order to have a language of thought, the creature needs predication, and that comes with Merge, and with edge features, so possibly **the protolanguage already was language**. In other words, **no protolanguage**.
>
> As it stands, **protolanguage** is a concept, a likely one based on the way evolution normally works. There seemed very little agreement on what **protolanguage** was like. It all depends on what you think language is. **Protolanguage** then becomes an early version of the full pie. It seems to me that the work of the protolanguage concept may be done and it is time to put the term aside. It was useful for hammering the big-bang theory of language leaping full-blown from the head of some recent Homo sapiens, but now **protolanguage** is beginning to look a bit anti--evolutionary itself. Prototypes are early versions that set the standards for later ones, but the concept of a type is Platonic rather than Darwinian. **Protolanguages** were not early versions of what we've got today, they were their own thing, evolved to serve the purposes of their day. We should keep in mind the great theme of Stephen Jay Gould's work: *evolution is not a synonym for progress*. Language went through many changes. We naturally think of them as stages to the glory that is us, but **let's not**

> **load the deck any further than we already have by calling some earlier form of human activity a proto-anything**. (from After Toruń Mr Bolles' account; all emphases are my own – T. K.)

Having said all this, I have manoeuvred myself into the situation in which I am finally forced to make the thing perfectly clear and say that from my point of view the title "Ways to pre-language" would reflect the contents of the conference more accurately. However, I cannot refrain from quoting a significant passage from John Lyons, one of the most outstanding contemporary linguists:

> Over the last fifty years or so, however, most linguists have shown little interest in the origin of language. The reason is simply that no sign of evolution from a simpler to a more complex state of development can be found in any of the thousands of languages known to exist or to have existed in the past. If we had interpretable records of the forms of communication employed by earlier hominid species we might be in a better position to discuss the origin of language. As things are, **most linguists would say the question is unanswerable** and, in any case, totally irrelevant to the construction of a general theory of the structures of language and the description of particular languages within the framework of this general theory. The attitude of most linguists to evolutionary theories of the origin of language tends, therefore, to be one of agnosticism. Psychologists, biologists, ethologists and other might say, if they so wish, **that language must have evolved from some non-linguistic signalling system**; the fact remains, the linguist might reply, that **there is no actual evidence from language to support this belief**. (Lyons 1977: 85–6)

Searching for possible causes of the terminological chaos, we need to take a closer look at what linguists mean when they use the term *language* (uncountable). Let me first note that their reluctance to formulate laconic definitions of language has to do with the fact that they regard language as a useful fiction, a hypostatic abstraction, which results from two universal aspects of conceptualization: objectification and categorization. Objectification consists in attributing the status of things (objects) to all kinds of entities with the accompanying presumptions that these objects exist in some ontological domain: physical, mental or both. The latter manifests itself in conscious or unconscious assigning everything to a particular category. Things belong to the same category

if they share certain, though not necessarily all, properties which are perceived as relevant to particular categorizations. In the course of over last hundred years mainstream linguistics has produced a certain cognitive model of the concept "language" consisting of such properties as being a typically human institution, which came into existence as a by-product of biological evolution, and which is characterized by a number of more specific *structural* and *functional* properties.[2] They can be presented in the form of an idealized cognitive model made up of the following elements.

Duality (double articulation), which means that it is made up of two systems: a finite set of meaning-free elements called phonemes or perhaps more abstract units called archiphonems which can be combined to form an infinite set of meaningful symbolic elements having the status of linguistic *signs*. Every sign consists of a combination of (archi)phonemes standing for some concept. Linguistic signs are characterized by varying degrees of complexity, from the simplest ones called morphemes to very complex ones making up sentences and their sequences (texts). Communication involving dual systems with linguistic signs is called verbal. Other kinds of communication are non-verbal. It must be noted that such signs as icons and indexes do not necessarily involve double articulation, in which case they do not belong to the set of linguistic signs.

Productivity and Recursiveness, which means that language allows its users to form novel signs, which have not been attested in earlier uses.

Arbitrariness, which is graded, and which means that a given combination of phonemes have to bear topological resemblance to what it stands for. Those signs in which such resemblance is perceivable (by virtue of more or less subjective judgments are called icons).

Interchangeability, which means that every language can be used to produce and to receive messages as the main instruments of communication. Such messages correspond to texts as products of language.

Specialization, which means that the main function of language is communication, but that not all communication necessarily involves language in its primary fundamental sense. This point will be further elaborated below.

2 Some of these specific properties were listed and discussed over half a century ago, for example by Hockett (1958: 574).

Displacement, which is strictly connected with the symbolic character of signs allowing their users to refer to things and relations which do not exist and/or take place here and now.[3]

Reflexivity, which means that language can be the source of meta-language used to speak about itself. Various other communication systems can convey messages of distance, direction or displacement, but cannot self-refer. For example, a dance *about* a bee dance is impossible (*cf.* Antila 1972: 27).

Cultural transmission, which means that every language is acquired in a cultural context as an effect of exposition to linguistic data (texts) produced by language users, in the first place one's parents, siblings and mates; in every case cultural transmission concerns a particular language (countable) that has to be distinguished from language faculty or simply language (uncountable) which is inherited genetically (innate). How much is inherited and how much is acquired remains an open question.

These properties "do not recur, as a whole set, in any known non-human communicative system, although individually some of them do" (Hockett 1958: 574). If such non-human ways of communication are also called language, it merely means that the word *language* is used in a metaphorically extended sense, resulting from *suppressing* one or more of these relevant properties. Some of the most familiar non-human communication methods possessing one or more of these properties are bee dancing (productivity, specialization, displacement), stickleback courtship (some specialization), herring gull care of offspring (possible though rather doubtful specialization), and gibbon calls (slight arbitrariness, interchangeability, specialization).

By contrast an idealized cognitive model of particular languages (countable) would consist of the following most important properties:

ICM of ***a*** language:

- a language consists of several interrelated components, *viz.* phonological, lexical, grammatical, and semantic;
- the content, form and structure of these components is different for every language;

3 Curiously enough Hockett is silent about dolphin communication which also appears to have some degree of specialization and displacement.

- a language allows its users to produce spoken and written texts which are in principle understood by other users of the same language.

2. The dating imbroglio

The terminological chaos concerning the fundamental meta-linguistic terms must have a bearing on dating. On the one hand, it is claimed that

> Protolanguage evolved perhaps as much as **two million years ago**, in the context of stone tool use, but was already used for complex symbolic actions the University of California (Berkeley)'s anthropologist and linguist Terrence Deacon told his audience in the final session of the first day of the conference on protolanguage in Torun, Poland." (*cf.* also Deacon *The Symbolic Species*) (After Toruń) [Deacon was not present, but presented his material over the Internet and took questions via Skype's online telephone system.]

On the other hand, it is also claimed that "language came from a big mutational leap **100 to 150 thousand years ago** [...]" (After Toruń, *cf.* also Dunbar, in this volume).

The span of time separating these two dates is indeed impressive, but it cannot be explained except by the fact that the proponents of the two extreme views, as well as those who situate the origins of language somewhere between these two extremes, *must be talking about different things* when they use the word *protolanguage*. The most recent dating concerns language as understood by contemporary linguists as an entity defined by the idealized cognitive model presented above. Any earlier dating concerns language in all kinds of extended metaphorical senses by virtue of which some crucial properties of language in its directly meaningful sense, such as duality, arbitrariness, and above all productivity with recursiveness are suppressed. Therefore whatever such scholars as Deacon have to say about early dating concerns various figurative and metaphorical senses of the term *language*. By contrast the late dating concerns *language* in its non-metaphorical, directly meaningful sense as described by the ICM presented above and as understood by most contemporary linguists.

The semantic analysis yielding this metaphorical/non-metaphorical distinction in understanding the term *language* receives a firm empirical

support from at least two facts about the nature of language: (1) the property of human mind called "discrete infinity;" (2) statistical data concerning language diversity.

The emergence of language in the strict sense is connected with the unique property of the human mind consisting in the cognitive ability to process recursive data structures, which means that the human mind is capable of producing an infinite number of concepts making up recursively enumerable infinite sets through generalizations about experientially grounded perceptions and out of finite sets of items (phonemes). The emergence of this unique property of human mind may be also manifested in being able to count to more than a fixed number N. This ability is a *conditio sine qua non* of the existence of language in the strict sense, whereby human mind is in principle capable of creating and understanding more than a fixed number of linguistic expressions of indefinite length. *N.B.* according to Chomsky the emergence of this ability speaks in favor of discontinuity theories of language origin, because there is no logical possibility of gradual transition from being able to count up to a fixed number N to being able to count indefinitely. In Chomsky's view, which I am neither qualified nor willing to dispute, such a change must always amount to a sudden jump, and for this reason the evolution of language from some pre-language had to be saltational. I can only add that this sudden jump is not necessarily inconsistent with the continuity of pre-language evolution. The jump is not unlike crossing a virtual boundary between being OUT OF and IN a container: whereas the approach to the virtual boundary may be gradual and continuous, the transition from being OUT and being IN a container is abrupt and seemingly interrupts the continuity of the gradual approach. In the same way the evolution of pre-language may be gradual, but crossing the boundary between pre-language and language, which is the appearance of duality and productivity (recursiveness), may be sudden.

The other kind of data which vindicate the distinction between figurative and non-figurative senses of language are statistical. Nichols (1998) used statistical data to estimate the amount of time that was needed for the current spread and diversity of modern languages. Given that linguistic changes are a necessary consequence of productivity and considering the approximate amount of time required for such changes to take place in the attested modern languages, Nichols was able to conclude that vocal

languages could not have started diversifying earlier than about 100 000 years ago. Therefore, it appears that any communication system that had existed before the onset of diversification cannot be called *language* in the strict sense.

3. Questionable extrapolations

Regardless of whether one talks about pre-languages, protolanguages or languages, any evolution begins with an individual as the original center and spreads outwards like a wave with a smaller or greater speed and scope to embrace other individuals, families, and all kinds of speech communities, such as tribes, professional groups, ethnic groups, and nations.[4] What is important to realize is that, like charity, every change begins at home, at the level of particular idiolects, before it reaches wider territories and before it can be generalized and officially recognized as a change affecting a dialect or a language. I invoke this model at this point to recall the fact that language is an abstract construct which is based on more or less accurate generalizations about a certain amount of data (texts) produced by a certain number of language users of particular idiolects. Here we must make reference to the individuality axis with its two ends, language at one end and idiolect at the other end. The two ends can be respectively called phylogenetic and ontogenetic. Although the phylogenetic emergence of language as a property of all human beings and the ontogentic emergence of an idiolect as a property of an individual human being are both developmental, there is absolutely no reason to expect, not to mention assume, that the data obtained in the course of investigating the ontogenesis of a particular idiolect can be used as evidence proving something about the development of language. *A fortiori*, no data obtained in the course of researching phylogenetic or ontogenetic aspects of animal systems of communication can be used as evidence vindicating conjectures about language. At best, such data can be used as additional pieces of information, provided that some *independent* solid evidence is available. If this maxim is flouted, we deal with illegitimate extrapolations. Unfortunately, various texts devoted to the origins of language, are not

4 This model, sometimes called the "wave theory," does not rule out the possibility of simultaneous convergent changes originating in various centers.

free from such illegitimate extrapolations, which pertains also to some materials resulting from "Ways to Protolanguage." An alleged authority on these matters, Derek Bickerton suggests that

> […] there are no substantive formal differences between the utterances of trained apes and the utterances of children under two. The evidence of children's speech could thus be treated as consistent with the hypothesis that the ontogenetic development of language partially replicates its phylogenetic development. The speech of under-twos would then resemble a stage in the development of the hominid line between remote, speechless ancestors and ancestors with languages much like those today. (Bickerton 1990: 115)[5]

Concerning the animal-to-human extrapolation, the After Toruń report by Mr Bolles' account contains the following passage:

> Deacon believes that originally, protolanguage was limited to pantomime and pointing with only stereotypical sounds. The basis for this position is the familiar one that apes have no voluntary control over their vocalizations but do make voluntary gestures. Thus, they would have first used gestures and only later transferred these signs to vocalizations. Why transfer them? Deacon suggests it is easier to learn a vocalization than a hand sign. Hand signs are reversed for the looker. If we face one another and I see you wave your right hand, the hand you wave is on my left. In order to imitate you and wave my right hand, I have to make a transformation, translating your action on my left as a right side action. Vocalizations, however, require no such transformation.

I am not qualified to decide whether such speculations and extrapolations are really illegitimate, but they are at best questionable. From the meta-linguistic point of view, they are based on an ambivalent understanding of the crucial terms, *language*, *a language*, and *idiolect*. Whereas whatever happens in the ontogenetic dimension and whatever is claimed about it is a matter of a particular idiolect emerging in a specific socio-cultural situation, whatever is claimed about phylogenetic development is in the first place a matter of a language and language. Therefore, generalizations concerning the directly observable ontogenetic development of an idiolect and groups if idiolects may constitute basis for claims pertaining to the phylogenetic development, first of a particular language and next of language in general. It follows that

5 For a very well documented critique of this view, see Slobin (2004).

generalizations pertaining to the phylogenetic development of a language and of language cannot be based on directly observable data but on the data which are themselves generalizations drawn on the basis of ontogenetic evidence. *Such generalizations are valid only to the extent to which the original ontogenetic data (in whatever substance) are available.*

In brief, generalizations about ontogentic dimension are made directly, whereas generalizations about the phylogenetic dimension are made indirectly, *i.e.* via the ontogenetic dimension:

> **idiolects** (generalizations 1º yield dialects) → **dialects** (generalizations 2º yield languages) → **languages** (generalization 3º yield **language**)

It turns out that any extrapolation from the ontogenetic development of an idiolect to the phylogenetic development of language involves a methodological triple jump, which eventually leads to the error of reasoning called *petitio principii*. Instead of empirically verifying the hypothesis that ontogeny is *isomorphic* with phylogeny, the hypothesis is presupposed to be true in the absence of empirical data verifying it. Thus, in the absence of primary linguistic data originating in the earliest stages of human evolution to vindicate claims about the existence and properties of some pre-language or proto-proto-language, it is assumed that it existed and had certain properties which result from extrapolations drawn either from ontogenetic data, which originated in much later stages of human development or from animal communication. Briefly, what has to be proved is presumed to be true. By the same token, *petitio principii* concerns reasoning about pre-language.

In lieu of conclusions: a postlude about miscommunication

The terminological chaos, which leads to the dating imbroglio, is one of the sources of what is called communication barriers that appear in all kinds of discourses (*cf.* Krzeszowski 2006). The terminological barrier and its consequences, which all too often plague scientific discourse, can be gotten rid of through explicating the senses of ambivalent terms. This is what I have been trying to attain in the course of this presentation. Sometimes, however, communication barriers cannot be overcome, and what is meant to be a scholarly discourse degenerates into a quarrel or a brawl. A fragment from the discussion following

the article "How not to reconstruct a protolanguage" by Glen Gordon[6] is a glaring example of such a degenerating discourse (all emphases are my own – T. K.). The beginning of the first paragraph and the concluding paragraph sufficiently well reveal the complete breakdown in communication between the participants of this particular discourse about protolanguage:

> I wrote an article last month, *The Tower of Babel*, which was an unexhaustive critical assessment of the late Sergei Starostin's grandiose online language project that limps on today through the efforts of surviving project members. A recent **troll** on that page under an unconvincing disguise of "G. Starostin" sent me two messages, one visible because it was civil if not misguided, while the second was abusive and **thrown in the trash** after I took note of his IP address. In case anyone was confused, my blog isn't a mouthpiece for proto-world rhetoric and I'm an ardent defender of mainstream linguistics despite my moderate interest in long--range linguistics. [...]

What purports to be a serious article criticizing the late Sergei Starostin's project ends with the following paragraph, addressed not so much to a specific "you" but to anyone who dares to propose new theories:

> You may find that your theory isn't gaining the kind of press that you had hoped and quite a few may be noticing several flaws in your theory. You may not have a single **factoid** in your favour to form a coherent rebuttal. This is when you bring out the big guns: **ignorance** combined with *non sequitur*. This tactic must be handled delicately however. You could try attacking your critics on the personal level, whether that be through the direct **use of swearwords** or through subtle mockery of your opponent. However this is a desperate last resort, more common on *Yahoo! Forums* or *Youtube*. It looks more professional however to simply ignore critics altogether while overpraising the capabilities of yourself and your associates. Using a plethora of unnecessarily sesquipedalian, multipolysyllabic megaterminology, such as "lexicostatistical," is a great tactic to conceal the weaknesses of your theories, as is treating your conjectures as proven facts in any of your publications so as to not bog down your important work with silly things like justification or common sense. Remember, all critics don't know what they're talking about. Their valid criticisms are just a devilish trick of theirs to throw you off-track and pull you off of your hobby horse.

6 http://paleoglot.blogspot.com/ [ED 04.03.2014.]

The ensuing "discussion" takes up and maintains the bellicose tone of the discourse:

> Very sad, Mr. Gordon. But the blame is on me – I should have remembered your blog is reserved for **bombastic** monologs rather than constructive discussion, which you find 'abusive' by definition. This is, after all, why you have chosen to run off from all the discussion boards and Wikipedia – so as not to be bothered by **trolls** who actually have something to say and do not get most of their information from snippets of Google books. What I didn't realize was that **you're also a coward** – not afraid of **spewing forth miriads of arrogant stupidities**, but afraid of having other people expose them. Well, I am happy to say that I have very rarely met **such human material** in my life, and even happier that I will never, ever bother you again with a single word, because you have given me ample reason to do so. Enjoy your blog.

I hope that discussions about ways to pre-language will never employ this sort of style.

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Szymon Napierała
Adam Mickiewicz University, Poznań

Protosyntax, Syntax and Semantics in View of Symmetry Breaking and Symmetry Restoring Processes

Abstract. The application of the Galilean approach to science allows for interdisciplinary analyses of linguistic phenomena at a more fundamental level. Besides treating language as a biological phenomenon the way it is done by biolinguistics, language may also be analyzed with reference to physical laws. The aim of this paper is to reflect on Pierre Currie's (1884) formulation that "Dissymmetry is what creates a phenomenon" with respect to selected manifestations of symmetry and asymmetry in syntax and protosyntax and in the context of the frequent appeals in the Minimalist Program to "the third factor of language design" or "principles not specific to the faculty of language" (Chomsky 2005). I argue that the transition from protosyntax to syntax may be analyzed via symmetry breaking, while the transition from full-blown syntax to protosyntax may be explained with recourse to symmetry restoring. My proposal is to analyze linguistic and protolinguistic phenomena by resorting to the processes of symmetry breaking and symmetry restoring. Specifically, human language has a variety of structures at different degrees of symmetry, ranging from the symmetric extremity (protolinguistic level), where I place parataxis and coordination, to the asymmetric extremity (linguistic level), where I place subordination and recursive embedding. I also discuss the phenomena in the middle of the symmetry/asymmetry continuum, such as "semantic subordination despite syntactic coordination" (Culicover, Jackendoff 1997). The empirical analysis of the foregoing phenomena shows that it is semantics that constitutes the trigger to symmetry breaking in syntax. A closely related conclusion is that slight asymmetries between syntax and semantics in terms of the aforementioned "semantic subordination despite syntactic coordination" are responsible for "creating the phenomenon" of syntax and semantics separately. Were they isomorphic, syntax/semantics would be a single module of grammar.

Keywords: asymmetry, faculty of language (FL), protolanguage, protosyntax, symmetry, symmetry breaking, syntax.

1. Background

1.1. Interdisciplinary approach to syntax

The interdisciplinary approach to language analyses is a very promising epistemological perspective, even though human faculty of language (FL) has not always been analyzed that way. A central assumption of the earlier generativism was the postulation of the autonomy of syntax as a principle of Universal Grammar (Witkoś 2004: 31), *i.e.* the methodological assumption that syntactic structures can be explained without resorting to extrasyntactic contexts. This postulate is subject to theoretical and empirical criticism. Although discussing this problem in more detail is beyond the scope of this paper, the framework I apply is that the thesis of autonomous syntax in its stronger version is unlikely to be true. Given the evidence of the linguists pointing to numerous interactions between syntactic, semantic and phonological components of grammar (*e.g.* Culicover, Jackendoff 2005; Jackendoff 2011) and accusing the syntacticocentric linguistic literature of underestimating the role of these interactions, it appears that a less syntacticocentric approach to FL is more fecund from a methodological and epistemological perspective.

Interestingly, however, even the syntacticocentric generativist literature is gradually accepting a more interdisciplinary approach to linguistics. This is related with the popularity of the biolinguistic perspective among the supporters of the Minimalist Program. This framework treats FL as a biological phenomenon (or even, more specifically mental and psychological phenomenon). Consequently, FL is analyzed as part of the natural world, worth examining through the lens of physical laws that govern the natural world. This trend is correlated with the growing interest in the so-called third factor of language design and "principles not specific to the faculty of language" (Chomsky 2005: 6), such as simplicity, economy/parsimony, symmetry, fractality or natural laws like the well-known Fibonacci sequence. This is the basis of the so-called Galilean approach to science that applies Galileo's methodology that nature is simple (the approach extensively discussed in Boeckx 2006 and expressing the idea that "nature is the realization of the simplest conceivable mathematical ideas" (Boeckx 2006, after Einstein 1954: 274.))

The foregoing trend stresses the fact that regarding the nature of language, it is not only genetic component and experience (*i.e.* Chomsky's (2005) first and second factors of language design) that count, but also physical laws of nature (third factor), *i.e.* "principles not specific to the faculty of language" (Chomsky 2005). And since symmetry considerations play a pivotal role in the third factor contents, it is natural to examine FL with regard to symmetry.

1.2. Symmetry as a third factor

As discussed in Castellani (2003) and Brading and Castellani (2003), symmetry has always been a methodological landmark in scientific investigation, even at a pretheoretic level. Specifically, symmetry was considered as a natural state, not necessitating explanation, whereas asymmetry was perceived as a deviation from symmetry, something necessitating explanation. The rapid development of physics in the 19th and early 20th century brought about the formalization of this pretheoretic approach. Poincaré's and Einstein's contributions emphasized a central place of symmetry in physical theories by "(…) the reversal of the trend: until then, the principles of invariance [*i.e.* of symmetry – S. N.] were derived from the laws of motion... It is now natural for us to derive the laws of nature and to test their validity by means of the laws of invariance, rather than to derive the laws of invariance from what we believe to be the laws of nature" (Wigner 1967 after Brading, Castellani 2003). Also, the pretheoretic intuitions concerning the role of symmetry breaking were formalized by Pierre Currie. Curie investigated the structure of crystals with their "many and striking symmetries being the result of the breaking of symmetries of the initial medium from which they originated" (Castellani 2003: 3). Thus, Currie arrived at a conclusion that "[D]issymmetry is what creates the phenomenon" (Curie 1884 after Castellani 2003: 4). Therefore, the lowering of the initial symmetry level of a given system is a vital criterion for explaining physical phenomena, and consequently the structure of the natural world. As language is clearly considered to be part of the natural world in the biolinguistic perspective, it is reasonable to analyze FL from the perspective of symmetry breaking as well.

2. The role of symmetry, symmetry breaking and symmetry restoring

2.1. Appeals to symmetry in the syntactic literature

The appeal to symmetry breaking in the linguistic literature is not new. Although this is not always clearly stated in the literature, symmetry is often assumed to be a characteristic of the protolanguage, while asymmetry is frequently deemed to constitute a *sine qua non* condition for the emergence of syntax as such. This is because asymmetry is a necessary condition for asymmetric operations Merge and Label, and consequently, for hierarchical phrase structure, linguistic embedding and recursion, which is considered by some minimalists to be the most central property of human syntax. As recursion is often assumed to be a necessary condition for the emergence of FL as such and the only specifically human and specifically linguistic aspect of FL (Hauser *et al.* 2002; Fitch *et al.* 2005; though compare Pinker, Jackendoff 2005; Parker 2006 and indirectly Everett 2005 for a contrary view), the thesis of the importance of asymmetry appears to be very strong.[1]

The idea of the catastrophic (saltational) emergence of syntax and FL is also associated with the emergence of asymmetric Merge, hence, with some symmetry breaking process. For instance, Hornstein 2009 and Hornstein and Pietroski 2009 perceive Merge as a composite operation consisting of the symmetric part, *i.e.* operation Concatenate, and an asymmetric part, *i.e.* operation Label. For Hornstein 2009 and Hornstein and Pietroski 2009, the catastrophic emergence of syntax is related with the emergence of an asymmetric operation Label to the otherwise symmetric Concatenate-based protosyntax. As he claims,

> The story would go as follows: take an organism that has Concatenation and Copy, add endocentric labelling and pops out hierarchical recursion. Add non-local dependencies and third factor computational considerations yield P-Minimality. With Concatenate, Copy, Label and P-Minimality many of the basic features of UG emerge. On this account, the rise of FL in humans is largely due to the emergence of a single innovation, endocentric labelling. (Hornstein 2009: 114)

1 I summarized the debates regarding this topic in Napierała 2009 and Napierała, forthcoming, so I do not discuss the issue in more detail in this paper.

Although Hornstein 2009 does not refer directly to the saltational emergence of language and hedges his statement a few lines later, adding that "(…) this cursory story is not in itself an account of how language evolved (…). It (at best) provides some ingredients and points to a way of reconciling the apparent specific complexity of FL with the short time available to produce it" (Hornstein 2009: 114), yet he suggests that language origin was a catastrophic event conditioned by introducing an element of asymmetry to the previously symmetric protosyntax. The addition that makes syntax function is the appearance of the asymmetric phenomenon of headedness (endocentric labelling), which is a *sine qua non* condition for constituency, phrase structure and linguistic recursion. Therefore, even though he does not directly refer to the distinction between protosyntax and syntax and does not provide much empirical evidence for this hypothesis, yet his model clearly evokes Pierre Currie's conclusion that "Dissymmetry is what creates the phenomenon." One may say that symmetry breaking "creates the phenomenon" of FL-syntax.

Another approach worth mentioning in the context of invoking the idea of symmetry breaking in syntax is Boeckx 2008. Cedric Boeckx, himself a supporter of the Galilean approach to science and linguistics (see Boeckx 2006), refers to the symmetry breaking while analyzing the structure of Merge. Boeckx 2008 sees Merge as a symmetric operation at a global level, whereas as an asymmetric operation at a local level. For Boeckx, operation Merge has both symmetric aspects (as it is a binary operation, joining two elements per single application of this operation in the derivational time) and asymmetric aspects (as only one out of two elements of Merge can assign its a label to the product of Merge for the sake of forming the hierarchical and recursive constituent structure of the products of Merge. The solution to this problem is the application of the physical notion of spontaneous symmetry breaking to explaining the problem of asymmetry of Merge: Boeckx 2008 suggests that it is a spontaneous symmetry breaking process that makes Merge asymmetric locally, whereas the reverse process might be called symmetry restoring (*i.e.* restoring the initial level of symmetry at a global level).

2.2. Protosyntax and syntax in view of symmetry considerations

Given that syntax is usually viewed as an asymmetric recursion-based system and that the catastrophic origin of language is associated with some form of symmetry breaking, it is sensible to assume that protosyntax is a more symmetric system. The symmetry of the protolanguage does not need to be absolute, as symmetry breaking denotes a process of a transition from a more symmetric to a less symmetric system. In fact, protosyntax is frequently linked to such phenomena as adjunction and/or parataxis (Cancatenate without Label in the nomenclature from Hornstein 2009 and Hornstein and Pietroski 2009), and small clauses (analyzed in more detail *e.g.* in Progovac 2010).

Actually, even the superficial analysis shows that small clause constructions are structurally simpler than their equivalent tensed constructions, as illustrated in (1).

1.	a.	I consider John honest.	small clause
	b.	I consider John to be honest.	TP, non-finite
2.	a.	She saw him stop the car.	small clause
	b.	She saw that he stopped the car.	TP, finite

Besides, some cross-linguistic arguments are also used to show that protolanguage may have a more symmetric form. Progovac (2010: 4) pays attention to the fact that ancient languages made more frequent use of small clause constructions that the present-day languages and recalls Latin *ablativus absolutus* constructions as in (3).[2]

3. [Urbe capta] Aeneas fugit.
   city captured Aeneas fled
   'With the city captured, Aeneas fled.'

   (Progovac 2010: 237)

By the same token, paratactic constructions, like the oft-quoted Ceasar's words "Veni, vidi, vici" are simpler than their more elaborate coordinated sentences "Veni et vidi et vici," which are in turn simpler

2 However, I have some doubts regarding Progovac's (2010) argumentation, since small clause constructions are also used in present-day languages, while tensed phrases are amply used in Latin.

(and more symmetric, as will be shown) than subordinated clauses of the type "I went to see…."

Apart from that, the debated claims concerning the possibility of the existence of recursion-less languages are worth mentioning here, *e.g.* the one between Everett (2005, 2007, 2009) and Nevins *et al.* (2009) concerning Everett's evidence that Pirahã (the last extant language of the Muran language family in Amazonas in Brazil) is a recursion-less language that replaces recursion with parataxis. Another allegedly recursion-less language is Riau Indonesian described by Gil 2009 whose syntax is classified at the level of concatenation grammar according to the nomenclature from Jackendoff and Wittenberg 2011. The significance of these data is unclear. Pirahã syntax is classified by Everett in terms of lack of recursive embedding and subordination (*i.e.* lack of syntactic asymmetry) and the ample presence of paratactic conjoining (*i.e.* presence of protosyntactic symmetry). However, Pirahã is not classified as pidgin that could employ protosyntax by nature. If Jackendoff and Wittenberg 2011 are right in their analysis, Pirahã is more complex than another allegedly recursion-less language, Riau Indonesian. According to Gil 2009 who examined the language, Riau Indonesian is not a pidgin, too. The conclusions of Everett are criticized in Nevins *et al.* 2009 and the whole issue deserves much future research. However, the problem is worth signaling in the context of the possible symmetry restoring process that might have led to the reduction of syntax to protosyntax in these languages.

2.3. Various levels of symmetry/asymmetry in syntax and protosyntax

As Castellani (2003: 2) analyzes symmetry breaking in physics, it may have several levels, depending on how many symmetries of the initial system have been broken. This is illustrated in (4).

4. Various levels of asymmetry according to Castellani (2003: 2)
   a. **Dissymmetry or non-symmetry** – lack of a single symmetry out of many possible symmetries in a given system (in the context of a given phenomenon)
   b. **Asymmetry** – lack of any (>1) of numerous possible symmetries in a given system (in the context of a given phenomenon)
   c. **Broken symmetry** – a result of symmetry breaking (*i.e.* (a) and/or (b))

Therefore, there are also various levels of asymmetry, depending on whether one or more symmetries have been broken. I claim that syntactic structures have a variety of forms, oscillating between the symmetric extremity (protolinguistic level) and asymmetric extremity (linguistic level). In the former I place parataxis, adjunction and small clauses, in the latter I place subordination and recursive embedding. Apart from that, there are also intermediate stages, where, as I argue, symmetry breaking takes place. This intermediate area where spontaneous symmetry breaking takes place I associate with coordination. I represent this continuum of symmetric and asymmetric syntactic phenomena in (5).

5.

parataxis adjunction	→	coordination	→	subordination recursive embedding
protosyntax		syntax		syntax
← symmetry				asymmetry →

Thus, the arrow towards the asymmetric edge represents symmetry breaking, *i.e.* the formation of syntax (via transition form protosyntax to syntax), whereas the opposite arrows represent the process of symmetry restoring, *i.e.* some reduction of syntax to protosyntax.

What is noteworthy is the role of coordination that lies in the middle of the symmetry/asymmetry axis from (5). To prescind from the more technical details that are beyond the scope of this paper, coordination used to be treated as a more symmetric operation than subordination, as the former involves the presence of two or more coordinated structures that appear to have a more parallel structure than subordination, which involves hierarchy and asymmetry of elements *per se*. In coordination, even the order of elements is sometimes free, as depicted in (6).

6. John and Mary arrived. = Mary and John arrived.

Unless there are pragmatic reasons for indicating that it is sentence-initial person that is semantically more prominent with respect to the action of arriving, the order of both coordinated NPs is free. On the contrary, in subordinating constructions (*e.g.* in possessive constructions or relative clauses) changing the order of elements would change the semantics of the reversed constructions. In brief, coordination was traditionally seen as a more symmetric operation due to its

apparently parallel structure [[X] & [Y]], for which coordination was treated as an exception from X-bar theory, necessitating n-ary (n>2) branching rather than binary.

However, coordination was later incorporated into the traditional X-bar theoretic (asymmetric) binary diagrams where the conjunction was the head of the coordinated phrase &P. This happened as a result of evidence that the second conjunct is more closely related with the conjunction than the first conjunct, as presented in (7), where (b) is both syntactically and prosodically ill-formed.[3]

7. a. John left. And he didn't even say goodbye.
   b. * John left and. He didn't even say goodbye.

   (Ross 1967: 90 after Citko 2011: 26)

Nevertheless, even though coordination may be treated as an asymmetric operation, it is still more symmetric than subordination, since, for instance, the order of conjuncts may be more freely reversed without affecting the semantics of reversed structure to the extent it happens with subordinating constructions. The following section will show additional evidence for the claim that coordination lies in the area of the symmetry axis where spontaneous symmetry breaking takes place, thus marking the boundary between protosyntax and syntax.

2.4. Coordination and symmetry breaking

The evidence comes from the so-called OM-sentences analyzed by Culicover and Jackendoff 1997. The name stems from the first two words of the sentences analyzed by Culicover and Jackendoff 1997, similar to the construction in (8).

8. One more game of chess and I go home.

As Culicover and Jackendoff 1997 notice, such sentences are syntactically coordinate, but semantically subordinate, as they can be paraphrased by conditional subordinate constructions as in (9).

9. a. I go home once we finish one more game of chess.
   b. Unless we play one more game of chess, I go home.
   c. If we don't play one more game of chess, I go home.

3 An inquisitive reader is invited to see Citko 2011 for more evidence.

Culicover and Jackendoff 1997 provide a detailed analysis of OM-sentence syntax with respect to binding, extraction and inversion to which a more inquisitive reader is invited to, and arrive at a conclusion that OM-sentences are examples of "semantic subordination despite syntactic coordination" (Culicover, Jackendoff 1997: 195). This is an instance of the asymmetry between syntax and semantics (the thesis developed in more detail in Culicover and Jackendoff 2005).

Interestingly, a similar effect can be observed in paratactic constructions examined in Culicover 2010. As illustrated in (10), even paratactic constructions, which are syntactically symmetric, can have conditional paraphrase in semantics, thus being semantically subordinate and asymmetric.

10. a. Nothing ventured, nothing gained. [If there is A, then there is B.]
    b. All cars with Ohio license plates, left side of road. [If you are an element in A, then you should have property.]
    c. Speakers of English, line/group 3. [If you are an element in A, then you should be an element in B.]

(Culicover 2010: 4–5, selected examples)

Even though I analyzed parataxis as more symmetric than coordination in (5), this problem can be resolved given that sometimes commas separating paratactically conjoined elements are treated as silent conjunctions, and the form of coordination without conjunction is called asydetic coordination (asydetic coordination would thus be closer to parataxis regarding its place on the symmetry axis from (5)). Nevertheless, the structures in (10) represent still another example of an asymmetry between syntax and semantics, since the syntactic (or protosyntactic), symmetric, paratactic constructions have asymmetric (conditional and subordinate) interpretation in the conceptual structure (*i.e.* semantics).[4]

What does it tell us from the perspective of symmetry considerations? It illustrates the asymmetry between syntax and semantics in the case of selected coordinated structures (OM-sentences) and selected paratactic

4 This conclusion could be treated as evidence for the autonomy of syntax and semantics *in its weak version*. There are of course parallelisms between syntax and semantics in this area, since *e.g.* subordinated sentences in syntax have subordinated interpretation in the semantic component of grammar, and many coordinated sentences in syntax (*e.g.* (6)) are also coordinated in the conceptual structure.

constructions (selected, since, of course, not all instances of coordination and parataxis can be subordinated in semantics, *e.g.* paratactic "Hi, John" or coordinated structure from (6)). I interpret this asymmetry between syntax and semantics in terms of Pierre Currie's formulation that asymmetry creates the phenomenon. If there were no mismatches between syntax and semantics, these two modules of grammar would form a single syntax-semantics module. Yet despite the parallelism between syntax and semantics (*e.g.* described in Hornstein, Pietroski 2009; Culicover, Jackendoff 2005; Jackendoff 2011), there are also mismatches (as described in Culicover, Jackendoff 1997, 2005 and Culicover 2010). I suggest that such asymmetries between syntax and semantics should be interpreted as a result of symmetry breaking that "creates the phenomena" of semantics and syntax respectively. The state before the symmetry breaking is the state of the protolanguage where syntax and semantics are more symmetric, probably too symmetric for language to function at all. The trigger responsible for symmetry breaking is semantic/conceptual in nature, as it is the element of subordination in semantics/conceptual structure that breaks the initial symmetry of the aforementioned paratactic and coordinate structures.

3. Summary of the results and areas for future researches

Thus, the foregoing analysis shows that syntactic structures have a variety of forms across the symmetry axis represented in (5). The protolinguistic level is characterized by an excess of symmetry, where syntax and semantics form a single undifferentiated module of grammar. Protosyntax is characterized by simple structures whose "residues" in the full-blown syntax are unlabelled Concatenate in the forms of adjunction and paratactic conjoining as well as small clauses. This protolanguage may be too symmetric for the full-blown language to function at a more advanced level, although it can function to some extent if the hypothesis concerning the reduction of syntax via symmetry restoring in the earlier version of the Pirahã and Riau Indonesian are some day confirmed.

Although I do not discuss the specific instances of protolanguage in this paper, limiting its scope to presenting the theoretical model of protolanguage and language as physical systems subject to symmetry breaking (and possibly symmetry restoring), there are a number of

contexts where protolanguage has been attested. As Bickerton 1998 notices, the instances of protolanguage include first language acquisition, contact (pidgin) languages and language related disorders. But I think that my model could be applied to the phenomena discussed in Bickerton 1998, which could be the task for future research. For instance, the language related disorders could be examined through the lens of symmetry restoring, *i.e.* the reverse process whereby the hierarchical structure of syntax is reduced to a more symmetric structure. First language acquisition and the formation of creoles from contact languages (pidgins) could be another for the empirical verification of my model. If this model is appropriate, both processes should be accompanied by symmetry breaking, *i.e.* the emergence of asymmetric syntax as a system parallel to semantics, yet with some mismatches like, for example "semantic subordination despite syntactic coordination" analyzed by Culicover and Jackendoff 1997.

Conclusions

The current paper has examined selected syntactic and protosyntactic phenomena, following the minimalist and biolinguistic interest in the "third factor of language design" and the interdisciplinary perspective of the Galilean approach to linguistics. Specifically, the paper presents a model that applies the physical notion of symmetry breaking to the relations between protolanguage and language as well as to the relations between syntax and semantics. The formation of FL from protolanguage is explained in terms of symmetry breaking. Consequently, syntactic and semantic modules of grammar are formed from the protolinguistic system where protosyntax and semantics formed a symmetric undifferentiated supra-module of the protolanguage. The empirical evidence for the symmetry breaking is presented on the basis of syntactic coordination with subordinating effects in semantics. The potential advantage of this model is its potential application to explaining the formation of language from protolanguage in the phenomena of first language acquisition, formation of creoles, as well as in the reverse processes of grammar reduction in language related disorders and, hypothetically, in Old Pirahã and Old Riau Indonesian.

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Thiago Oliveira da Motta Sampaio
Federal University of Rio de Janeiro, Brazil

Aniela Improta França
Federal University of Rio de Janeiro, Brazil

Marcus Antônio Rezende Maia
Federal University of Rio de Janeiro, Brazil

Does Time Perception Influence Language Processing? Self-Paced Reading Evidence of Aspectual Coercion in Durative Events

Abstract. In recent decades, several articles have been published on Aspectual Coercion (Pustejovsky 1995; Jackendoff 1997). The mainstream hypothesis, Iterative Coercion, proposes that punctual verbs such as "punch" combined to durative modifiers such as "for five minutes" induce an aspectual mismatch, triggering an iterative interpretation. Psychophysical and neurophysiological experiments provide evidence for the iterative coercion hypothesis (Todorova *et al.* 2000; Brennan, Pylkkänen 2008). However, since the results found so far for punctual verbs could on the whole be predicted by the aspectual coercion features of the punctuality and durativity discussed in linguistics theory, a trivial question has failed to be asked: can all prediction be posed to durative verbs? In the present work, we propose that this aspectual coercion can also be seen as a referential change from a single individual event to a set of events. Here we launch the hypothesis that when the event is larger than its mean duration, such as "dance a waltz for 20 hours," an iterative meaning is triggered once the event cannot consume the whole duration described by the adverbial phrase. As for the acquisition of the duration of events, we propose that a language external system as the Internal Clock Model (Church 1984; Meck 1996 *et al.*) may be responsible for tracking how long events last in the real world. We tested our hypotheses in a self-paced reading experiment using the same sentence in four duration conditions (minutes, days, months and years). Our results present increased reading times for [year] compared to [minutes] and a later but stronger

effect for [days] compared to [months] and [years] conditions. The reason for the different behavior remains an open question.

Keywords: time perception, language processing, aspectual coercion, experimental linguistics.

Introduction

In linguistics, *punctuality* and *durativity* are two settings of just one among several parameters of *Aspect*, a linguistic property concerning the developmental frame of a linguistic event. *Aspectual Coercion* is a phenomenon seen in the aspectual mismatch between non-resultative punctual verbs such as "sneeze" and a durative modifier such as "all day long." As for the cognitive mechanisms involved in solving the mismatch, the mainstream hypothesis, *Iterative Coercion Hypothesis*, proposes that durative contexts trigger a third and epiphenomenal parameter resulting in an iterative reading of linguistic punctual events (Pustejovsky 1995; Jackendoff 1997).

However, linguists do not have a clear definition for punctual events and it seems that they overestimate their intuition. For example, some papers use verbs such as [dive] and [jump] as if they had the same aspectual features as [break] or [sting]. This classification can lead us to a problem concerning the event-duration perception. Even if [jump] sounds fast compared to [dance] or [sleep], which in a longer duration scope gives us the perception of a point in a timeline. On the other hand, it sounds durative when compared to [break] or [sting], which in a narrow duration scope gives us the perception of a small line in a timeline. The point to be discussed can be summarized in the following question: Is linguistic perception of duration also influenced by Weber Law? If so, we can not say that aspectual coercion is only a linguistic problem as it may involve other cognitive processes.

Some experimental studies using behavioral and neurophysiological methods have been looking for empirical evidence of aspectual coercion. Their results are consistent with the iterative coercion

hypothesis,[1] presenting increased times for iterative condition. However, as the punctuality parameter from Linguistics is enough to predict the results of the so-tested punctual events, it seems to have been taken for granted that durative verbs in durative contexts should not have any effect as they do not present any kind of linguistic mismatch. Our discussion lies at this point: what if durative verbs present the same effects?

In this work we propose (i) that aspectual coercion can also be seen as a referential change from a single individual event to a multiple/set of events. Our hypothesis predicts that durative verbs such as "sing" in very large contexts such as "for three hours" will present the same effects found so far for punctual verbs as a single event is not able to fill the whole timespan described by the adverbial phrase.

As a consequence of our proposal, we are supposed to point the process by which one can acquire the mean duration of an event and know that it cannot last for so much more. At this point we also propose (ii) that a language external system is responsible for counting, storing and comparing durations that humans experienced during their lives. A great candidate seems to be the *Internal Clock Model* (or *Pacemaker-Accumulator Model*, Treisman 1984; Church 1984; Meck 1996). The model consists in a pacemaker emitting "ticks" which are counted by the accumulator, processed by the working memory and stored in the reference memory. In a hypothetical Language-Time Perception interface, the parser should pick up event-duration properties from reference memory at the moment of lexical activation.

In order to test the proposal in (i), we ran a self-paced reading experiment in 36 volunteers from Federal University of Rio de Janeiro. Stimuli are composed by 12 sentences in four durative contexts: [minutes], [days], [months] and [years]. Our results present increased reading times for [days], [months] and [years] compared to [minutes] condition. However, while [days] condition present longer times in the word describing the duration, [days] and [months] present a later and stronger effect. The nature of the different behavior between conditions remains an open

1 It is important to remark that Pickering *et al.* (2006) present two self-paced reading and one eye tracker experiments in which they did not find any significant results. However a significant effect was found in the second eye tracker experiment presented in the paper. Also, the MEG result found by Brennan and Pylkkänen (2008) is usually considered weak compared to other neurophysiological results.

question. The proposal in (ii) remains as an explanatory hypothesis which we intend to present more empirical evidence in the near future.

1. Aspectual coercion in theoretical and experimental linguistics

Considering the context of a sentence as being fully specified by the coherent combination of their lexical items and their syntactic structures (*Strong Compositionality*), sentences like (1a–b) should have similar meanings. However it is not the case as (1a) is not understood as if the clown performed a very long jump lasting for about ten minutes, neither (1b) is understood as if the clown did several running events. In this sense we need an explanation of how our linguistic processor can assign different meanings to verbs inserted in the same syntactic and lexical contexts (*Weak Compositionality*).

1. a. The clown jumped for ten minutes.
   b. The clown ran for ten minutes.

The difference between these verbs should thus lie in their lexico-syntactic or in their lexico-semantic properties. Philosophers of language argue that verbs have different structural, aspectual and eventive properties. Typology studies thus proposed a categorization of verbs into different event classes. In a classical vendlerian classification (Figure 1), "run" is classified as an activity (*e.g.* atelic durative event) while "jump" is classified as an achievement (*e.g.* telic[2] punctual event).

Based on some properties pointed by event classification studies, the literature in Experimental Linguistics generally tests the Iterative Coercion Hypothesis (Pustejovsky 1995; Jackendoff 1997) proposing that punctual verbs used in durative contexts are coerced to an iterative meaning. The findings present positive evidence in audio-visual cross modal experiments (Piñango *et al.* 1999), in classic linguistic protocols as self-paced reading experiments (Todorova *et al.* 2000; Brennan, Pylkkänen 2008), eye-tracker experiments (Pickering *et al.* 2006 experiment 4; Townsend 2013) and kinectic reading/RSVP with neurophysiological methods as EEG (N400-like component: Paczynski, Kuperberg 2011)

2 In the literature, events having an inherent endpoint such as "built a house" or "reach the summit" are named *telic events*. Atelic events are those which can last indefinitely such as "to work."

and MEG (AMF component at about 400ms: Brennan, Pylkkännen 2008). Negative results have also been found in self-paced reading and in eye tracker protocols (Pickering *et al.* 2006 experiment 1, 2 and 3).

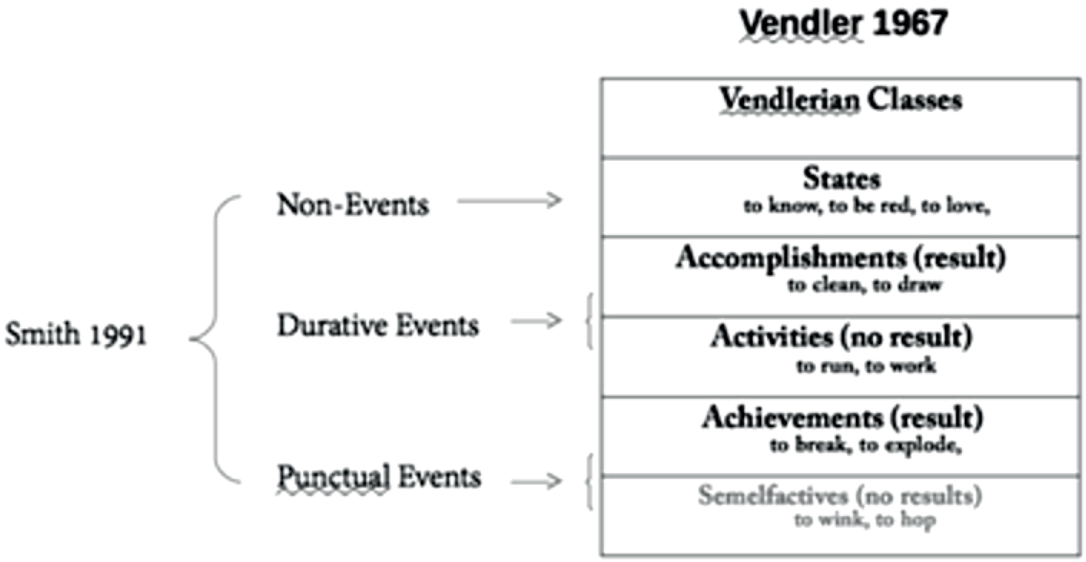

Figure 1. Interception of Vendler (1967) and Smith (1991) event classification. Semelfactive class was proposed by Smith (1991) and completed the logic of two punctual and two durative classes

Linguists have a theory and experiments evidencing the psychological reality of aspectual coercion in language processing. However, as the theory came much earlier than the experiments[3] some highly used concepts have any empirical basis. Are we really looking at the results in the right way or have event classification studies biased their view on the meaning of these data? In the next section we discuss the theory and results from a different perspective.

2. A critic to the mainstream approach on aspectual coercion

In the first section we discussed some event classification works which pointed the parameters that we should look for when studying linguistic events. However, some critics can be pointed to event classification works. As raised by Rosen (1999: 4):

3 The first event classification was proposed by Aristotle in the ninth book of *Metaphysics*. His proposal has been taken by Kenny (1963) in the Philosophy of Language. The first experiment on aspectual coercion dates from 1999 (Piñango *et al.* 1999).

> [Event Classification...] is not explanatory: It does not address how events are represented in the grammar; nor does it try to determine where events are encoded – within the lexicon, the semantics or the syntax.

In reflection to the non-explanatory and non-objective approach of event classification studies, several proposals have been presented since Aristotle's event classification were raised up by Kenny (1963), and at least up to Dölling (2013), each one working on their own parameter--combination set-up (*cf.* Sampaio, França 2010).

Concerning the aspectual coercion hypothesis, it is possible to divide them in at least two main groups. The first one looks at the settings in an aspectual property of an event (punctuality/durativity) which is coerced in contexts presenting the opposite settings (Figure 2, see Brennan, Pylkkännen 2008 for more details). The second group looks at the change in event classification as the trigger for coercion. It is the case of Dölling (2013) who proposes his own event classification before pointing to nine different kinds of aspectual coercion. In our point of view, classification change can be seen as a consequence of a property shift. However, looking at the classification change makes it easier to predict more than one direction for coercion, which is the higher point of Dölling's proposal.

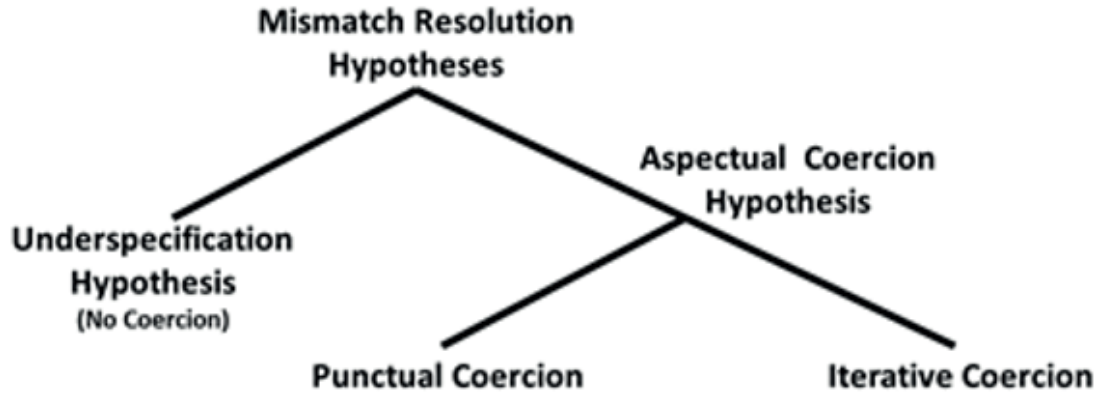

Figure 2. Mismatch Resolution Hypotheses for punctuality/iterativity shift (adapted from Brennan, Pylkkännen 2008)

Dölling (2013) proposes a subtractive coercion, an effect of an incomplete event as in (2). Note that the verb [study] is atelic (*i.e.* does not have an inherent endpoint). In this sense, the sentences in (2) should be perfectly built for syntax and for aspect, but not for semantics and/or for pragmatics.

2. a. The boy studied for one minute before the final exam.
   b. #Fred played the sonata for one minute.
   (Dölling 2013: 2)

At this point, generative linguists just do not address the question. They argue that the answer lies in the world knowledge, a kind of mysterious box in which Linguistics can not look at and which the content is just picked up by the Lexicon/Encyclopedia during language processing. Other linguistic theories will look at Gricean Conversation Principles (Grice 1975) and at Pragmatics, which are still so far from a real understanding of the cognitive processes involved in the acquisition, refinement and in the performance of such cognitive knowledge.

However a number of works in different Experimental Psychology fields have been uncovering the processes underlying some points that are not entertained by Linguistics. One example is Time Perception, a research field that can pave the way to this controversial realm of event--duration knowledge during language processing.

3. A new look at aspectual coercion

Having robust evidence for iterative coercion and supporting an aspectual-based view of coercion effects, linguists seem to be convinced of their explanatory power for the aspectual mismatch. However, this belief has been keeping us from asking a very trivial question: what if durative events present the same effect? After all, once durative verbs and durative contexts have compatible aspectual properties, there are no reasons for thinking in a different way. However, one can wonder whether it really is an aspectual problem.

It is a consensus that the iterative meaning of punctual events is triggered by their inability to last for the timespan described by the adverbial modifier. Let us call this phenomenon *durational mismatch* from now on. Our very simple explanatory change on aspectual coercion not only has the same entailments as the traditional iterative coercion hypothesis but it also makes possible that even durative events present a coercion effect when used in very large timespans. In our approach, coercion triggers not an aspectual but a semantic or pragmatic mismatch which works for punctual and for durative verbs in the same way. This simple change also

improves the range of predictions and simplifies the explanatory power of coercion effects.

Our hypothesis needs at least two more contributions: (i) a theory of duration acquisition which will be discussed in the next section, and (ii) experimental results evidencing coercion effects on durative events, which are presented in the section 5.

4. Does Time Perception interfaces with language processing?

Even if future experimental results on durative events manage to support our hypothesis, it means that language processor has access to the mean duration of events. It is thus essential to describe how humans acquire the mean duration of durative events. At this point, the Time Perception Internal Clock Model seems to us a powerful and elegant way to describe the acquisition, storing and semantic/memory access of events duration during language processing. Time perception has been studied in the recent decades presenting evidence of an internal mechanism to keep track of time intervals in animals and in humans (Block 1990; Buhusi, Meck 2005).

Psychophysicists thus developed a model aiming at explaining and predicting the cognitive mechanisms involved in the psychological time. *Internal Clock Model* (or *Pacemaker-Accumulator Model*, Treisman 1984; Church 1984; Meck 1996) now has a large number of adepts and robust psychophysical evidence.

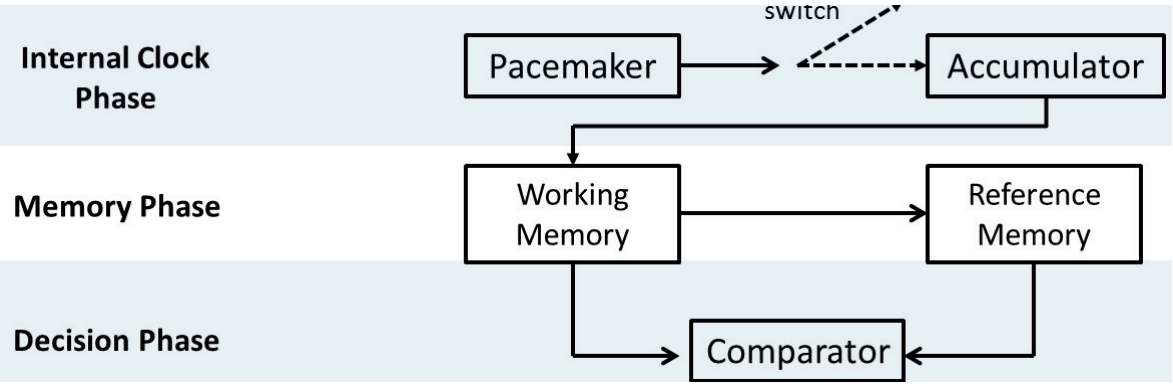

Figure 3. Schematic representation of the three-stage Internal Clock Model (adapted from Meck 1996)

A triphasic processor composes the model above. The idea consists in a biological pacemaker emitting regular pulses like a real clock. Once we take attention to an event-duration or to a time interval, these pulses are accumulated and then stored in our memory. This memory is then used in the ongoing task or just to refine the sense of how long an event last. For example, it is unusual to consider of a sonata played in just two minutes or of a long jump lasting for ten minutes. This sense of the meantime of events can thus come from the Gaussian distribution of all our memories about the duration of each event. The Internal Clock Model is a formal approach of how humans can acquire specific world knowledge about events. Reference memory on events-duration can thus easily output its content to semantics, interfacing constructionist models of language processing.

5. Experimental evidence on duration coercion

Iterative coercion has been strongly supported by experimental results. However, as far as we know, no experiments have been run to observe coercion of durative events. This is the challenge we are facing with the following experiment.

5.1. Methods

Participants: 36 native speakers of Brazilian Portuguese, ages between 18–25 years (19 females) participated in this test. They were Language, Speech Therapy or Engineering students at the Federal University of Rio de Janeiro and have normal or corrected to normal vision.

Stimuli: for this test we built a Latin Square design from a list of 12 durative verbs (1/3 of total sentences) and four periods of time: minutes, days, months and years. There were four versions of the experiment. For each of them, verbs were shown in a different modifier period as in (3) and (4).

3. Carla caminhou por dez [time period] na praia de Ipanema.
   Carla walked for ten [time period] on Ipanema Beach.
4. **Time periods**: (a) minutes, (b) days, (c) months, (d) years.

Procedures: the subjects were seated in front of a MacBook White 15" running Psyscope X B57 on Mac OSX 10.5.8. Stimuli were presented in a word-by-word self-paced reading with a simple interpretation question at the end of each sentence. Stimuli were presented in Times New Roman 24 white font in a black background for sentences. Questions were presented in a blue font. Ten practice sentences were presented to the participants before the test. The trials began with a fixation cross screen presented for one second. A series of hash tags was presented indicating the beginning of the sentence. Participants used the [space-bar] to advance through the sentence until they were presented with an interpretation question that they answered yes [k], in green, or no [l], in red. Subjects who did not reach 80% of accuracy (three participants) were eliminated from the analysis and replaced by another three subjects. The mean accuracy was 94% for the total of 36 subjects.

5.2. Results

For the words five to eight and for reaction times, results lasting more than six standard deviations below and above the mean were removed as outliers. This process eliminated 3.45% of the data. The last word was removed from the analysis to avoid some semantic wrapping up effects. The remaining data was organized and processed by IBM SPSS Statistics 20. A one-way ANoVA was run for each of the six relations (minutes/days, minutes/months, minutes/years, days/months, days/years, months/years). After the processing in SPSS, data was imported to MS Excel 2010 to build the graphics.

A visual observation of the reaction times (Figure 4) reveals a scalar result in which "minutes" is faster, days and months have the same results and year has slower times. However, no significance was found between them. Figure (5) presents the average reading times for each word. The first relevant difference was found in the duration word at segment 5 that presented larger times for [years] than for [minutes] $p < .05$. Days and months resulted in no statistical difference in this word. On the other hand, they present a more robust effect later in the eighth word of the sentence $p < .001$.

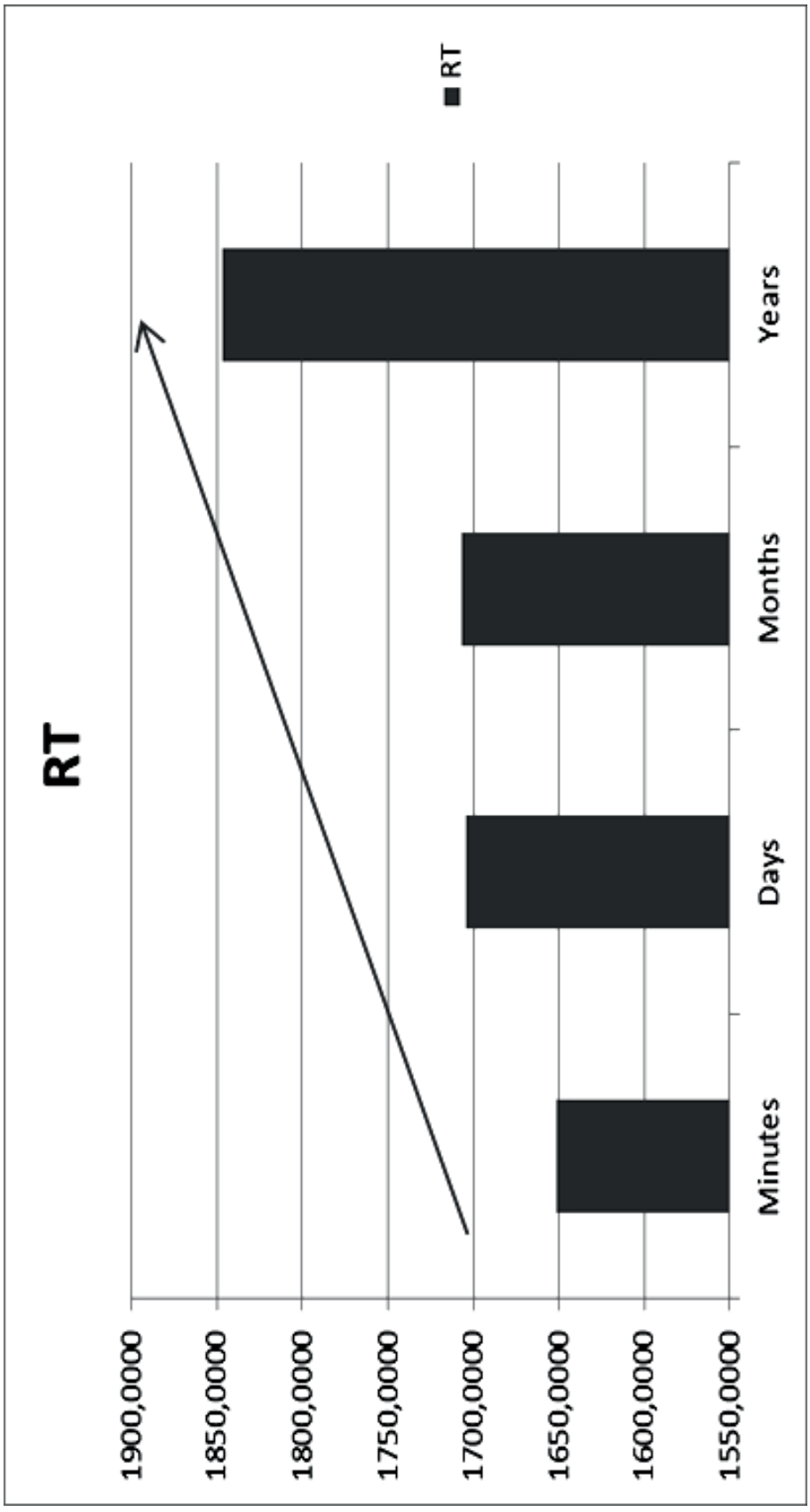

Figure 4. No significance in the reaction time between conditions

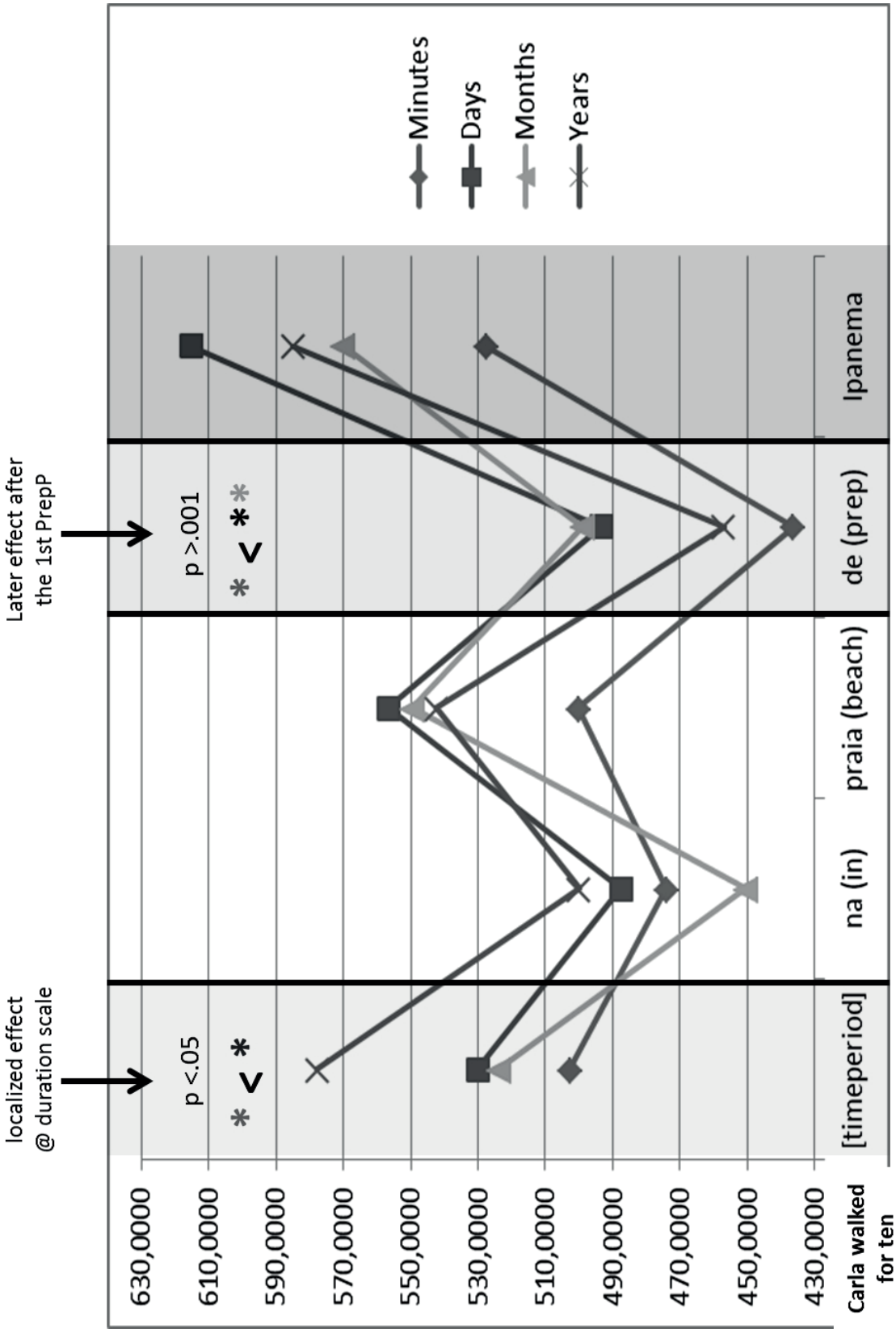

Figure 5. ANoVA reveals a significant difference for word describing event-duration between minutes-years conditions. A latter and more robust effect can be observed between minutes-days and minutes-months condition

6. Discussion

Our experiment found evidence of coercion for durative events, arguing against the aspectual-driven approach on coercion effects. However, a lot of work is still needed in order to get more robust evidence on our hypothesis.

6.1. How does this work contribute to language research?

On the one hand, theoretical works on aspectual coercion have been seeking alternatives to deal with the issue, instead of iterative coercion hypothesis but still in aspectual-driven hypothesis. One example is the proposal of the nine types of aspectual coercion in Dölling (2013). On the other hand, experimental works seem stuck with the idea of iterative coercion, since innumerous positive results have been found in very different methodologies, such as those in Piñango *et al.* (1999), Todorova *et al.* (2000), Pickering *et al.* (2006) and Brennan and Pylkkänen (2008). However, it is reasonable to notice that, as we pointed out, iterative coercion is not the only possible interpretation to their experimental results. Furthermore, no work has been done to verify whether durative verbs are also subject to aspectual coercion. Our experiment fills this gap by finding clues of the psychological reality of coercion in verbs embedded in larger durative contexts. Our results are consistent with the proposal that aspectual coercion is triggered by temporal modifiers lasting more than the average duration of the event. In this case, coercion operates a reference shift from a single event to a set of events and it raises the question of whether coercion is related to aspect or to a time magnitude.

6.2. On language and Time Perception

If our results are really related to a "duration-coercion," how do we know the average duration of an event? As we are studying duration, a reasonable way to solve the question is proposing an interface between the lexicon/encyclopedia with Internal Clock Models of Psychology's Time Perception. Such interface could explain how the human brain estimates duration of events (Church 1984; Treisman 1984; Block 1990; Meck 1996). As to why we found different results for the days-months conditions in comparison with the *years* condition, we observed a spillover

effect in the wrap-up of the sentence. As for the years condition, we have a localized effect in the time period word and a little effect at the end of the sentence. These different results can tell us something about the processing of this kind of sentence. A possible interpretation looks at larger timespans, as in the *years* condition, as being less natural for durative events than *days* and *months*, resulting in an earlier and localized effect similar to those reported in iterative coercion experiments.

6.3. Weak points and future improvements for this study

Why did we find different effects between experimental conditions? Our interpretation will look at this difference as a magnitude related problem. Once years are too large than other durational categories, it would elicit a higher semantic/pragmatic mismatch which is solved earlier in the sentence. As for days and months conditions, they are not too large and a possible temporal mismatch can be solved later in the sentence. However, there are other plausible interpretations. Another view will look at the possibility that days, months and years do not elicit continuous duration, but a cyclical meaning. A future experiment is needed to compare duration timespans such as *seconds*, *minutes* and *hours* with cyclical timespans such as those of *days* and *months*. Also we did not control the mean duration of events used in the experimental sentences, an important step to get a higher level of control for our stimuli. We are now working to develop a pretest aiming at controlling the mean duration of events.

Another open question is whether our effects happen only for the temporal dimension and not for distance and quantity, for example. A comparison experiment between different magnitude of dimensions would be an interesting step forward. As we can see, our experiment still needs some improvements. The reason for finding different results is still unclear.

Conclusions

The experiment above is consistent with our main prediction that coercion effects can be observed for durative verbs as well as for punctual verbs. In our proposal, aspectual coercion is a resource used by the language processor to reach a plausible meaning when an event is wrapped in a larger temporal context. However, some questions still remain about

the nature of our effects. Would an experiment controlling the scale of distance or quantity, for example, have the same results? This is where we are probably heading next.

Acknowledgements

We are especially grateful to Katharine Freitas (Lapex-UFRJ) for encouraging this project. We also need to thank the people from Neurospin for all the comments on time perception and on the main author's project. Acesin and Lapex are really thankful to INSERM and to CEA, especially to Virginie van Wassenhove for receiving the main author of this paper in her lab to develop this interdisciplinary research for one year. We also thank all our volunteers and the financial support from Capes Foundation, Ministry of Education of Brazil (BEX 10465-12-0) which makes it possible for us Brazilians to profit from top rate scientific labs in the world. This research is also supported by Conselho Nacional de Desenvolvimento Científico e Tecnológico (GD 141963/2011-5).

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Stimuli list:

1. Carla caminhou por 10 [*time period*] na praia de Ipanema.
Carla walked for 10 [time period] in Ipanema Beach.
2. Liliane nadou por doze [*time period*] na piscina do clube.
Liliane swum for twelve [time period] in the club's pool.
3. Raquel brincou por trinta [*time period*] no pátio da escola.
Raquel played for thirty [time period] in the schoolyard.
4. Matheus jogou por cinco [*time period*] no time de futebol.
Matheus played for five [time period] in the football team.
5. Camila dormiu por quinze [*time period*] no quarto da colega.
Camila slept for fifteen [time period] in her friend's room.
6. Renato lutou por seis [*time period*] na academia de karatê.
Renato fight for six [time period] in Karate Academy.
7. Joana viajou por vinte [*time period*] no carro do Marcelo.
Joana traveled for twenty [time period] in Marcelo's car.
8. Eduarda correu por três [*time period*] na pista de corrida.
Eduarda ran for three [time period] in the cinder track.
9. Julia trabalhou por nove [*time period*] na loja de calçados.
Julia worked for nine [time period] in the shoe store.
10. Lucas ajudou por dois [*time period*] nas tarefas do amigo.
Lucas helped for two [time period] with his friend's works.
11. Isabelle dançou por oito [*time period*] no palco do teatro.
Isabelle danced for eight [time period] on the theater stage.
12. Maria estudou por nove [*time period*] no curso de turismo.
Maria studied for nine [time period] in the course on tourism.

Waldemar Skrzypczak
Nicolaus Copernicus University, Toruń

Conceptual and Textual Constellations in Aboriginal Australia

Abstract. The aim of this article is to present linguistic and pragmatic aspects of Aboriginal English in Australia as viewed against the general background of Aboriginal languages, creoles and cultures on the one hand, and mainstream Australian culture, on the other. A brief presentation of the two polarised background domains will lead to a closer characterization of contemporary Aboriginal English in terms of its potential to convey the universe of Aboriginal traditional concepts, as well as how it aspires to meet the demands of contemporary Australian discourses. Emphasis will be placed on those aspects of Aboriginal English, which require a greater cross-cultural sensitivity on the part of non-Aboriginal users of English visiting Aboriginal communities. These sensitivity factors will also be addressed with regard to legal affairs and educational policies. The article is intended for the general academic public in Poland and elsewhere beyond Australia, who would wish to access a survey of key issues involving Aboriginal condition in Australia.

This text largely draws upon research done by Australian scholars and is meant to mediate their ideas to the aforementioned public, namely, on this side of the planet. I personally met two prominent theoretical figures quoted extensively in this article, namely Michael Walsh of the Department of Linguistics at Sydney University, where I stayed for three months in 1993, and Stephen Muecke of the Sydney University of Technology, who allowed his time for an extensive interview and generously shared the gift of his books and other materials during my visit in 2005. My visits at the Koorie Centre at Sydney University and the Department of Immigration and Multiculturalism and Indigenous Affairs in Canberra in 2005 also largely contributed to the shaping of my views. Responsibility regarding the selection of issues and their verbal rendering rests on me.

Keywords: Aboriginal languages, Australian English, creoles, culture, pragmatics.

1. Terra Australis Incognita

In brief, Australia can be defined in terms of three powerful dichotomies that embrace the landscape and human condition in terms of material artefacts and socio-psychological domains. Australia can be viewed as a realm likened to both the planet Mars and botanical gardens (a dry and barren interior vs. fertile fringes and tropical rainforests). Australia is both remotely archaic and ultra-modern (geological past, endemic flora and fauna, Indigenous cultures vs. the latest developments in technology and lifestyles). Australia can be considered in terms of both the fatal shore and Arcadia (early convict and settler physical and emotional condition vs. modern urban and multicultural society). All these shortcuts in defining Australia amount to the overstatement which suggests an assumption that in modern times even boomerangs require sophisticated remote control GPS navigational systems and the unique quality of Australian visual arts and literary imagery makes its presence internationally.

Australia, or *Terra Australis Incognita*,[1] stands out as an exceptional entity – art of the prehistoric Gondwanaland supercontinent, isolated from the rest of the world, its landscapes providing home to unique forms of flora and fauna. The First Australians are one of the longest continuing cultures on the planet . They were the first custodians of the land, which for over 40 000 years has been the pillar for their diverse societies. Despite their apparent Stone Age simplicity, Aboriginal cultures display a rich and highly intricate semiotic fabric that reflects the inventive mind embracing a coherent universe of deep time-space relationships. These organically inscribe the tribe along with totemic land features into an iconographic mode, fully integrated with the *Dreamtime* – the Aboriginal equivalent of the Book of Genesis, the time when the "world was sung into existence." *Songlines* (or *Song Cycles*), the invisible tracks combining landscape features, chanted in words, provide an equivalent of Aboriginal epics, not lesser than those of European traditions, *The Iliad* and *The Odyssey,* or *Beowulf*.

After the first white settlement, following the First Fleet's arrival in 1788, Indigenous Australians suffered physical and spiritual

1 *Terra Australis Incognita: próba definicji poprzez kontrapunkt* (Skrzypczak 2010).

dispossession and marginalization.[2] Exploration and settlement were legitimised by the *Terra Nullis* doctrine, which proclaimed Australia to be an empty land. Only the final decades of the 20th century brought about the process of reconciliation, involving the acknowledgement of the wrongs of the past inflicted on indigenous populations, which was followed by a broad implementation of procedures aimed at amending at least some of the injustices.[3]

The national identity of White Australians,[4] mainly of Anglo-Celtic background, is in itself also deeply rooted in rejection. Particularly, convicts from England and Ireland suffered the loss of the loved ones and homes they left behind, while also facing the hardships of a strange and barren land. Today Australia defines itself as *a fair-go country*, *a lucky country*, *etc.*, where the gold miners, explorers and ANZACS gave rise to the individual known as the Aussie battler struggling against all odds. For Anglo-Australians tradition of egalitarianism and nostalgia of the bush still constitute the core of their identity. At the same time, the Australia of today *is no more a quarry or a farm*.[5] The developments of recent decades testify to the social, intellectual and technological sophistication of Australians. These developments are also exemplified by the processes of reconciliation and a gradual growth of participation of aboriginal activists, artists and academics social and intellectual spheres of Australia. Thus, out of the drama of both Indigenous and Anglo-Celtic convict Australians, a space for the celebration of the Australian landscape has emerged. The vital question is whether

2 In the 20th century, Aboriginal Australians were marginalised to the point that they were denied their rights to citizenship and the right to vote until as late as the 1960s, when they were included in the national census for the first time since European colonization. The practice of forced assimilation of Aboriginal half-castes throughout the 20th century, who are nowadays known as the *Stolen Generation*, was abandoned only in the 1970s.

3 The Mabo legal case to execute the native title for the plaintiff's ancestral land, that was concluded with an unprecedented victory, is a very important landmark in the process.

4 See Appendix One for basic elements of Australian history after captain James Cook.

5 Australians enjoy a sophisticated modern urbanised and multicultural society, celebrating Indigenous, Anglo-Celtic and New Australian (Mediterranean, Asian and Pacific) elements in visual arts, music, literature and life styles, along with a blossoming food and wine culture.

this celebration is the case of an experience that is mutually shared by Aboriginal and White Australia, or both cultural formations are still separated by gulfs of distinct conceptual and textual constructions.

2. Australian English: a variety of Antipodean English[6]

The history of English in Australia[7] is a history of linguistic transportation and adaptation, and a history of semantic change and borrowing. Semantic change is illustrated in such examples as: *paddock* (field), *creek* (a river), *station* (farm), and borrowings, especially from Aboriginal languages, such as: *koala, wombat, dingo, billabong, malee, coolibah, woomera, didgeridoo* illustrate this state of affairs. Irish and Scottish contributions into vocabulary such as *Sheila* (girl), *Paddy* (boy), *billy* (kettle) also need to be attested.[8]

Australian English shares a degree of family resemblance with other English varieties of the Southern hemisphere. There exist two theories striving for an explanation of the uniqueness of the Australian variety: the stranded dialect theory and the melting pot theory. The stranded dialect theory is based on the assumption that there exists a conservative force operating in a community far away from home, which generates a resistance to change. The melting pot theory is based on the ingredients in the kitchen analogy (Peter Trudgill, personal communication).

Accent variability in Australia is social and stylistic rather than regional.[9] Social and stylistic lines of subdivision distinguish three brands of Australian English: *Cultivated Australian* (closest to the middle-class English in Britain), *General Australian* (bearing a number of distinctive features in pronunciation, vocabulary and modes of social interaction), *Broad Australian* (the remnant of the diachronic and regional

6 Baker, Sidney J. *The Australian Language*; Lambert, James. *Macquarie Australia's National Dictionary*. *Dictionary of Slang*; Moore, Bruce. *Speaking Our Language. The Story of Australian English*; O'Grady, John. *Aussie English: An Explanation of Australian Idiom*; Ramson, William S. (ed.) *English Transported: Essays on Australasian English*; Turner, George W. (ed.) *Good Australian English, and Good New Zealand English*.

7 See Appendix Two for details.

8 1798 (Irish Rebellion) and 1840s (potato famine).

9 Some maintain that the Australian English of the city is faster and more "clipped" than that of the bush, that is slower and broader.

remoteness of some modes of expression at the level of pronunciation, vocabulary and modes of interaction). Traditionally, Australian speech is said to be egalitarian, apparently anti-emotional and laconic, but it is also taken to be adventurous, colourful and creative in character. The virility and character of Australian English is best expressed in the diverse and sophisticated literary output of both Aboriginal[10] and non-Aboriginal writers.

3. Aboriginal universe

As Wally Caruana ([1993] 2003: 7–13) notes, "Aboriginal history has produced one of the longest continuous traditions" and considers art as central to Aboriginal life. Art connects the present with the past, human beings with the supernatural, and the profane with the sacred. As Caruana further observes, "art activates the powers of ancestral beings and expresses individual and group identity and relationships between people and the land […] Art is an expression of knowledge and statement of authority. Ancestrally inherited designs assert identity and kinship." The spiritual universe of the Aboriginal people is woven around the concept of *Dreamtime*, the Aboriginal Genesis, when the world was sung into existence (*cf. Logos* in Western tradition). The spiritual, natural and moral order of the cosmos is founded on Dreaming, as well as epic deeds of the supernatural beings and creator ancestors (such as *the Rainbow Serpents, the Lightning Men, the Wagilag Sisters*).[11]

Aboriginal visual iconography takes many forms: rock art engravings and paintings, the art of body decoration, *etc.* Artistic designs and symbols bear relation to multiple referents. Each symbol or icon embraces a range of meanings on multiple levels of interpretation, as there is no one-to-one referential relationship. As Stephen Muecke points out in his captivating book *Textual Spaces* ([1992] 2005), Aboriginal semiotic

10 For representative characterisation of Aboriginal Australian literature see: Heiss, Anita, Dhuuluu Yala. *To Talk Straight*; Heiss, Anita, Peter Minter. *Macquarie Pen Anthology of Aboriginal Literature*; Lambert, Iohanna, Katie Langloh Parker. *Wise Women of the Dreamtime: Aboriginal Tales of the Ancestral Powers*; Mudrooroo. *Indigenous Literature of Australia. Milli Milli Wangka*.

11 See also: Reed, Alexander W. ([1993] 1999) *Aboriginal Myths, Legends and Fables*. Sydney: Reed New Holland Publishers Australia.

systems[12] are mostly *dialogic* and *iconographic* (like Chinese pictograms or Egyptian hieroglyphs), whereas European semiotics is bound to the symbolic representation of the alphabet, being *logocentric*. Further on, Muecke makes observations regarding such aspects as custodianship of a story, point of view and collective knowledge, and the dialogic and confessional mode of discourse, which can be rendered selectively, in short, under the following headings:

a. *Authorship* is predominantly a Western concept, romantic in nature, with a subjective outlook of an individual author. Aboriginals are the custodians of their texts (Muecke [1992] 2005: 38).
b. *Stories* told from a *point of view*, as was the case of Paddy Roe maintaining (1) his position in discourse, (2) dialogical space opened up, and (3) indirectness through topicalisation: "This country I'm talking about" as reported by Muecke ([1992] 2005: 86–112)".
c. The perspective (or point of view) may also encapsulate *collective knowledge*, for example, "a bird call" heard, independently by family members ("they were three bells ringing from our hearts" Ruby Langford, in Muecke [1992] 2005).
d. *Aboriginal narratives* employ the mode of the dialogue (*e.g.* "I'll give you a word...") and are also confessional in style (cf. "Tell us what you are like" […] "Sing your songs once more and tell us your stories").
e. *Dreaming stories* are positioned outside of time. The Dreaming is a parallel reality viewed from an externalist perspective.
f. *Oral narrative* utilises cross-parallel repetitions: "we pull up under his tree, he say-this tree we pull up-we pull up under this tree" (Paddy Roe in Muecke [1992] 2005).
g. *Rhythmic stories* 'breathe' […] "between *speech and silence*, *me and you*, between *then and now*, between the *dialogue and narration*, between the *performance and story*" […] (Muecke [1992 2005: 65).
h. Various mnemonic devices (repetition/chorus) are employed in traditional performances, Muecke ([1992] 2005: 44) writes: "Song

12 See also: Berndt, Ronald M., Catherine H. Berndt ([1964] 1996) *The World of First Australians. Aboriginal Traditional Life: Past and Present*. Melbourne: Aboriginal Studies Press.

> cycles are also likely to work with memory in that they progress nomadically from place to place across a stretch of country, literally following in the footsteps of the ancestor… who first walked there and created the landforms […] Knowing the performance text also means to know the country."

4. Australian Aboriginal languages

On the day of first settlements there were around 250 diverse Aboriginal languages in Australia, as distinct from each other/one another as Turkish is from Swedish. They were diverse in terms of their morphological structure, as well as case systems. Australian Aboriginal languages display no clear connection with any languages outside the continent. As Walsh and Yallop (1993) report, cognates *beyond* Australia, such as Indonesian-Malay (*bulan*), Javanese (*wulan*) and the *Fijian* → (*vula*) for the English word <moon> "testify to cultural and linguistic mobility and contact among the islands of the Western Pacific," but no cognates were found between Australia and the Pacific.

Aboriginal Australia as a territory is a tightly knit patchwork of geographical areas that integrate a social group with totemic landscape features. As Rumsey (1993: 191–205) explains, class names divide the whole society into four or eight different skins and specify who can (or cannot) marry whom, which in turn defines the patterns of land inheritance. The "overlap between language and territory" resulting from it produces multiple continua best reflected in the concept of *Song Cycles* (*Songlines* that span the continent) and thus are imprinted on it both linguistically and geo-morphologically. We can therefore "read the landscape," which becomes "a mnemonic device" in the verbal memorization of texts. Mobility and territorial overlap creates a situation, which Laycock (1979: 82 in Rumsey 1993: 195) expresses as "Australian Aborigines being the most multilingual people in the world" (some speak four–five languages that differ greatly in grammar and vocabulary).

In phonological terms the most striking of all pronunciation features of many Aboriginal languages are retroflex sounds and the initial velar nasal *ng-*. In typological and lexical terms the basic classification of Australian languages follows the subdivision based on cognates found along spectra of various range across the land, especially stretching from the East

Coast (Queensland) to the West Coast (Western Australia). The cognates convey the concept of *man* and are labelled respectively as <pama> and <nyunga>. These two cognates yield the fundamental subdivision of Australian indigenous languages into *Pama-Nyungan* languages (south of this line) and *Non-Pama-Nyungan* (north of it). There also exists further evidence of cognates across many Aboriginal languages pertaining to body parts: *mara*, *mala, ma* (hand), *bina* (ear), *jina* (foot), *mili* (eye)… and also numbers: *bula* (two). Cognates are also identified in Central Australia for boomerang: *alye* (Central Australia), *kali* (Uluru region), *karli* (Warlpiri) and water: *kwatye* (Central Australia), *kapi* (Uluru), *ngapa* (Warlpiri) (*cf.* Butler 1998). Walsh (1993b: 6) also mentions scant evidence of some external influence before European settlement as merely reflected in two loan-words (in Northern Territory) from Indonesian Macassan traders: *trepang* (sea cucumber) and *rrupyia* (money).[13]

5. Classificatory systems

Classificatory systems of many Aboriginal languages involve *nominal classifiers* for persons, animals, long-shaped objects, liquids, things and the systems of complex kin relations. Consider noun class markers discussed by Walsh (1993a: 109) in Murrinh-Patha and Dyirbal respectively: *Murrinh-Patha* (Top End): *kardu* (Aboriginal people, spirits), *ku* (non-Aboriginal People), *kura* (fluids), *mi* (flowers, fruit, vegetable food), *nanti* (residue category). *Dyirbal* (Queensland): *bayi* (human) males, animals, *balan* (human) females, water, fire, fighting, *balam* (non-fresh food), *bala* (everything else) (Dixon in Walsh 1993a: 118 and Dixon after Lakoff 1987: 96–104). Both instances form radial categories with various extensions motivated by "the principle of belief," in other words, the explanatory principle stems from tribal mythological universes, *e.g.* sun/women *vs*. moon/men.

6. Structure of Australian Aboriginal languages

Morphologically, Australian languages cover the entire analytic-synthetic spectrum (isolating, inflectional, agglutinating). Morphological agglutination has been demonstrated by Walsh (1993b: 3) through

13 Macassan-based pidgin may have developed to serve as a contact language.

"the-beads-on-a-string" analogy, as in: *mi-nhi-purl-nu* (*I-you-wash-will*) (Murrinh-Patha). Morphological and syntactic richness and diversity among Australian languages has been demonstrated by various researchers. Colin Yallop (1993: 15–32) reports on a list of grammatical categories that provide a wealth of unique instances of segmentation of the experiential/conceptual universe, pertaining to: (a) case systems (*e.g. ergativity*: ergative markers in Guugu Yimidhir – *ngun*, in Alyawarra – *ila*), (b) copula omission, (c) unmarked possession, (d) indirectness (no apparent difference between *yes-no* questions *vs*. information seeking *wh*-questions and statements), (e) the use of postpositions, (f) complex systems of demonstratives, (g) gender distinctions beyond natural gender, (h) tense, aspect, modality markers, (i) complex pronoun systems (*e.g.* pronouns: exclusive *vs*. inclusive and dual *vs*. plural "we," *e.g.* Warlpiri "we": *ngali* (you & I, dual incl.), *ngajarra* (we: two-dual, you excl.), *ngalipa* (you, I & others, plural incl.), *nganipa* (we plural, you excl.) (Yallop 1993: 27).

Barry Alpher (1993: 97–105) also reports on various instances of "out-of-the-ordinary use of language," which embrace taboo registers, respect registers, initiation registers and the use of sign language. Respect registers, for example, require separate vocabulary, separate grammar, and even separate pronunciation (*sic!*) relative to register defined by gender, age and status, *e.g.* in Uw-Oykangand (cape York Peninsula), *abmal* (foot) is found in neutral register, *arrmbun* (foot) marks respect register. Taboo and initiation registers involve a secret language between older and younger people. As Alpher reports, Lardil, for instance, has 150 items to substitute regular language. Sign language lets users avoid speaking after a death of a husband (mourning) and is also used when stalking game (Alpher 1993). All these examples testify to the intellectual ingenuity of the Aboriginal people. Edith Bavin (1993: 85–97) makes additional observations about the peculiarities of language acquisition and educational practices in a Warlpiri community. According to her, language acquisition is based on watching what adults do and listening to what adults say. In other words, naming and giving imperatives (the instructional mode) are fundamental speech acts, as she writes: "[t]he question-answer routine is *not* part of their interaction; children learn the language by exposure to real situations" (Bavin 1993: 87).

7. Language contact

Early language contact in colonial NSW (1788–91), as Jakelin Troy reports (1993: 33), consisted in "simple verbal exchanges." Early notebooks of William Dawes (Troy 1993: 44–46) display collections of lexical sets and grammatical comments of this early colonial contact. *Aranbanoo* and *Bennelong* are often quoted as the first "linguistic experiments." *Bennelong*, who was befriended by Captain Arthur Phillip and was the first Aborigine to visit London, provides an example of the first successful learner of English in the early European-Aboriginal contact.

As Tench (1979, after Troy 1993) reports, first development of a pidgin language yields such elements as: *tun* (sun), *talt* (salt), *gooroobeera* (a stick of fire, a gun), and *king* (which associated with wine drinking, a toast; in Queensland *king* is still generic for alcohol). Linguistic evidence for language contact in Sydney is exemplified by such loanwords as: *dingu* (*dingo*), *warada* (*waratah*), *wumarang* (*boomerang*), *wumara* (*woomera*), *garabara* (*corroboree*) (Troy 1993: 47). Walsh (1993b: 9) also reports on such borrowings from Sydney area as: *billabong*, *koala*, *kukaburra*, *cockatoo*, *nuula-nuula*, and (from Guugu Yimidhir around Cooktown in Queensland) *kangaroo.* He further points to evidence of language contact that is reflected in a broad array of Aboriginal place--names: *Canberra*, *Uluru*, *Wagga-Wagga*, *Woolongong*, *Parramatta*, *etc.* Aboriginal people also employ their own words to define themselves, *e.g. Koori* (New South Wales and Victoria), *Murri* (Queensland), *Yolngu* (Northern Territory) (Walsh 1993b: 8).

In spite of the existence of these unquestionable articulate memorials of the peculiar culture clash (namely, when European and Indigenous Australian elements came into collision), the decline of Aboriginal languages seems inevitable. Walsh (1993b: 1–2) reports that 160 (out of 250 languages) are extinct and only 20 are likely to survive. Terry Crowley (1993: 69), commenting on the death of the last Tasmanian Aboriginal in 1876, concluded the situation ironically: "Languages don't generally die. They commit suicide." Even though the disappearance of languages and cultures results in fact from poor health, gradual loss of hunting grounds, diseases and murder, the bitter truth of this observation demands due reflection.

8. Language contact: pidgins and creoles in Australia

The most prominent effects of language contact[14] reported in literature are reflected in the formation of such linguistic entities as Kriol in Northern Australia, Torres Strait Creole, Pearling Luggerl, Chinese Pidgin English and Pacific Pidgin English (Walsh 1993a, b). The emergence of pidgins and creoles[15] from the time of settlement is associated with such terms as Broken English and Kriol[16] (Roper River Kriol, Kriol Roper English), but varieties of Aboriginal English still form an erratic spectrum of diverse linguistic formations. Kriol and varieties of Aboriginal English are *lingua francas* over vast areas of Australia providing themselves as link languages across tribal areas and gradually displacing traditional languages. Elements shared by varieties of Kriol and Aboriginal English can be listed as follows:

Verbs: *bin* – past tense marker (*bin luk* = looked)
Nouns: *ola* – plural marker (*ola biliken* – the billycans, *ola kenggurru* – the kangaroos)
dubala – dual marker (*dubala gal* – two girls)

Pronouns and verb marker blends: *im* (him-he/she) + *bin* (past) = *imin* (him bin); for example:

14 *Cf.* "cognitive" interpretations of Tok Pisin (Papua New Guinea) examples: *Mi go long town* (= to). *Mi come long town* (= from). (source–path–goal schema as a common conceptual base for "long" activating *from* and *to* respectively through profile shifting). *Mi singout go-go* (kept V-ing) (iconicity of reduplication).

15 A pidgin: "a restricted contact language." Creole: "an expression of a demand for a new language" (Harris 1993). *Cf.* also: *The Oxford Companion to the English Language* enumerates: Australian Pidgin of the 18th century (contact language of the Sydney area), also Kriol and Torres Straight Creole / Torres Strait Broken, Queensland Kanaka English and Queensland Canefields English (spoken by Melanesian indentured labourers 1860–1910) related to Pacific Jargon English.

16 Kriol is spoken in Western Queensland across the Barkly Tablelands and Roper River Basin Northern Territory into Kimberley in Western Australia. Used in over 100 Aboriginal communities by more than 20 000 speakers, half of whom use it as their first language. The continuum covers *hebi Kriol* (heavy), basilect (used by those who also speak some local Aboriginal language(s)) and *liat Kriol* (light), acrolect, which is used as the first language. It displays various pronunciations along the post-creole continuum. Like Pacific Pidgins it uses [-im/-um] suffixes like in *killim* (hit) and *kukum* (cook) (*cf.* Tok Pisin: *kilim/kukim*) (*The Oxford Companion to the English Language*).

minbala bin wok gada ola biliken
we-two-past-walk-with-pl-billycans (Butler 1998: 195)

The Oxford Companion to the English Language provides a host of fairly diverse examples:

Ai bin rid det buk. (I read (past) that book)
Ai bin gibit im mani blonga daga. (I gave him some money for the food)
Imbin bogi longa riba. (He swam in the river)
Olubat bin Kaman from deya. (They came from there)
Deibin hambagam mi fo daga. (They pestered me for food)
Melabat kaan go garram yumob. (We cannot go with you people)

Creolisation (when a creole becomes a full language) occurs as a result of an abrupt change in a new community, when there is a need for a primary language. According to Harris (1993: 145–154), The story of Kriol in the northern territory, is a story of "losing and gaining a language." Northern Territory Pidgin English was a *lingua franca* at that time, spoken in townships, cattle stations, mining camps inhabited by Chinese, Europeans and Aboriginal people. Roper River Mission is often associated with the emergence of the creole (Kriol) out of pidgin English. As Harris (1993: 149) reports, adults were still multilingual, and spoke their native languages in the home environments, but children of various linguistic backgrounds created a creole – "manipulating the linguistic resources available to them to create a language which catered for all their communicative needs." Mari Rhydwen is of the opinion that Kriol is now formally described and is beginning to acquire its own distinctive literature and literacy (in contradistinction to oral tradition). She presents her opinion on Kriol in one of her works devoted to Aboriginal literacy (1993: 155–168) in which she poses the following two fundamental questions: "does literacy promote or destroy oral culture?", and "is vernacular literacy a tool of assimilation or of liberation?". She offers answers based on her observations of literacy and educational practices in the Yongu community and expresses the opinion that literacy-based education helps to "sustain sensitive components of Yongu knowledge" (Rhydwen 1993: 157). Then she adds the following observation, which seems symptomatic of Aboriginal Australia: "Kriol speakers never identified themselves as Kriol people. They refer to themselves by the name of their ancestral language, even if they do not speak it" (*cf.* Rhydwen 1993: 165–167).

9. Constructing history through language

To present the power of language in image and attitude construction, in this case, racist and imperialist, Muecke ([1992] 2005: 51) quotes Daisy Bates in her *The Passing of the Aborigines*, which, according to him, "depicts views tailored by Victorian obsessions" such as: "they can't handle grog, they can't hold a steady job." Muecke ([1992] 2005: 51) observes that Aboriginal History[17] was firstly "locked into academic Standard English," and the discursive representation of events was fossilised in the form of grammatical structures, figures of speech, the framing of action. He demonstrates the case of *Sandawara* (Pigeon the Bushman), an Aboriginal resistance fighter in the Kimberley, killed in 1897, following the assumption that "hero construction is a textual configuration" and presents three renderings of the story of a critical comparison of "black" and "white" accounts (in English and Aboriginal English), and how they "predispose the readers to certain interpretations" as "the versions choose different details"[18] (Muecke 2005: 57). The Aboriginal story stresses Pigeon's last words "you are my brother".The white story chooses the Aboriginal burial custom (Pigeon and events are "exoticised"). Colin Johnson's (Mudrooroo's) literary account in *Long Live Sandawara* relies on "imagery, novelistic conventions, such as syntactic inversion [*upright straight he stands there*], metaphor [*a smile lights his face*], imagery that constructs a view [*the far-off position*]" (Muecke [1992] 2005: 66).

Further on Muecke ([1992] 2005: 28–30) distinguishes various construals of reality based on three distinct instances of selections pertaining to certain word choice, sentence constructions, grammatical categories and figures of speech – to effect in the materialization of racist, romantic and anthropological attitudes respectively. The racist attitude is rendered as follows: "Many girls drifted into prostitution" to be interpreted as: [~Many (mob) girls (immature females) drifted (involuntary inanimate motion) into prostitution (containment)]. The romantic view holds: "Many women chose prostitution." The anthropological view constructs

17 See also: McKenna, Mark ([2002] 2004)*Looking for Blackfellas' Point. An Australian History of Place*. Sydney: University of New South Wales Press.

18 In cognitive linguistic terms – these three versions stem from three different *construals* of the same event. The conception of construal stems from the assumption that grammar is image. Cognitive processing of this kind is also known under the labels of dimensions of imagery, focal adjustments, more casually, "camera work."

the facts from the so-called "objective" perspective: "According to X, 35% of young women from Y became prostitutes in the year…" The choice of words, constructions and figures of speech then produces desired perlocutionary effects and proves to constitute a powerful tool for shaping attitudes and ideologies, including oppression.

Michael Christie (1993: 169–180) considers institutionalised discourse in English in his article, "The Language of Oppression," and cites the Bolden Case (in 1845, an Aboriginal husband and wife couple were killed by a squatter, Bolden in Victoria). The language of the documents quoted by Christie shows that the rendering of the situation through the medium of official English was one-sided and discriminatory: "Bolden stood trial for their killing. Handwritten disposition was devoid of detail. Bolden's language was bland (…) for the fear of incriminating himself." Further Christie (1993: 169) quotes the documents verbatim: "The second shot was fatal […] the woman died from her wounds." The rhetoric aims at playing down the whole drama. He also reports on the white point of view: the "style and perspective of official newspapers displayed remarkable 'consistency' of language," such as the use of euphemisms: the murder of the Aborigines was often referred to as "clearing operations" and "to turn off" (Christie 1993: 170–171) meant simply to kill. Another instance of adding insult to injury was that "Aborigines were never heard [in courts], never translated […] and could not be witnesses as they could not swear on the Bible." This legal fiction was supported by the concept of Australia as *Terra Nullis* (unoccupied land). Christie (1993: 173) also quotes Neil Black, another squatter: "two--thirds of the squatters do not take a single straw about taking the life of the natives." Some of such racist attitudes had roots in the concept of polygenesis, which said: "men were created separate and unequal,"[19] which became a sad proverbial expression of the time.

10. Aboriginal English

Cross-cultural differences between Aboriginal English and official Australian English in the context of legal cases was reported by Diana Eades (1993: 181–190) in her article under the title "Language and the Law:

19 See: Long, Edward (1774) *History of Jamaica*: blacks rendered as "apes". Note also the expression: "lump them with the dingoes and shoot them as a rural pest."

White Australia v. Nancy." Nancy, an Aboriginal young woman, was accused of: "Unlawful use of a motor vehicle. She pleaded guilty and was fined $500 and placed on a 12 months good behavior bond." According to her biography, however, she was innocent, and she pleaded guilty because it is impolite in Aboriginal discourse to disagree with the interlocutor, not to mention the fact that since she was in a police station, where she was interrogated, Nancy was scared. The mismatch of communication results from the fact that Aboriginal English displays significant cultural differences and can be listed under the following headings addressing "sensitivity issues:"

1. the need for *indirectness* in *seeking information*[20] (whereas in white Australia, questioning is common in classrooms, courtrooms and police stations),
2. different "syntax of *silence*" (silence could be interpreted as guilt by whites),
3. different rules for *eye contact* (lack of eye-contact could be interpreted as dishonesty by whites),
4. the need to *agree* with the interlocutor ("Yes/Agree" are often used as a *politeness strategy*),
5. greetings are used, such as: *hello*, but no words for *please* and *thank you* (thanks are expressed in actions rather than in words),
6. *skin names* and *moieties* are important (to ascribe land rights and sacred places),
7. *taboo:* some knowledge is restricted (*e.g.* do not mention the name of the diseased),
8. *territoriality:* Aboriginal spirituality embraces the land and everything above and below it,
9. different understanding of *time* (circular time; *when*? is a useless term).

Resulting from the above sensitivity issues a more direct and accessible, list of pointers to be followed by an outsider visiting Aboriginal areas can be rendered as follows: do not interrogate or embarrass people asking direct questions; do not feel compelled to fill the silence (tolerate

20 Politeness requires indirectness: instead of asking "What's your name?" say: 'My name is… I'm from…' followed by a gentle handshake, instead of asking "Where is …?" say: 'I'm trying to find my way…' also: 'I'm wondering about what happened last night.' 'I need to know why you didn't do your homework'; also: disjunctive '*either A or B*' questions can confuse an Aboriginal speaker.

silence); do not maintain prolongued eye-contact: it may be inappropriate; do not explore the land on your own (Aboriginal sites are protected under law); ask permission before you can take a photograph; do not bring alcohol to Aboriginal communities (dry communities); do not attempt to speak Kriol or Aboriginal English; do not talk to Aboriginals like you talk to children (in a patronizing way).[21]

A coherent report on the cross-cultural legal aspects is provided by Muecke ([1992] 2005: 121–124). It concerns the legal proposal for the incorporation of *Aboriginal Customary Law into General Australian Law*. He notices that at "semiotic and linguistic levels narratives of law function to encode paradigms of events that constitute possible transgressions (causes), punishments (effects) and legal strategies in the syntax of legislative procedure" (*e.g.* in white discourse the use of "I hereby sentence you…" is a regular practice), he also points to making a statement such as pleading guilty by Aboriginal speakers (*cf.* agreement as a politeness strategy):

a. *'Alright,' he said, 'You bin kill your missus?'*
b. *'Yes,' he tell 'im.*

Thus the stark contrast between silence and denial in Western Law and Aboriginal communication strategies is apparent (*cf.* also the Nancy Case). As Muecke later reports ([1992] 2005: 128): "The communicative practices of the Aboriginal Law Reform Commission (ALRC) […] require Aboriginal English to be appropriated to give legal discourse an intercultural status." The problem is the law that ought to be translated into Aboriginal English[22] but it is *not* Aboriginal in origin, and the procedure requires the implementation of the following shifts:

1. From formal written English into spoken Aboriginal English;
2. From referential function to interpersonal function;
3. From talking TO Aboriginals to talking WITH Aboriginals;
4. From expression of knowledge to desire to know.

21 Elaborated on the basis of Butler's *Australian Phrasebook*.

22 The rise of Aboriginal English (pidgins and creoles; "illegitimate children" / *lingua francas*). Varieties of Aboriginal English came to be recognised since 1970s and 1980s. New names emerged (*Kriol*). Aboriginal English is a generic term for Aboriginal variations of English (officially since 1961 – as an entry in the catalogue of the Library of the Australian Institute of Aboriginal Affairs). Now Aboriginal English is recognised institutionally, politically and linguistically.

Further, discursive practices that Muecke considers vital for the cross--cultural transition involve referential discourse, legislative discourses and Aboriginal discourses can be, in short, summed up as follows[23]:

Referential discourse	Legislative discourse
Vehicles, traffic, alcohol… Killing, spearing… Secret law, sacred sites…	To be handled by 'White Law' To be handled by Aboriginal Courts and JPs To be handled by Aboriginal Law

He further observes, that "magistrates sentencing Aboriginals attempt to reinforce tribal authority placing convicted persons […] to the care and control of the tribal elders" (Muecke [1992] 2005: 133). Aboriginal discourse, treated as "occasions for becoming," displays an array of characteristics of its own and some vital linguistic/pragmatic elements need to be incorporated by Aboriginal Law Reform Commission (ALRC) (selectively rendered): Aboriginal discourse marker *Alright*, speaker and addressee are to be pronominalized in ALRC (as: *we*), Aboriginal Addressees become (as: *you*), anaphoric references are made explicit and clausal structure is altered, some lexemes need to be altered (*e.g. Blackfella, Whitefella Law, grog*…). Muecke concludes the issue in the following words: "rhetorical approach does *not* posit a universal human subject but concentrates on a particular performance, communicative events in discourse […] [t]herefore, we need to learn to speak *with* Aboriginals and not talk *about* Aboriginals."

11. Appropriation and coda[24]

Colin Johnson (Indigenous Author *Mudroodoo*) writes (1985: 21, after Black 1993): "a stone age culture (static, unchanging) is a myth […] all languages and cultures change and adapt." And Paul Black (1993: 207) further observes the "Aboriginal languages [are] coping with new circumstances in modern times [and are] forced to adapt to new uses. […] Their traditional uses were hunting, ceremonies, camp fire,"

23 See: Muecke ([1992] 2005: 132) for full inventory.

24 Consider also such aspects of *appropriation* as the phenomenon of Yotu Yindi ("Treaty" – In the Mainstream), Pan-Aboriginality, Aboriginal Renaissance, Aboriginal Art and Music and cultural boundaries in modern Australia, the issues of stylistic quotation *vs*. the issues of copyright.

but the modern world challenges new domains of experience, hence, also poses new linguistic demands to express the experience of the local clinic, school, church, store, card playing, council meetings. According to Black, new uses must be reconsidered in terms of three variables:

1. new vocabulary [new topics/field of discourse],
2. new discourse patterns [textual spaces/styles and registers],
3. new media [in writing and broadcasting language has to be relatively decontextualised].

In bilingual education in Australia there exist some 30 bilingual programs. As Black (1993) further reports on "new adaptive demands imposed by new realities of social and institutional lives in Australia – Indigenous societies entering the realms of literacy, education and broadcasting will face the following cross-cultural differences between *Blackfella* and *Whitefella* to overcome." My paraphrase of the above:

1. books, unlike people, tell "the same story,"
2. writing inhibits oral story-telling,
3. the symbolic representation of writing – juxtaposes Aboriginal multi-layered iconography,
4. in white society, written contracts are valued over oral promises,
5. writing also aids memory (notebooks, libraries, archives) *vs*. memorization,
6. writing allows communication over long distances *vs*. face-to-face dialogic interaction,
7. discourse patterning: setting and register (in a school situation, students are not allowed to talk whenever they wish, and they undergo "question and answer" evaluation),
8. also respect registers, avoidance, taboo, indirectness, kinship obligations also need to be taken into account.

The overall lesson that we can draw from Aboriginal Australians is vital: "discourses are occasions for becoming" and they still allow us to "escape the evils of writing," as Claude Lévi-Strauss in *Tristes Tropiques* warns us that "the function of writing is to enslave." Thus "reading the landscape" in Australian Aboriginal sense, with its multiple levels of interpretation is a powerful way to counterbalance Western logocentrism.

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Appendix One:

Australian History in brief (since Captain James Cook, 1770)
Captain James Cook and the *Endeavour* (1770)
Captain and Governor Arthur Phillip and *The First Fleet* (1788) (*Australia Day 26 January*)
Governor William Bligh, Governor Lachlan Macquarie
Gold Rush (1851) and Exploration (19th century): Eyre, Leichhart, Flinders, Burke and Wills
The *Bulletin* J. F. Archibald – editor
Federation and Commonwealth: Henry Parkes, Alfred Deakin, Edmund Barton (1901)
Boer War (1902), Anzacs in Gallipoli (1915) (*ANZAC Day 25 April*)
WWII and the bombing Darwin by Japanese (1942)
Bicentennial celebrations (1988), The Sydney Olympics (2000)
Reconcilliation and 'Sorry Day' (26 May)

Australian Prime Ministers (selection):
1901–1903 Edmund Barton (First Prime Minister)
Alfred Deakin (following E. Barton – three terms)
1915–1923 William Morris Hughes (the cause for Australia in Versailles) after WWI <Great Crisis> 1939–1941 Robert Gordon Menzies (WWII), 1949–1966 Robert Gordon Menzies (Prosperity)
1991–1996 Paul Keating (Globalisation and republican tendencies)

1996–2007 John Howard (Globalisation)
2007–2010 Kevin Rudd ("Green Politics")
2010–2013 Julia Gillard
2013– Tony Abbot

Figures of Australian Culture (selection)**:**
Literature: Henry Lawson, Banjo Paterson, Les Murray, A. D. Hope, Kenneth Slessor, Patrick White, Peter Carey, Frank Moorehouse, David Malouf, Helen Garner, Tim Winton, Peter Goldsthworthy…
Indigenous writers: Odgeroo Noonuccal, Jack Davis, Kelvin Gilbert, Lionel Fogarty, Ruby Langford, Mudrooroo, Sally Morgan…
Celebrities – actors: Paul Hogan, Mel Gibson, Nicole Kidman, Russell Crowe, Barry Humphries (comedian), Peter Weir (film director), singers/musicians: Nellie Melba, Kyle Minogue, Nick Cave…

Australian Films (leading themes, selection)**:**
My Brilliant Career (ambitions of an Australian woman);
Picnic at Hanging Rock (stereotypical Victorian and Australian elements);
Crocodile Dundee (US-AU cultural exchanges);
Walkabout (tapping onto mythical levels: "civilisation is more primitive and more perverted");
Gallipoli (a mythology of a failure of heroism);
Shiralee (the Australian character and romanticism of the bush);
The Last Wave (where rationality breaks down);
Madmax (calls into question the integrity of the body / masculine identity);
Strictly Ballroom, Looking for Alibrandi, Shine, Muriel's Wedding, Two Hands (responses to current social issues and multculturalism).

Appendix Two:

Australian English:

Social and stylistic variation: Cultivated Australian, General Australian, Broad Australian
Semantic change: paddock (field), creek (a river), station (farm)…

Borrowing: (from Aboriginal languages) koala, wombat, dingo, billabong, malee, coolibah, woomera, didgeridoo, (from Irish) Sheila (girl), Paddy (boy), (from Scots) billy (kettle)…
Origins of Australian English (two lines of explanation): the "stranded dialect theory" *vs*. the "melting pot theory."

Pronunciation in "broader" versions of Australian:

Some London Cockney features h-dropping (*'ello luv, 'ow are you?*), th-substitution: (as in: *muvver*) and the glottal stop (as in: *little, bottle*) *did not* make their presence in Australian English…
The overlap between Cockney and Australian English (**vowels and diphthongs**):
day, mate, sail, change, basically, amazing, today (~day like in 'to die') – as in: *G'd**ay** M**a**te. It's absolutely am**a**zing*
leave, tea, sheep, dream (~ey) – as in: *L**ea**ve the t**ea** on the table.*
meal, feel, building (~eeyool) – as in: *I f**eel** like having a big m**eal**.*
The Australian push-chain:
s**i**ster, d**i**nner (ee) – as in: *My s**i**st**er** invited me to d**i**nn**er**.*
sist**er**, dinn**er** – *schwa* shading into to (a)
n**e**xt, b**e**st (i) – as in: *It's the b**e**st you can do.*
f**i**rst, g**i**rl, w**o**rk (the vowel is more protruding)
b**eer**, n**ear**, h**ere** (eeya) or (ee-ee) – as in: *I was n**ear** h**ere** and had some b**eer** last y**ear**.*
g**oi**ng, h**o**me, l**o**cal, s**o**cial (ay) – as in: *Where are you g**oi**ng? I'm g**oi**ng h**o**me.*
h**ow**, n**ow**, d**ow**n, f**ou**nd (eau/æou) – as in: *Stop dreaming, come d**ow**n n**ow**.*
Consonants: the intervocalic /t/ voicing – as in: ci**t**y, beau**t**y – *the beau**t**y of this ci**t**y*
in more extreme versions – a sequence of vowel sound shifts plus voicing as in: b**etter**, l**ater**, w**ater**… (~byda, ~layda, ~woda) – as in: *It couldn't be b**etter**. I'll see ya l**ater**, Sweet**i**e.*
Note: *It's am**a**zing h**ow** prisoners had so much p**ain** and suffering h**ere**, and it gives us pl**ea**sure to be h**ere** tod**ay**.* (Nora Hamilton-Stone commenting on Port Arthur, Getaway, Channel Nine, 1993)

Note also the so-called rising 'inflection' (HRT-high rise tone) in declaratives.

Vocabulary and modes of interaction:

Aboriginal place-names: (Canberra, Paramatta, Wagga-Wagga, Uluru);
Colonial place-names: (Brisbane, Sydney, Melbourne, Mt Kościuszko)…
Aboriginal words: (cockatoo, boomerang, woomera, corroboree, billabong)…
Aboriginal concepts: (Walkabout, Dreamtime)…
Colourful nicknames: Aussie/Oz (Australian), Kiwi (New Zealander), Pommy (the British)
Apple Isle (Tasmania), Festival State (South Australia), Garden State (Victoria), Sunshine State (Queensland)
Greetings, address words, farewells: Aussie Gentleman: G'day Mate. Howya going? –Can't complain. G'day, How are ya? G'day ya Old Bastard! See ya… Aussie Sheila: How ya goin' luv, What's the latest goss?
Appreciation and attitudes: You Little Ripper! No worries! You're not wrong. (= 'I totally agree with you')
Shortened forms: Aussie, Tassie, Barbie, ciggie, prezzie, mozzie, esky, sunnies, tinnie…
Geographical and bush concepts: Downunder, Outback, to go Waltzing Matilda (= to be humpin' the buey on the wallaby)
Subversiveness: Rhyming slang: trouble and strife (wife), Dad and Dave (shave). Back slang: yob → yobbo (for boy). Twisting of meanings: blue/bluey (red haired). Strine: Afferbeck Lauder (alphabetical order), Emma Chissett (how much is it?), Gloria Soame (glorious home)…
Colloquial expressions: have tickets on oneself (have an inflated opinion on one's own), swing the billy (put the kettle on to make tea)… shark biscuits (novice surfers), couldn't organize a pissup in a brewery (a hopeless organiser), as useful as a glass door on a dunny (something useless), looks like a dog's breakfast (in a mess), she'll be apples / she'll be sweet (everything will be fine), they'll chew you up and spit you out (rough treatment)…, grouse lippy (what a nice shade of lipstick).

Special vocabulary: The Great Australian Adjective: Bl**dy in terms of frequency seems a legend today (a bl**dy good day, a bl**dy good job…), station (farm), paddock (field), stockman (cowboy), cobber (friend), dinkum (truth), footpath (pavement/sidewalk)… True Blue (an Anglo-Aussie), Barbie (BBQ = a barbecue), an ankle biter (a toddler), blotto, legless (drunk), big smoke (city), bush telegraph (gossip), bush telly (watching the stars), idiot box (telly), cop shop (police station), dial (face), ivories (teeth)… swagman, billabong, coolibah tree, billy… and more.

Grammar:

In Standard Australian differences relative to Standard British English seem to be very few, *e.g.*: sth different **to** sth, youse (pl. you).

Agnieszka Słoboda
Uniwersytet Adama Mickiewicza, Poznań

Pismo jako zewnętrzny czynnik zmian składniowych w średniowiecznej polszczyźnie

Abstract. The Middle Ages is the most important period for the Polish language, because a new form of syntax in written form was shaped in this time. Contact with a new medium starts a number of structuralization processes, which has to deal with the heritage of spoken language and the requirements posed by a foreign (Latin) standard. I present the consequences of the transition from oral culture to literate culture reflected primarily in the syntactic structure of the numeral groups whose primary Slavonic character is a heritage of archaic, holistic perception expressed in the language and based on the semantics and close relationship with the extra-linguistic reality. The structuralization, influenced by writing, leads to abstraction of language components, and to inclusion of all sentence elements into syntactical relationships. The consequence is the emergence of formal exponents of the new grammatical category, that is the numeral. Most medieval texts written in Polish are translated and the first contact with written language at the beginning of education was based on Latin. The impact of Latin is systemic and manifests itself in a gradual grammaticalization of numerical expressions. Roman system of digits, adjectival character of Latin numerals and lack of dual category of number in Latin are factors that have influenced the formation of the numerals as separate part of speech.

Keywords: the Middle Ages, numerals, syntax, orality, literacy, structuralization.

W rozwoju kultury poszczególnych narodów moment przejścia od kultury oralnej do kultury opartej na piśmie zawsze stanowi istotny przełom. Rozwój języka pisanego wymaga uwagi ze względu na to, że stanowi on zupełnie inny sposób komunikacji niż język mówiony. Można by tu powtórzyć za Walterem Ongiem ([1986] 2009), że mamy do czynienia z rewolucją technologiczną, która staje się początkiem cywilizacyjnych

zmian, całkowicie przekształcających naszą kulturę, świadomość i myśl. Procesy zachodzące w języku, który poddany zostaje technologicznej obróbce, wynikają z uwarunkowań wielorakiej natury. W wypadku polszczyzny istotne jest, że wchodząc w obręb kultury łacińskiej, weszła ona również w obszar łacińskiego piśmiennictwa, które stało się, ze względu na wypracowany już model języka i jego edukacji, wzorem dla piśmiennictwa rodzimego. Oddziaływanie pisma na zmiany w polszczyźnie średniowiecznej rozpatrywać należy zatem zarówno w świetle wiedzy o mechanizmach poznawczych związanych z procesem czytania, jak i w kontekście wiedzy o dwu- i wielojęzyczności.

Połączenia mózgowe warunkujące mowę wykształciły się wraz z powstaniem gatunku *homo sapiens* i twierdzi się, że należą do „wyposażenia" genetycznego człowieka. Teoria Stevena Pinkera (1994) mówi o tzw. instynkcie języka, a to łączy się z propozycją Noama Chomsky'ego ([2002] 2005), by traktować język jako cechę wrodzoną gatunku ludzkiego. Owa cecha związana jest w ogóle z wykształcaniem przez poszczególne gatunki sposobów komunikacji – bardziej lub mniej skomplikowanych. Cecha ta obejmuje wszystkie gatunki żywych organizmów, które opracowują systemy oparte na aktywności biochemicznej, sensorycznej czy dźwiękowej.

U ludzi posługujących się różnymi językami i różnymi systemami pisma w trakcie czytania aktywują się te same obszary mózgu. Według Stanislasa Dehaene'a ([2009] 2010: 7) architektura ludzkiego mózgu podlega pewnym genetycznym ograniczeniom, ale niektóre z obiegów (połączeń) ewoluowały, aby tolerować margines zmienności. Część naszego „wyposażenia", np. aparatu wzrokowego, pozostaje otwarta na zmiany zachodzące pod wpływem środowiska. Plastyczność struktur nerwowych pozwoliła naszym antenatom w określonych okolicznościach na odkrycie pisma. A zatem, jak to ujął Manguel:

> Gdy pierwszy pisarz napisał i odczytał pierwsze litery, organizm człowieka był już zawczasu przygotowany do wykonywania czynności pisania i czytania, które w momencie pojawienia się homo sapiens były dopiero melodią przyszłości. Innymi słowy, organizm był zdolny do gromadzenia, przypominania sobie i odszyfrowywania wszelkiego rodzaju doznań, w tym znaków pisanego języka, których jeszcze nie wynaleziono. (Manguel [1996] 2003: 62)

Jest to o tyle interesujące, że w pracach skupiających się na zdolnościach poznawczych poprzedzających funkcje językowe, tzw. językowych preadaptacjach, nie zrównuje się zdolności językowych z pisaniem i mówieniem, a jedynie z mówieniem (por. Hurford 1999). Manguel ([1996] 2003: 62) powołuje się przy tym głównie na badania i tezy André Rocha Lecoursa, dla którego wykształcenie funkcji językowej może nastąpić w pełni (w określonej półkuli) jedynie, gdy poza mówieniem musimy się nauczyć rozpoznawać wspólny system znaków wizualnych. Zauważył bowiem, że lateralizacja funkcji językowych jest słabsza u osób, które nie nauczyły się czytać. Przynajmniej od czasów Arystotelesa przyjmuje się, że pismo jest środkiem służącym do graficznego zapisu mowy. Założenie to leży u podstaw dawnych i najnowszych teorii rozwoju pisma, głoszących linearny postęp: od wczesnych systemów piktograficznych do późniejszych systemów fonologicznych, których ukoronowaniem był alfabet. Przyjrzenie się systemom pisma pozwala zatem sądzić, że stanowią one interpretację języka mówionego. Podstawową wadą takiego ujęcia jest założenie, że wynalazcy systemów pisma uprzednio znali język i jego budowę – słowa, fonemy i tym podobne, zaś rozwój był wynikiem znalezienia sposobu na jednoznaczne przedstawienie tych struktur. Według Dereka Olsona ([1994] 2010) to systemy pisma dostarczają kategorii i pojęć służących myśleniu o budowie języka mówionego, a nie odwrotnie. Dopiero pismo aktywuje świadomość budowy języka, która jest efektem używania pisma, a nie wstępnym warunkiem jego rozwoju. Świadomość językowa pozwala na kształtowanie się systemu językowego opartego na jakiejś normie – formy utrwalane w tekstach pisanych wyznaczają w dalszej kolejności standard języka mówionego, uruchamiając procesy redukujące typową dla oralności wariantywność. To, dlaczego świadomość językowa pojawia się dopiero w umysłowości piśmiennej, wynika z różnicy w mechanizmach poznawczych, jakie są zaangażowane w wytwarzanie mowy i posługiwanie się pismem. Podstawowa odmienność tych procesów związana jest z typem modalności i struktur mózgowych odpowiedzialnych za przetwarzanie zakodowanych odmiennie informacji. Mowa jako prymarny sposób komunikowania, obejmujący nie tylko sygnały dźwiękowe, ale także elementy dodatkowe – intonację, akcent, gesty, mimikę, ma charakter holistyczny i angażuje obszary korowe znajdujące się zarówno w lewej, jak i prawej półkuli. Mózg piśmienny wykorzystuje do posługiwania się językiem głównie lewą półkulę. Interpretacja tekstu pisanego

wymaga od odbiorcy skojarzenia ze sobą dwóch elementów należących do różnych typów modalności. Nie jest to mechanizm prosty, ale – jak pokazują badania nad uczeniem się czytania przez dzieci – proces kilkuetapowy (por. Chall 1983). Jego początkiem jest transfer międzymodalny – aby zrozumieć tekst, konieczne jest przetransponowanie kodu pisanego na kod dźwiękowy. Dopiero odczytanie tekstu na głos (usłyszenie go) pozwala na jego interpretację. Po jakimś czasie dochodzi jednak do integracji międzyzmysłowej i możliwe staje się ciche czytanie.

Na poziomie realizacji transfer ten wiąże się również z funkcjonowaniem tzw. pamięci szeregowej (zdolności, która determinuje porządek, w jakim przetwarzamy wszelkie informacje). Badania prowadzone przez psychologów poznawczych przemawiają za wnioskiem, że przetwarzanie szeregowe (sukcesywne w lewej półkuli mózgu, symultaniczne w prawej) to ogólna funkcja poznawcza, która jest jednak zróżnicowana zależnie od typu szeregowanych informacji. Ten aspekt poznania ilustruje rozróżnienie między syntaktycznym a semantycznym komponentem języka – składnia zawiera abstrakcyjne reguły szeregowania słów w wypowiedziach gramatycznych, natomiast semantyka obejmuje znaczenia słów w postaci ich atrybutów pojęciowych. Język mówiony opiera się przede wszystkim na komponencie semantycznym; łączenie ze sobą słów w zdania polega w pierwszej kolejności na odniesieniu do rzeczywistości i przedstawieniu relacji między obiektami czy zjawiskami w rzeczywistości pozajęzykowej. W polszczyźnie średniowiecznej owo semantyczne, „mówione" przedstawianie rzeczywistości wyraża się jeszcze w konstrukcjach składniowych na różnych poziomach struktury zdaniowej. Są to m.in. zdania nominalne, apozycje, predykacja imienna, podmiot w celowniku, konstrukcje liczebnikowe, orzeczenie akomodowane zgodnie ze składnią *ad sensum* (Krążyńska, Mika, Słoboda 2011). Wprowadzenie pisma pociąga za sobą inny sposób szeregowania. Pismo aktywizuje przede wszystkim wzrok, a nie – jak mowa – słuch. Zmienia się zatem rodzaj zmysłu stanowiącego podstawę kształtowania się nowej umiejętności, jaką jest pismo. Zastąpienie języka słyszanego przez widziany w istotny sposób wpływa na ludzki umysł. Wzrok preferuje linearny tok ujmowania myśli i języka, pozostając w przeciwieństwie do słuchu ukierunkowanego na całościowy odbiór komunikatu.

Przez to, że język pisany postrzegany jest za pośrednictwem wzroku, materializuje się, stając się rzeczą. Wizualizowany język sprzyja

wyodrębnieniu w nim elementów; słowa zaczynają być postrzegane jako jednostki języka, a tym samym rozluźnia się zależność języka od aktualnej rzeczywistości pozajęzykowej. Przestaje dominować układ komunikacyjny JA–TY (MY–WY), cechujący się obecnością obu stron aktu mowy w tym samym miejscu i czasie. Język pisany oddziela się od posługujących się nim ludzi. Staje się wytworem niezależnym od tych, którzy powołali go do istnienia. Funkcjonuje w nierealnym świecie. Dzięki pismu wzrasta znaczenie operacji umysłowych. Wyodrębnia się intelekt jako samodzielny poziom ludzkiej świadomości. Krytyczne myślenie o czymś możliwe jest dopiero po unieruchomieniu obiektu refleksji, czyli po jego spisaniu. Zdarzenie przemienia się w „fakt". Kształtują się nowe języki sprzyjające poznawczemu nastawieniu człowieka. Służą one uprawianiu filozofii, logiki oraz wszelkich innych nauk, pozwalają wznieść się na poziom rozważań teoretycznych. Obok języków powstają metajęzyki. Pismo ułatwia strukturalizację tekstu. Dokonuje się ona w toku pisania. Dzięki pismu doskonali się forma zdań rozbudowanych, zwłaszcza złożonych podrzędnie. Podobnemu działaniu poddane są też większe całostki tekstu.

W jaki sposób pismo zmienia strukturę języka polskiego w najstarszej dobie piśmiennej? Przede wszystkim pojawia się tendencja do odmiennej strukturyzacji wypowiedzi opartej na analizie przestrzennej oraz dążność do włączania wszystkich składników zdania w formalne relacje składniowe, elementy językowe ulegają uabstrakcyjnieniu, wykształcają się formalne wykładniki łączliwości zdań złożonych podrzędnie, kształtuje się tzw. mowa zależna (Krążyńska, Mika, Słoboda 2011).

Kiedy uświadomimy sobie, że większość średniowiecznych tekstów pisanych po polsku to teksty tłumaczone oraz że pierwszy kontakt z językiem pisanym w trakcie edukacji szkolnej opierał się na łacinie, istotne staje się ustalenie, jakie relacje mogły występować między językiem polskim i łacińskim, gdy pierwszy z nich opierał się jedynie na przekazie ustnym, a drugi nabywany był zarówno w mowie, jak i w piśmie. Język łaciński był przy tym językiem drugim, którego uczono metodami pamięciowymi, a zatem który nabywano w inny sposób niż język rodzimy, przyswajany w sposób naturalny. Dominacja łaciny w szkole, urzędach, sytuacjach oficjalnych oraz w piśmie mogła prowadzić u osób wykształconych do submersji, a konsekwencją tego procesu mogło być osłabienie kompetencji językowej w języku rodzimym

i skłonność do operowania językiem drugim, opanowanym w większym stopniu i obudowanym wiedzą o charakterze metajęzykowym. Swobodne posługiwanie się językiem łacińskim sprzyjało powstawaniu kalk strukturalnych, co było szczególnie charakterystyczne dla polszczyzny późniejszej (XVI- i XVII-wiecznej)[1]. Wśród procesów związanych ze strukturyzacją i formalizacją wypowiedzeń znajdują się m.in. zmiany w składni grup z określeniami liczbowymi, które doprowadziły do ukształtowania w późniejszym okresie kategorii gramatycznej liczebnika. Wahania w zakresie tych konstrukcji i ich wariantywność w obrębie tego samego tekstu świadczą o przejściowym charakterze epoki i o nieustabilizowanym jeszcze w umyśle mówiących statusie kategorialnym liczebników. Są jednocześnie doskonałą ilustracją interesującego mnie zagadnienia. Wiele języków charakteryzuje się podziałem wyrażeń liczbowych (*number words*) na niższe (odpowiadające cyfrom 1–4) i wyższe (od 5 wzwyż). Zróżnicowanie będące podstawą tego podziału dotyczy zwłaszcza liczebników głównych. W okresie prasłowiańskim odmieniały się one bądź jak zaimki (1–2) i przymiotniki (3–4), bądź jak rzeczowniki (5–10). Języki słowiańskie są pod tym względem wyjątkowe, ponieważ wyzbyły się dawnych wyrażeń wskazujących liczby od 5 wzwyż, które były nieodmiennymi przymiotnikami (tak jak miało to miejsce w łacinie), a później wykształciły je na nowo w drodze derywacji od liczebników porządkowych. Przyjęły one wówczas formę rzeczownikową i nie oznaczały początkowo liczby, ale nazwę zbioru (‘piątkowość’ itp.) (Moszyński [1984] 2006: 284). Rzeczownikowy charakter liczebników typu *pięć* odczuwany był szczególnie w N. i Acc., o czym świadczyć może ich nadrzędna rola względem przydawek odnotowana przez Mirosławę Siuciak (2008: 146) jeszcze w XVII wieku.

Według Jamesa Hurforda (2001: 69) znaczenia liczebników wskazujących na najniższe liczby mogły być postrzegane i przedstawiane podobnie jak znaczenia podstawowych przymiotników, np. *czerwony*, *gorący*, *okrągły* itp., czyli jako dostrzegalne właściwości obiektu lub grupy obiektów. Najniższe liczebniki można zatem uznać za określenia percepcyjnie uchwytnych cech opisywanych przedmiotów:

1 Badania neuropsychologiczne prowadzą do wniosku, że przetwarzanie słów przez osoby dwujęzyczne opiera się na tym samym obszarze w mózgu, ale już przetwarzanie zdań wymaga wykorzystania odmiennej ścieżki neuronowej dla każdego języka (Golestani *et al*. 2006).

> Percepcyjna uchwytność kwantyfikowanych obiektów odróżnia liczebniki niższe od wyższych. Postrzeganie zbioru złożonego z mniej niż 5 elementów jest czymś innym (mniej skomplikowanym) niż abstrakcyjne liczenie – proces wymagający bardziej zaawansowanego przetwarzania danych w ludzkim mózgu (np. grupowania, porównywania i wykorzystywania danych uprzednio zapamiętanych). (Rutkowski 2003: 223)

Stan, jaki obserwujemy w staropolszczyźnie, uznać zatem można za dziedzictwo epoki, w której postrzeganie liczby miało charakter konkretny, a badania antropologiczne pozwalają wysunąć tezę, że takie postrzeganie liczby jest charakterystyczne dla ludów niepiśmiennych (Ifrah [1985] 1990: 13; Lévy-Bruhl [1910] 1992: 236; Gordon 2004; Dehaene *et al.* 2004 i in.). Rozwój zdolności arytmetycznych, wymagających zaawansowanych procesów myślowych opartych na abstrakcji musi być zatem związany z przejściem danej kultury z typu oralnego do piśmiennego.

W okresie prasłowiańskim liczebniki od 1 do 4 odmieniające się jak przymiotniki, co wynikało z pojmowania ich jako cechy liczonych obiektów, łączyły się z rzeczownikami na zasadzie kongruencji, natomiast pierwotne rzeczowniki, czyli liczebniki od 5 do 10 wymagały od rzeczowników formy dopełniacza. *Genetivus* w tym wypadku ma swoje umotywowanie w postrzeganiu liczby powyżej 4 jako całości, zbioru o charakterze rzeczownikowym, który wyodrębniony zostaje z większej całości elementów wskazanej rzeczownikiem w *pluralis*, a zatem pełni dokładnie taką funkcję jak *genetivus partitivus* (Klemensiewicz 1930: 86–96). W połączeniach z liczebnikami 5–10 przymiotniki i zaimki występowały pierwotnie zawsze w formie wymaganej przez liczebnik, dostosowując się do niego na zasadzie kongruencji. Przyjmowały zatem formę liczby pojedynczej rodzaju żeńskiego, np.: *przed sześcią*$_{\text{instr f sg}}$ *niedziel*$_{\text{gen f pl}}$ (PY 843), *s siedmią*$_{\text{instr f sg}}$ *kmiot*$_{\text{gen m pl}}$ (KS 414). Liczebnik jako element nadrzędny, rzeczownikowy podporządkowuje sobie elementy referencyjne (zaimki) odnoszące się do całego skupienia liczebnikowo-rzeczownikowego: *nad tę*$_{\text{acc f sg}}$ *pięć*$_{\text{acc f sg}}$ *grzywien*$_{\text{gen f pl}}$ (KS 503), *tej*$_{\text{gen f sg}}$ *piąci*$_{\text{gen f sg}}$ *grzywien*$_{\text{gen f pl}}$ (KS 1240), *na tę*$_{\text{acc f sg}}$ *sześć*$_{\text{acc f sg}}$ *śladow*$_{\text{gen m pl}}$ (PY 1034).

Forma orzeczenia przy liczebnikach zależała od typu liczebnika: przy liczebnikach *jeden*, *sto* i *tysiąc* oraz przy liczebnikach od 5 do 10 orzeczenie przyjmowało formę *singularis*, przy tych ostatnich pojawiała się też forma *pluralis*, co było wyrazem zwyczaju, zgodnie z którym

w związkach z orzeczeniem mogła być realizowana zasada zgody *ad sensum*, np.: *a pięć*$_{\text{nom f sg}}$ *jich*$_{\text{gen f pl}}$ *mowią*$_{\text{3praes pl}}$ (KL 699), *dziesięć*$_{\text{nom f sg}}$ *kmieci*$_{\text{gen m pl}}$ *jachali*$_{\text{3past m pl}}$ (KS 314), lub *ad formam*, np.: *dziesięć*$_{\text{nom f sg}}$ *lat minęła*$_{\text{3past f sg}}$ (Warsz 2894), *ostała*$_{\text{3past f sg}}$ *pięć*$_{\text{nom f sg}}$ *grzywien* (P 1419).

Postrzeganie liczby, które w dobie przedpiśmiennej miało charakter konkretny, pod wpływem pisma uległo uabstrakcyjnieniu, oderwaniu od pierwotnej semantyki i zaczęło podlegać regułom strukturalnym. Przejście od słuchowej analizy tekstu do jego przetwarzania przestrzennego, wzrokowego, było niewątpliwie pierwszym etapem procesów wyrównujących i redukujących, w pierwszej kolejności na poziomie składniowym, w drugiej w obrębie kategorii morfologicznych[2].

Obiektywizm wynikający z oddzielenia tekstu od mówiącego, poznawanego od poznającego, staje się większy, gdy trzeba się posługiwać językiem wyuczonym, oderwanym od naturalnej emocji języka ojczystego (Ong [1982] 1992: 156). Wykształcanie się odrębnej kategorii gramatycznej, jaką jest liczebnik, nastąpiło więc nie tylko pod wpływem pisma jako nowego medium, przekształcającego sposób kategoryzacji pojęć (również liczbowych), ale także w wyniku oddziaływania piśmiennej realizacji języka obcego – łaciny, czeszczyzny, być może również języka niemieckiego.

Niewątpliwie największe oddziaływanie miała łacina. Jako podstawowy język dokumentów pisanych przez pierwsze stulecia istnienia polskiej państwowości była dla ludzi, którzy opanowali trudną sztukę pisania i czytania, niewątpliwie łatwiejszym językiem do stosowania w piśmie niż polszczyzna[3]. Różnice w systemach gramatycznych obu języków mogły powodować, że łaciński system liczebnikowy z ujednoliconą składnią zgody i brakiem liczby podwójnej (Safarewicz 1953) mógł – jako prostszy – w dużym stopniu wpłynąć na procesy redukcyjne i wyrównawcze w morfologii i składni polskich kwantyfikatorów[4]. Dziać się tak mogło według mnie szczególnie wówczas, gdy obok zapisu słownego wyrażeń

2 Wyrażenia liczbowe, należące w prasłowiańszczyźnie do różnych kategorii morfologicznych, zajmowały w strukturze zdania podobną pozycję, co sprzyjało tendencji do nadawania im podobnych właściwości składniowych.

3 O roli łaciny w różnych okresach historycznych pisze m.in. Stanisław Dubisz (2007).

4 Mechanizm ten działał również w drugą stronę – pod wpływem języka polskiego w polskiej łacinie średniowiecznej występują liczne przykłady liczebników głównych połączonych z genetiwem rzeczownika liczonego. Por. Weyssenhoff-Brożkowa 1991: 80.

liczebnikowych stosowano zapis cyfrowy. Istotna rola zapisu cyfrowego w tekstach łacińskich i polskich polega na ujednoliceniu w piśmie symboli reprezentujących liczebniki, które należały do różnych typów morfologicznych[5]. Notacja rzymska, szczególnie w odniesieniu do liczb o wartości wyższej niż 10, odpowiadała strukturalnie budowie polskiego liczebnika głównego. Kłopoty sprawiało jednak połączenie cyfry z rzeczownikiem w odpowiedniej formie gramatycznej ze względu na silne oddziaływanie składni łacińskiej, w której liczebnik był formalnie członem podrzędnym. Stąd pojawiały się konstrukcje typu: *XXII grzywien*$_{\text{gen f pl}}$ (PY 26), *XXIIII grzywien*$_{\text{gen f pl}}$ (KS 990), *konie*$_{\text{acc m pl}}$ *XXVI* (KS 879). Trudności te powodowały, że w polskich tekstach zapis cyfrowy liczebnika stosowano niechętnie; cechuje go niska frekwencja w porównaniu z zapisem słownym. Częściej spotykamy natomiast liczebnik łaciński w miejscu polskiego, dla przykładu: w rotach pyzdrskich zapis cyfrowy pojawia się zaledwie 13 razy, cała grupa z liczebnikiem po łacinie – 32 razy. Na podstawie zapisów rot z Kościana (wyjątkowych ze względu na zachowane brudnopisy) można pokusić się o stwierdzenie, że zapis cyfrowy był wygodny i łatwiejszy szczególnie wówczas, gdy cała grupa imienna była zapisana po łacinie. Przemawia za tym wysoka frekwencja zapisu cyfrowego (118 razy), przy czym w większości przykładów obok łacińskiej cyfry stał również łaciński rzeczownik (79 razy), np.: *Godzwin dał Dzierżce* ***X marcas et V*** *za Żydowego żywota* (KS 34); *iż pani Margorzata pomagała Dorocie prawa* ***pro XVI marcis*** *scoltecie in Woczechowo* (KS 523).

Częściej też w rotach pojawia się zapis całej grupy z liczebnikiem po łacinie (90 razy). Jeśli wystąpiła ona w brudnopisie, w czystopisie przetłumaczono ją na język polski lub pozostawiono bez zmian, np.:

> Cso mi Mikołaj dał **novem** [[marcas]] **scotos et sex mensuras** avene to mię przeprosił, iżeśm nań nie żałował (KS 61);

5 Stanislas Dehaene stwierdził, że w naszym umyśle przetwarzanie liczbowe funkcjonuje na podstawie trzech rodzajów kodu: 1. abstrakcyjny kod analogiczny, który służy tworzeniu reprezentacji pojęciowej pomocnej przy porównywaniu ilości i określaniu przybliżonej wartości liczbowej zbiorów; 2. kod wizualny aktywowany przy interpretacji form liczbowych, takich jak cyfry arabskie; 3. kod werbalny służący operacjom na słowach oznaczających liczby, przeprowadzaniu działań matematycznych przyswajanych w drodze nauki i udziale pamięci długoterminowej, takich jak np. mnożenie. Każdy z tych kodów opiera się na oddzielnej podstawie neuronowej (zob. Dehaene 1997, 2001).

> jako Tomisław Tutewski **cum duobus tam bonis sicut est solus et XX inferioribus** gwałtem otbił starszego i sołtysa pana Piotraszewego sbracią ot prawa (KS 533);
> Jako o niewyprawienie rękojemstwa Sobka Żytowiecskiego jem szkodzien **septem marcas** (KS 1008) [w czystopisie: jem szkodzien **siedm grzywien** VII 142].

Szczególne oddziaływanie w tego typu grupach nominalnych mogły mieć wyraziste końcówki fleksyjne łacińskich rzeczowników. Można np. przypuszczać, że konstrukcje narzędnikowe w związku zgody z rzeczownikami lub substantywizowanymi przymiotnikami zaczęły pojawiać się w tekstach tłumaczonych i dwujęzycznych (np. rotach sądowych) pod wpływem wyrazistej końcówki narzędnika w łacinie, np.: *iż pan Abraham Dzbąski nie wziął kmiotowica Jana gwałtem cum **XX nobilibus** tam bonis sicut est solus st cum **decem inferioribus** de famuli manibus domini Johannis Tuchorski, ale przyszedł do niego po tem* (KS 1276); oraz ze względu na nadrzędną rolę rzeczownika w grupach z nieodmiennymi liczebnikami o wartości 4–10, por.: *Jako Jan łowił na tej toni gwałtem, cso pani na to listy ma metsecundus si<cut> solus et **cum quator podlejszymi*** (PY 284)[6].

Ciągły kontakt z tekstami łacińskimi jako podstawą tłumaczeniową dla polskich tekstów mógł zatem spowodować zmianę w poczuciu językowym. Niepostrzeżenie dla użytkowników języka zmieniały się relacje składniowe w obrębie grupy liczebnikowej. Nieodmienność w języku łacińskim liczebników od 5 wzwyż i nadrzędna rola rzeczownika w grupie nominalnej spowodowały, że w polszczyźnie rzeczownik w związku z liczebnikiem również zaczął być odczuwany jako element nadrzędny. Świadectwem tej zmiany są grupy nominalne, w których liczebnik główny oznaczający liczby od 5 wzwyż zachowuje jeszcze formę rzeczownikową, ale kwantyfikowany rzeczownik uniezależnia od niego formę składniową, przyjmując formę przypadkową wymaganą przez rządzący zdaniem czasownik, np.: *aby **s sześcią***$_{\text{instr f sg}}$ ***podlejszymi***$_{\text{instr m pl}}$ *szedł w jej dom* (P 943); *Jakom ja nie kazała **siedmi***$_{\text{dat f sg}}$ ***kmiotowicom***$_{\text{dat m pl}}$ *a osmemu panicu tknąć kołow* (PY 554); *jako Chociemir nie worał w Katarzynin dział **na ośmi***$_{\text{loc f sg}}$ ***zagoniech***$_{\text{loc m pl}}$ *w jej rolą* (KL 885).

O wahaniach w tym zakresie świadczy występowanie w jednym tekście obu wariantów konstrukcji liczebnikowych, np.:

6 Być może podobnie oddziaływała łacina na grupy w celowniku.

> podkomorzam **po sześci grzywnach**, komornikom tych wszystkich **po sześci skot**, sędziam starościnym po poługrzywniu (Dział 21*v*);
> komornikom <**po**> **sześci grzywien**, sędziam po poł grzywny, kożdemu pisarzewi ziemskiemu lisie łupieże, jinszym kastellanom, wyjąwszy sędomirskiego ha lubelskiego, **po sześci grzywnach** przez wszego przeciwiania (Sul 17);
> ode dnia skazania **w sześci niedzielach** pospołu siebie naśladujących ani przez ktorego naszego urzędnika z strony naszej, ani przez ktorego czestnikow naszych albo żupc jich gabani być mają (Sul 98);
> *a jimienie swoje [i] za wszytko prawo ziemskie *zapłacenie **w sześci niedziel** ot dnia ucieczenia rękojemstwo dostateczne obyczajem obykłym położyć ma (Sul 107).

Konsekwencją omawianego procesu stała się stopniowa adiektywizacja liczebnika w przypadkach zależnych w polszczyźnie, która ostatecznie dokonała się w ciągu kolejnych dwu stuleci (Siuciak 2008).

Zależność od łaciny widoczna jest również w wypadku konstrukcji złożonych z kilku leksemów rzeczownikowych – w staropolszczyźnie każdy element takiego zestawienia traktowany był jako składnik samodzielny, przejawiało się to w swobodnym szyku, niezależnym od przyjętego w notacji cyfrowej, łączono również zapis cyfrowy ze słownym, np.: *mimo XXX a trzy lata* (Klemensiewicz 1930: 78–83; Słoboda 2012: 99–119). Zapis cyfrowy powodował, że szyk elementów stabilizował się i podporządkowywał systemowi arytmetycznemu. Wpływ na wskazane zmiany składniowe miał również język czeski, lecz w odróżnieniu od wpływów łacińskich, które miały charakter systemowy i były związane z dwujęzycznością średniowiecznych pisarzy, teksty czeskie jako podstawa tłumaczeniowa dla polskich rękopisów były przede wszystkim źródłem kalk strukturalnych i zapożyczeń leksykalnych (Słoboda 2013).

Pismo umożliwiło wykształcenie w świadomości mówiących takiego modelu językowego, w którym istnieje określona kategoria gramatyczna wskazująca na liczbę. Niezauważane wcześniej wspólne cechy leksemów liczebnikowych stały się wyeksponowane (szyk, łączliwość z określoną częścią mowy, zbliżenie do wyrażeń atrybutywnych). Ciągły kontakt z tekstami łacińskimi jako podstawą tłumaczeniową spowodował zmianę w odczuciu relacji składniowych. Nieodmienność liczebników od 5 wzwyż, a także częstsze w dokumentach łacińskich zapisywanie liczby za pomocą cyfr spowodowały, że w grupach nominalnych z liczebnikiem rzeczownik zaczął być odczuwany jako element nadrzędny,

co w konsekwencji doprowadziło do stopniowej adiektywizacji liczebnika w przypadkach zależnych w polszczyźnie. Zmiana hierarchii składników w grupie liczebnikowo-rzeczownikowej z liczebnikami od 5 wzwyż i przeniesienie funkcji członu głównego na rzeczownik spowodowały, że stawał się on niezależny od liczebnika i zależny od czasownika w innych przypadkach niż N. i Acc. W związku z tym przyjmował identyczne wartości przypadka co liczebnik; składnia ta ustabilizowała się w konsekwencji jako związek zgody między liczebnikiem i rzeczownikiem. Liczebnik pod wpływem swej nowej, atrybutywnej funkcji zaczął przyjmować nowe wykładniki morfologiczne, stopniowo ujednolicając odmianę. Zmiany składniowe objęły również wyrażenia referencyjne oraz te wyrażenia atrybutywne w grupie imiennej, które odnosiły się do całej grupy liczebnikowo-rzeczownikowej, były zatem wykładnikami dodatkowej predykacji (Topolińska 1984: 368–383). Określenia w grupie nominalnej, początkowo formalnie zależne od nadrzędnego liczebnika, stopniowo uzależniały się od kwantyfikowanego rzeczownika, przyjmując formę liczby mnogiej, a formę przypadkową uzależniając od rodzaju gramatycznego rzeczownika (N. pl lub Gen. pl). Równolegle do zmian fleksyjnych i składniowych wewnątrz grupy nominalnej przebiegały przekształcenia relacji w związku głównym zdania. Orzeczenie, początkowo zależne pod względem rodzaju i liczby od nadrzędnego w grupie liczebnika, musiało dostosować swoją formę do nowo powstałej grupy podmiotu, w której nadrzędność semantyczna rzeczownika nie zgadzała się z jego formalną zależnością od liczebnika.

Cechy morfosyntaktyczne kwantyfikatorów w staropolszczyźnie świadczą o tym, że w epoce średniowiecza dochodzi do zasadniczego przełomu w rozwoju nie tylko w obrębie tej kategorii, ale w ogóle polskiej składni. Kontynuowane są w tym czasie archaiczne konstrukcje typowe dla języka mówionego i jednocześnie, pod wpływem wymogów pisma i oddziałujących na polszczyznę wzorców obcych (głównie łacińskich), kształtuje się nowa postać składni w wersji pisanej.

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Agnieszka Stępkowska
University of Social Sciences, Warszawa

Reconsidering the Sociological Competencies of the Interpreter

Abstract. Beside specialist knowledge referring to a specific translated field, the interpreter needs to accumulate a contextual knowledge derived from the communicative context of a given translational situation. It is the knowledge about speakers and listeners, including their roles, expectations, opinions, competencies and nationalities. It becomes clear that the overall grasp of the translational situation plays a key role in successful interpreting. Although no simplistic linguistic-cultural divide is possible, Andrew Chesterman (2005) proposed four complementary approaches to research into translation: the textual, the cognitive, the cultural and – the one to be tackled in this article – the sociological. Each of these approaches presupposes a set of adequate competencies expected from translators and interpreters.

From among many abilities and competencies, either ascribed to or required from interpreters, the present article will focus on the sociological competencies of interpreters, which are directly responsible for controlling the mediated situation. Therefore, I will attempt to systematize and reconsider the sociological competencies of interpreters based on the typology proposed by Andrzej Kopczyński (1997). These competencies include (1) the ability to evaluate the situation (speaker – interpreter – audience), (2) the ability to identify with the speaker (empathy), (3) the ability to work in a team (collegiality), and (4) the ability to use equipment.

Keywords: sociological competencies, interpreting, communicative contexts, empathy.

Remarks on the sociological perspective

Society is a shared area and, therefore, a continuously changing network of interpersonal relations. It has no congealed shape, but it rather "comes into being" all the time. Sociology in the proper sense examines what

happens between people – social events, interactions, and social bonds that either bring people closer or make them grow apart. In addition, sociology studies the social capital, *i.e.* the network of interrelations between individuals. The shape of society is determined by things people do and, above all, how they communicate with one another. A monolingual communication is not always successful, which incidentally makes us realize the scale of the challenge of the communication assisted by the interpreter. Interpreting seen from a sociological perspective gains a broader sense. Not only is it mere research of pairs of texts in different languages or the transferring process of the meaning, but it comprises a wider cultural and ideological context, as well as the role of the interpreter as the human agent in communication. The need to expand the field of study, particularly allowing for the interpreting context, has already been indicated by some authors (*e.g.* Toury 1995), yet the classification of the four approaches to research into translation studies proposed by Andrew Chesterman (2005) systematizes neatly the breadth of research within the discipline. Having assumed the existence of certain widely acknowledged problems, Chesterman (2005: 24) sketched out the textual, cognitive, cultural and sociological perspectives, having blurred and often overlapping contours. Thus, the textual perspective includes texts, linguistic data in written or in oral form, as well as general features of the pairs of texts, such as equivalence, naturalness and fluency. The focus of the cognitive approach concerns the decision-making process in the minds of translators or interpreters, their emotions and attitudes, professional experience, and the routine quality of the translation task. The third, cultural, perspective deals with the transfer of cultural elements between polysystems, relations between centre and periphery, as well as power and ethics, ideology and cultural identity. Lastly, the sociological perspective concentrates on translating or interpreting as a social practice. Therefore, it looks at the role of agents, patrons or the publishing industry, the translation market, and also at the social status of translators and interpreters and their profession. In her concept of 'translatorial action,' Justa Holz-Mänttäri (1984) explicated the interrelations between agents involved in the translation process, and described the interpreter as "an expert in cross-cultural communication."

Contextual knowledge in interpreting

Those who participate in the act of communication cannot be abstracted from the concept of social context. As opposed to the expertise concerning a specific domain that is translated, we can talk about a situational knowledge. *Situational knowledge* consists in the grasp of the situational context of a given translational situation. It is the basic knowledge related to speakers, their roles, the hierarchy of these roles, and the speakers' attitudes towards the discussed issues. As to receivers, the interpreter should be familiar also with their roles, including their expectations, viewpoints, competencies, and nationality. The interpreter needs to demand plainly all this information before he begins to interpret. Such an understanding of situational knowledge embraces familiarity with the text (also in the sense of the oral message), *i.e.* metatextual knowledge. This is the ability to identify a text, and especially the ability to anticipate its function and structure. At this point the term 'sociolinguistic competence,' introduced by Piotrowski and Ziółkowski (1976: 130), may prove useful, as it refers to the perfect knowledge of the usage of language rules depending on the situation and the social role. These authors consider the sociolinguistic competence to be a special instance of cultural competence. Thus, acquired in the socialization process, the sociolinguistic competence becomes a cultural trait that sets apart members of different cultural groups.

As opposed to translation, where the translator can look at the whole text, interpretation reveals the textual structure step by step. The interpreter needs to anticipate it based on his own feel of the situation (*e.g.* his knowledge about the speaker), and the established conventions of argumentations. Naturally, a full understanding of the discourse structure may radically improve the quality of interpreting, and the interpreter may aptly use intonation, logical stress and phrasal conventions. It often happens, however, that the input structure is unclear, inconsistent or badly marked. As a result, the interpreter is forced to proceed as if he were blindfolded, and only provisionally assuming some hypothetical and most probable intention of the speaker. In other words, the primary and all-embracing interpreter's competence is to know what is important in a particular situation. In his exploration of conference interpreting, Diriker (2008) approached the interpreter's task as a social practice

in terms of micro- and macro-contexts, especially concentrating on the interrelations between the interpreter, his decisions and the social context. In Diriker's (2008: 212) words, "the interpreters reveal, represent, reproduce and occasionally restore power differences between individuals (micro-contexts), as well as among individuals, institutions and society at large (macro-contexts)."

The role of the interpreter

When considering the interpreting job as an act of communication, it needs to be remembered about the uncertain and still emerging status of the interpreter. Many authors (Prunč 2007; Sela-Sheffy 2005; Wadensjö 2011; Dam, Zethsen 2010; Sela-Sheffy, Shlesinger 2008) unanimously agree that this status is ambivalent and has not reached the level that would be satisfactory both for interpreters and translators. Ambivalence consists mainly in the contradiction. On the one hand, the interpreter's role is crucial for an effective transfer of the message between the parties involved in communication. On the other hand, the interpreter is taken to be a *non-person* (Goffman [1959] 1990: 150), or a *displaced person* (Wilss 1996: 142), and – consequently – he is expected to be invisible.

Indeed, since interpreting is a discursive practice, it may be assumed to have its own internal logic. Accordingly, Moira Inghilleri (2003) suggests the following:

> [T]he relationship between micro-interactional and macro-structural relations is fundamental to and informs all interpreted interactions. It impacts on matters such as: the appropriateness with respect to function of a translated utterance; knowledge of the interpreting context; relationships amongst the participants in the interpreting context; and the crucial, overarching issue of meaning in a given context. (Inghilleri 2003: 262)

Eugene Nida ([1964] 2003: 153) sees the ideal translator as "a person who has complete knowledge of both source and receptor languages, intimate acquaintance with the subject matter, effective empathy with the original author and the content, and stylistic facility in the receptor language." In turn, for Wilss (1996: 143) the essence of communication would be "getting the sender and the recipient 'tuned' to each other for a specific message." In other words, by practising the social role, interpreters become committed to the "mediation of knowledge" (Wilss 1996: 143).

Competencies of the interpreter: a focus on the "socio" aspects

A competent interpreter could be succinctly described as the one who knows what is important in a particular situation. Not only is the interpreter a passive 'ghost' of the speaker, but he becomes an active observer of the context by dint of adapting his interpretation to the relations that arise from the contact between participants of the translational situation. It may be assumed that one of the most difficult skills to acquire for interpreters involve quick responses and the overall grasp of the translational situation, that is – sociological competence. Also, one of the reasons of these difficulties may be sought among interpreters' personality factors, which will, however, not be addressed here. Kopczyński (1980: 23) refers to translatorial competence in the following way:

> In the communicative chain of the act of translation the translator is a black box that is not accessible to empirical study. The only elements that are subject to observation are the input and output texts, the translator's behavior, his strategies of tackling the task of translation, *etc.* The only way of approaching this problem is to hypothesize a model of translational competence of an ideal translator. (Kopczyński 1980: 23)

Obviously, the model of translational competence comprises all kinds of competencies to be synchronized in the translational situation. Apart from sociological competencies, Kopczyński (1997: 20–24) mentions interpreter's competencies that refer to cognition (listening, understanding, transcoding, expressing the meaning, anticipation, selective thinking, quick grasp of problems), psychology (concentration, stress, reflex, memory, divisibility of attention, associating the meaning, imitating, dramatizing), as well as to culture, language and communication (the knowledge of cultures, languages and communicative conventions). As for sociological competencies, they further divide into four. The first two, *i.e.* the ability to evaluate the situation and the ability to identify with the speaker, are crucial in both consecutive and simultaneous interpreting, whereas the other two seem to be specifically characteristic of the simultaneous type of conference interpreting, *i.e.* teamwork and the use of equipment.

Wolfram Wilss (1996: 147) notes that translation has been classified as the "fifth skill," next to the skills of writing, reading, speaking and listening. Before we reconsider the sociological competencies proposed

by Kopczyński (1997), it is worthwhile to look more closely at the concept of a *skill*. Wilss (1996) does not mention competencies, which I take to be synonymous with *competencies* here, but he makes a distinction between *ability* and *skill*, whereby the former is innate and the latter is acquired in a learning process. Wilss (1996: 149) argues that skills are dependent on abilities, *i.e.* no skill can be developed without a suitable ability functioning as its precondition. He dismantles the concept of skill into three dimensions which are worth citing here in full as the study of the notion of translation skills are rarely to be found in the Translation Studies literature:

1. Skill manifests itself in an observable act from which its existence can be derived;
2. Skill contains a predictive component because of the possibility of repeating it in comparable situations;
3. Skill depends on physical or mental conditions which must be constitutional in character; otherwise no skillful behavior can occur.

(Wilss 1996: 149)

Below, in what follows, there is a typology of sociological competencies proposed by Kopczyński (1997) to be reconsidered as the aforementioned purpose of this article.

The ability to evaluate the situation

The interpreter participates in the act of communication. By doing so, he needs to adjust his interpretation to different circumstances created by the speaker and the audience, not least himself (speaker (S) – interpreter (I) – listeners (L)). Kopczyński (1997: 22) distinguishes three kinds of interpreting situations:

(1) $S = L$[1]

The speaker and listeners are united by the same knowledge and expectations. The interpreter is an outsider to them. This situation is frequent and difficult for the interpreter. It may be a specialist conference where the level of knowledge (of the subject matter) represented by the speaker and listeners is comparable. The interpreter needs to acquaint

1 The lettering reflects Kopczyński's (1997) ideas originally expressed in Polish, here changed into English.

himself with the subject, though never reaching the degree of expertise of the participants. Out of necessity the interpretation will be closely following the structure and syntax of the text produced by the speaker. According to Brown (1995: 25), "speakers must, in general, suppose that the judgments they have made about how to express their thoughts are reasonably accurate and should be adequate for their listeners' purposes."

(2) S = I

This situation implies a thread of understanding between the speaker and the interpreter. Those who represent different culture, language and knowledge are the listeners. In these circumstances the interpreter may be required to explain cultural phenomena, or to divert from the text. This is the most comfortable situation for the interpreter as he may freely select the translational techniques he wishes to use.

(3) I = L

In this situation it is the interpreter and listeners who have the same background of culture, language and knowledge. As a result, certain meanings may be understood with no need of verbalization.

Apart from the fact of presented allegiances, the interpreter undergoes serious pressures due to his linguistic and cultural background or, in other words, the type of acquired bilingualism, *i.e.* compound or coordinate. When compared, the compound bilingual is more monocultural, whereas the coordinate one is distinguished by biculturalism. That is why Anderson (1976: 215) expects that interpreters who are coordinate bilinguals are more likely to remain neutral as they will "produce translations with greater meaning equivalence than compound bilinguals." As to compound bilinguals, they will tend to identify with the client whose culture they share.

The ability to identify with the speaker

The behavior that demonstrates empathy is distinguished by the ability to envisage oneself in the position of another person, and so to share that person's feelings. As previously mentioned, Nida ([1964] 2003: 153) builds the ideal role of the translator, among others, on "effective empathy with the original author and the content." Kopczyński (1997: 22) states that empathy is connected with the perception of the interpreter's

role. The interpreter either echoes or interferes in the text. The 'shadow' interpreter holds on to the linguistic and non-linguistic performance of the speaker, thereby becoming passive and invisible. The 'intruder' interpreter does not imitate the non-linguistic behavior of the speaker, but actively contributes to the interpretation by digressing and paraphrasing. The ability to identify with the speaker is useful both to consecutive and simultaneous interpreters. The level of empathy also depends on the personality type represented by an interpreter and it *per se* constitutes the subject of scrutiny. As Henderson (1987) observed, most interpreters – if asked – are likely to agree that personality is a significant factor that contributes to the success of the job.

The ability to work in a team (collegiality)

Teamwork is the professional reality shared primarily by simultaneous interpreters working in a booth. For these interpreters, teamwork is an opportunity to unite their efforts for an optimal interpreting performance. Thus, the idea of collegiality is always tested inside the interpreting booth. The interpreter who sees his role properly will leave the booth only at the break time, and will not force his partner to interpret the most difficult parts of the conference, leaving the easiest parts for himself.

The ability to use equipment

The equipment is practically entirely the domain of conference interpreting performed in the simultaneous mode. The interpretation equipment includes interpreter's booths, consoles, microphones, headphones, transmitters and all the related sound and audio components. Thus, the prime duty of simultaneous interpreters is to learn about the technical set-up of all the equipment and to know how to use it during the conference. Interpreting booths belong to the most conspicuous attribute of simultaneous interpreters. The booths may be soundproof, but also permanent and portable. Each booth has interpreter consoles equipped with headsets, microphones, and sometimes recording devices depending on the language configurations and conference formats.

Conclusions

The aforementioned parts of the article sketched out the sociological competencies necessary in the interpreter's profession. These competencies, together with other situational factors that appear during interpreting, demonstrate that oral translation is a continuous and hasty (because under time pressure) decision-making process based on many elements of the given context, jointly creating a concrete interpreting situation. Interpreting involves an intense and complex mental work to enable communication between two different parties, often in adverse conditions. Additionally, interpreting requires a broad, versatile and constantly enriched knowledge, a special type of diligence in learning about the world, the awareness of the essence of translation in general, as well as many trained psychological, linguistic and paralinguistic properties and incessant decision-making. All this leads to an observation that, as Bruce Anderson (1976: 218) observed, "[i]n general, the interpreter's role is characterized by some degree of inadequacy of role prescription, role overload, and role conflict resulting from his pivotal position in the interaction network." The interpreter is a legitimate party in the process of communication and makes his own judgements followed by readjustments. The social competencies of interpreters not only contribute to the interpreting performance, which seems quite obvious, but they also become the fundamental tools to promote the interpreter's job. Thanks to the adequate evaluation of the given situation, the feeling of empathy, good cooperation with other interpreters and the mastery of basic technical skills, the interpreter is a successful mediator of the involved parties. In other words, an ideal interpreter becomes a direct participant and, thereby, an integral part of the communication act.

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Christian Tămaş
Alexandru Ioan Cuza University of Iasi, Romania

The Arabic Element "al" from *Nomen Dei* to Definite Article

Abstract. The aim of this paper is to try to establish whether the name of the archaic supreme god of the Semites can be traced down in the form of the Arabic definite article whose etymology and origin have not been fully elucidated until now. Even if the clear etymology and origin of the Arabic definite article has not been clearly established so far, it would still be rather hazardous to put an equal sign between the Arabic definite article in its common acceptation and the name of the ancient Semites' god. Nevertheless, what we will try to demonstrate is the fact that the definite article *(ʾa)l* present in the Qur'an and within the Islamic tradition, when followed by God's epithets, seems to point to the name of the archaic god of the Semites. The main question that is raised here is whether we have a semantic coincidence or a re-semantization process. If we take into account that at least two of the epithets related to God in the Islamic tradition, *Al-Raḥmān* and *ʾAl-Malik* (translated as "the Merciful" and "the King"), were used by the ancient Semites as epithets of the archaic god *(ʾ)l* we can assume that the other epithets attributed to God followed the same pattern.

Keywords: etymology, definite article, god, proper names, Semitic languages.

Introduction

During history there were many scholars who tried to establish the origin of the so-called "proto-language" of mankind, the one Adam and Eve spoke in Paradise. Thus, according to some opinions, this was Hebrew, or Sanskrit, or Arabic, while Leibniz ([1704] 1996) in his work entitled *New Essays on Human Understanding*, published after his death, opined that this language was old German, admitting though that Hebrew and

Arabic most resembled the Adamic language (Leibniz [1704] 1996: 282). Whether they are right or not is not the purpose of this paper to demonstrate. What we try to establish here is whether the name of the archaic supreme god of the Semites can be traced down in the form of the Arabic definite article whose etymology and origin have not been fully elucidated until now.

1. Etymologies

Since the beginning of the 19th century, the origin of the Semitic words *(’i)l(u)* and *(’e)l* as names, appellatives or attributes of the proto-god of the Semites has raised a great interest. But the age and scarcity of the documentary and epigraphical sources, as well as the purely consonantal characteristics of documents and inscriptions have prevented until now the obtaining of definitive results. For this reason, the establishing of the vocalic quantity of a lexical unit proved itself of a crucial importance in identifying the consonantal roots as the derivation basis of a word. In the case of *(’i)l(u)* and *(’e)l* the general idea was accepted that the vowels “i” or “e” were short, taking into account the absence, within the discovered sources, of a graphical sign that should indicate a vocalic prolongation. From an etymological point of view, the majority of opinions converged to relating the noun *(’e)l* to the weak root *w-l* or *’-y-l* meaning “to be the first” or “to be in front of.” To this root it was assigned as well the meaning of “powerful,” derived from the other two meanings already mentioned, even if the god to which it referred was considered by Wolf von Baudissin a local god (Baudissin 1929, after Dussaud 1938: 536). In the opinion of Otto Procksch (Procksch, after Pope 1955: 17), the name of the supreme god of the Semites had the meaning of “power,” as it is derived from the root *(’)l*, present as well in Akkadian with the meaning of “to be powerful” or to “show power.” Other Orientalists suggested relating the root *(’)l* to the Arabic *(’a)l(i)h(a)* which would confer to *(’)l* the meaning of “the one who inspires terror,” but Baudissin (1929: 16) argued that this verbal root was not very frequently used with this meaning, and that the rather obscure contexts in which it was used suggested a noun to verb derivation, this verb being derived from the noun *(’i)l(a)h* (god). Hans Bauer (Bauer, after Cooper 1981: 337) suggested that the element *(’)l* should be related to the Proto-Semitic demonstrative *(’)l* used as

a pronoun instead of "this" or "that," as a taboo word designating a god the way the third person masculine pronoun *huwa* was used in relation to God in the Islamic mystical literature, and as a substitute for the name of the god in a series of proper nouns (Wardlaw 2008: 61).

As for Hines (2007: 72), Jack (1935: 15) and others, they suggested a relation between the Sumerian *(e)l* meaning "shining" and the Akkadian *(i)l(u)* meaning "bright," "the one who sheds rays," and "holy" (Smith 2004: 292), both words having as well the generic meaning of "bright sky" or "starred sky." Meanwhile, Muslim scholars suggested that the element *(')l* could be related to the root *w-'-l* meaning "to seek shelter," "to shelter oneself" (Drijvers, Healey 1999: 81). With respect to the difficulties met when trying to establish the origin of the terms *('i)l*, *('i)l(a)h* or *('i)l(ā)h(a)* which, according to the epigraphical evidence, used to designate a god if not the supreme god of the Semites, the conclusion was that, taking into account their utilisation by all the Semite peoples, their origin, although not fully elucidated, must have been common. Thus, either *(i)l(a)h* and *('i)l(ā)h(a)* represented a prolongation of *('i)l* or *('i)l* represented a contraction of *(i)l(a)h* and *('i)l(ā)h(a)*. Murtonen (1952) backed this theory arguing that the ancient Semites, being very religious, invoked the name of their supreme god very frequently, using mostly the vocative mode. Thus, in his opinion, the forms of vocative could have been used as well as forms of nominative. In Ugaritic, the second oldest Semitic language, the words containing the noun *('i)l* as a proper name are not very numerous. Nevertheless according to the epigraphical material discovered up until now, *('i)l* could be considered an appellative in the case of a group of compound names, where it is followed by the name or the title of a god (De Langhe 1945: II). According to some authors, these names would not necessarily identify the proper noun *('e)l* or *('i)l* with a specific deity. Moreover, according to most scholars, the element *('e)(i)l* of the compound proper nouns should be almost certainly translated by the common appellative "god" probably accompanied by the first person singular possessive adjective: "my god (is) Baal," "my god (is) Haddad" *etc.* In fewer cases, the element *'(e)l* appears as a suffix attached to a god's name such as, for example, *y-m-l*, vocalised as "y(a)m'l," *i.e.* "Yam is *('e)l*," "Yam (is) (my) god." However, the epigraphical evidence and other documents which have been preserved show that the element *(')l*, with or without the glottal stop *hamza* ('), and vocalized with "a," "e"

or "i" is or refers to the name of the supreme god of the archaic Semitic pantheon. Most proper compound nouns dating from the Ugaritic period consist of god *(')l*'s name, vocalized alternatively with "a," "e" or "i," plus a verbal form or an adjective: *(')l defends*, *(')l loves*, *(')l listens*, *(')l says*, *(')l helps*, *etc.* In some compound nouns *(')l* is placed at the end, following a noun, such as: *dn'l*, *'l* is judge; *mr'l*, *'l* blesses; *bd'l*, the hand of *'l*; *bn'l*, the son of *'l etc.* (De Langhe 1945: II). The conclusion to which the discovered evidence leads is that god *(')l* was still very present in the everyday life of the ancient Semites, in spite of the successive changes that took place in the time of the pantheon's hierarchy. Thus *'l* still was the "creator," the "protector," the "listener," the "judge," the "forgiver," the "lover," the "gracious," the "merciful," the "almighty" and so on.

The Finnish Orientalist Aimo Murtonen (1952: 93–103) provides a comprehensive list of more than 200 compound proper names containing the element *(')l* or *(')lh*, discovered in documentary and epigraphical Amoritic, Ugaritic, Canaanite, Hebrew, Phoenician, Aramaic and South-Arabian sources. His list, even if not exhaustive, shapes to a great extent the qualities attributed to the supreme god of the Semites, and his impact on daily life. According to Murtonen, *(')l* as the proper name of the supreme god is attested in Lower Mesopotamia (2300 BC), in the regions inhabited by the Amorites (2000–1500 BC), in Cappadocia (2000–1500 BC), in Ugarit (1500–1200 BC), in Southern Arabia (c. 1200 BC–500 AD), in Karatepe (1200 BC) and Sengirli (800–700 BC). As an element without an ascertained independent meaning, *(')l* is attested in compound proper names in Lower Mesopotamia (2700 BC–100 AD), in Assyria (1500–600 BC), in Nuzi (c. 1500 BC), in Palestine (c. 1400 BC–100 AD), in the Arabian kingdom of Lihyan, in the regions controlled by the Safaites and the Thamudeni (600 BC–500 AD), as well as in those inhabited by the Nabataeans and the Palmyrenes (200 BC–500 AD). In the inscriptions discovered in these regions, *'l* is called "bull," "father," "uncle," "king," "lord," "shepherd," "leader," *etc.*, and the one who believes in him is called "son," "servant," "fighter," "follower," "beloved," "he who is preserved by his hand," "he who dwells in his shadow," "companion" and "song." In addition to these epithets, there are some that relate to the negative side of the god and refer to the idea of destruction, scandal, devastation and disease. Given his attributes and the actions whose agent he was considered to be in the Semitic world since the mid-third millennium BC

to our era, *(')l* seems to fit the pattern of the archaic proto-divinity, like the Chinese Tian and the Indo-European Dyeus. Moreover, even if no evidence discovered until now links the three gods, it is interesting to mention that the proper names Tian, Dyeus, and *(')l* refer to the same idea of sky or heaven. However, as far as it concerns *(')l*'s epithets, besides the Ugaritic sources, the most complete, the Amorite, Aramaic and Arabian sources do not mention much. In the Old Testament there are the words *ʿelyōn*, *ʾōlām* and *bēt'ēl* which are considered attributes of god ('E)l (Aubrey 2008: 29), although their relationship with the god's name is challenged by some authors (Pope 1955: 25).

2. The origins of a definite article

From a chronological point of view, the presence of a definite article, a West-Semitic characteristic, was attested after the year 1200 BC. Other previous Semitic idioms, including the Akkadian, do not seem to have used a determinant of this kind on a regular basis. Nevertheless, according to Albright (1958) and Loprieno (1980) the use in Ugarit of a determinant element *hn* suggested the existence of a definite article even before the date mentioned above.

There are three definite West-Semitic articles:

a. the prefix *ha* + the gemination of the first consonant of the word that follows the article, found in Hebrew, Phoenician, Punic, Moabite, Ammonite and in several North Arabian dialects;
b. the prefix *'l* or *'a*, when *l* is assimilated in speech by the first consonant of the word that follows the article (in this case the respective consonant is doubled in speech);
c. the suffix *ā* in Aramaic.

But if the existence of a definite article in the Semitic languages is known, its origins, especially of the Arabic definite article, are still a matter of debate. Unlike the Proto-Arabic and the dialects spoken in the north and south of the Arabian Peninsula the classical Arabic uses a definite article *(')al*, or *(')el* which precedes the word to which it is linked. The Arabic definite article was attested for the first time in the name of the goddess 'Alilat *('al-ilat)* as well as in the Nabataean inscriptions discovered in the Sinai Peninsula. Its etymology generated in time a large number of hypotheses more or less controversial but its real

origin still remains unclear. According to Jacob Barth's theories (1967), the origin of the Arabic article was the Arabic negation *lā'* transformed by metathesis or syncope in *'al*. However his hypothesis could not be verified by lack of concrete evidence. Wensinck (1931: 54–55) proposed instead a hypothesis based on the form of the proto-article *h(a)* and on a series of dissimilation processes.

The most popular theory within Semitology is that the Arabic article had the same proto-Semitic origin as the Hebrew definite article *ha*, this being the article used in the Arabic spoken in the north of the peninsula (with the variants *h* or *hn*), before its first attestation as *(')al* which took place in Dedan/Hegra at the beginning of the Nabataean kingdom (Stein 2010: 228). Nevertheless, David Testen (1998) and Jacob Weingreen (1967) affirmed that the correct predecessor of the Arabic article was *h(a)l*, a demonstrative adjective that can be found in many modern Arabic dialects. His opinion was rejected by some grammarians which considered the dialectal form *hal (hadha + 'al)* as a mere contraction of the demonstrative adjective. In contradiction with these opinions, Frithiof Rundgren (1992: 257–269) considered the Arabic article as a development of a proto-article *'(a)*, identifying its traces in the Arabic adjectives which are names of colours as well as in the elative forms of the adjective derived according to the *'af'alu* scheme, with a prefixed *'a* (*'akbaru*, greater; *'ajmalu*, prettier, *etc.*)

Moreover, the fact that the consonant *l* does assimilate only in the article led to two currents of opinion referring to the etymology of the Arabic definite article. The first based itself on the behavior of the consonant *l* from the article, when the article is followed by a "moon" consonant which does not admit the assimilation of the consonant *l* in speech (*i.e. 'al-qamar*, the moon; *'al-bint*, the girl, *etc.*). The second based itself on the behavior of the same consonant *l* when the article is followed by a "solar" consonant which requests the assimilation in speech of the consonant *l* (*i.e. ash-shams*, the sun; *as-salām*, the peace, *etc.*). To a certain point, the data referring to the Old Amoritic language seem to lead to the conclusion that this language used a definite article very similar to the classical and modern Arabic article, although it has never been identified as such. The Amoritic sources where this article seems to appear mention only proper names, and for this reason they cannot constitute a clear base for further research. The fact that the theories and

the interpretations have not offered any conclusive results so far show the lack of clarity or the scarcity of the ancient sources and leave the matter open to further investigation.

3. A possible re-sematization

As shown above, the Semitic root *'l* can be largely found in the earliest strata of the eastern, north-western and southern Semitic idioms and dialects,[1] as part of theophoric names and toponyms, accompanied by short nominal or verbal constructions, which indicates that in the proto-Semitic language the element *'l* alternatively vocalized with a short or long *a*, *i*, or *e* as *'(a)l*, *'(i)l*, or *'(e)l*, represented either the name of the archaic Semitic god, or a determinant which, when accompanying other god's name, recognised him the quality of god. In the second case, it has never been precisely established if the root *'l* – or *'l(h)*[2] obtained by phonetic expansion but having the same meaning – followed by the name of a god, referred directly to *'l* as name of the archaic god of the Semites or if this element was used as a common noun because of frequent use. However, how could the name of a god become in time a definite article? Could the frequent use of the element *'l* determine its re-semantization? If we are to consider two Ugaritic syntagmas – 1. *'l mlk* and 2. *'l hd*, we see that they could be translated and understood not only as 1. *'l* the king and 2. *god* Hadad, but also, taking into account the grammatical structure of the Semitic languages, as two nominal sentences with the copulative verb unexpressed: 1. *'l* (is) the king and 2. *the god* (is) Hadad. In the same line of argumentation it is important to notice that the sentence *'l mlk* was very much used in earlier times, according to Smith (2009: 354), in relation to the archaic proto-god *'l*. Besides these two Ugaritic inscriptions, two more examples could back the re-semantization hypothesis, those referring to the Hebrew compound name of God *'El raḥūm we-ḥanūn*, provided by the Old Testament and those referring to *'Al-Raḥmān* and *'Al-raḥīm* provided by the Qu'ran. In the Old Testament (Exod. 34: 6,

1 In Phoenician *'l* or *'lm*; in Ugaritic *'il*, with the feminine form *'ilt*; in Amoritic *'il(l)* or *'el* with the feminine *'il(la)t*; in Akkadian *il* or *el*; in epigraphical South Arabic *'l* (see Murtonen 1989: 90).

2 In Ugaritic with the form of plural *'alhm* and of feminine *'lht*; in Aramaic *('ā)lah*; in Siriac *'al(l)ah*; in Amorite *il(l)a*; in Arabic *ilāh* (see Murtonen 1989: 91).

Neh. 9: 31, Jonah 4: 2), the above-mentioned divine epithets preceded by the name of God and translated as "The Lord God merciful and gracious" are applied to Yahweh, but in the light of the Ugaritic epithets they seem to stress a distinctive feature of god *'l* (see Janzen 1997: 254). In this respect the scholars agreed that the expression *'ēl raḥūm weḥanūn* was not applied only to God as Yahweh but as well to God as 'El Shaddai. The same pattern includes the compound name *'ēl 'ōlām*, translated as "God the eternal" (see Mills 1990: 241). Nevertheless, at the same time, both compound names constitute in themselves nominal sentences and as such they can be read also as: "The Lord God *is* merciful and gracious" and "God *is* the eternal." As for the divine epithets/names present in the Qur'an, *'al-raḥman* and *'al-raḥīm*, Arthur Jeffery (1938: 140–142) opined that, while the root *rḥm*, common to the Semitic languages, which appears many times in the Qur'an under its derived forms *marḥama*, *raḥīm*, *ruḥm*, *riḥm*, *raḥma*, *raḥmān* and *raḥima*, *'al-raḥīm* was undoubtedly a word of Arabic origin that fitted into a common derivation pattern, *'al-raḥmān* was a lexical borrowing. This point of view was backed by the hypotheses previously emitted by several classic Arab lexicographers, such as Mubarrad and Tharlāb who saw in *'al-raḥmān* a word of Hebrew origin. According to the theories of several western Orientalists, the epithet/name *'al-raḥmān* entered classical Arabic through South Arabia, but in the opinion of Nöldeke-Schwally (1909) the origin of this term should be looked for elsewhere. In the same line, Joseph Halévy (1895) was of the opinion that the expression had a very old Semitic origin, contradicting those who favored its Hebrew origin and others who hesitated to pronounce themselves on this matter.

From a chronological point of view, the epithet *raḥmān* has a rather long history, being mentioned under this form in the bilingual Akkadian and Aramaic inscriptions discovered in north-eastern Syria in 1979. In one of the inscriptions, dedicated to the West-Semitic god Hadad/Adad, this was called *rḥmn* in Aramaic, and *rēmē'ū*, in Akkadian. According to Tallqvist (see Rahmouni 2008), it seems that this epithet was used for the gods Marduk and Ninurta as well. The epithet *rḥmn* in Aramaic was attested as well in the *Words of Ahiqar* inscribed on eleven sheets of papyrus discovered at Elephantine (Aswan) in 1906. Here, *rḥmn* appears accompanied by the element *'l* which does not seem to directly refer to the proper name of god *'l*, as this one was no longer an active god

of the pantheon, but to "god" as common noun, both *'l* and *rḥmn* referring to god Hadad. Later the root *rḥmn* will be present, besides the biblical texts referred above, within the Hebrew and Aramaic liturgical tradition, where this epithet, alone or in combination with *'el* was frequently used as name of God. *Rḥmn* is mentioned as well in the Nabataean inscriptions where, even if it is apparently used as an epithet of the god Baalshameyn, in most cases it appears associated to an unknown or "hidden" god whose origin generated a large number of controversies. However, it appears that the epithet *raḥmān* was largely associated with *'l* (vocalized either with "a" or "e") as a generic name for "god" and frequently used by the members of the nomad tribes established in the region. The term was largely used as well in southern Arabia in the 4th century BC as an epithet of a supreme god, very close to the God of the monotheistic period (Ryckmans, after Hary *et al.* 2000: 386). But even if it seems that the South Arabian inhabitants used *'al-raḥmān* as a title and epithet of God, it appears that this one did not directly influence the term *'raḥmān* used later in the Qur'an taking into account that the South Arabian culture did not have a major impact on the Arabs from the north-west. Anyway, it seems that *'al-raḥmān* was used in Arabic before the revelation of the Qur'an, according to the evidence provided by the pre-Islamic poetry. Nöldeke and Schwally (1909) and other Orientalists noticed that in that period, *'al-raḥmān* as the divine name was almost as frequent as *'allah*.

Conclusions

Even if the clear etymology and origin of the Arabic definite article has not been established so far, it would be rather hazardous to put an equal sign between the Arabic definite article in its common acceptation and the name of the ancient Semites' god. Nevertheless, the definite article *('a)l* present in the Qur'an and within the Islamic tradition, when followed by God's epithets seems to point out, in the light of our argumentation, to the name of the archaic god of the Semites. If we take into account that at least two of the epithets related to God in the Islamic tradition, *Al-Raḥmān* and *'Al-Malik* (translated as "the Merciful" and "the King"), were used by the ancient Semites as epithets of the archaic god *'l* we can assume that the other epithets attributed to God followed the same pattern.

Whether we have a semantic coincidence or a re-semantization process and whether the origin of the Arabic definite article used in relation to the epithets of God extends over the Arabic definite article used in its common acceptation is difficult to say, taking into account the scarcity of the evidence discovered so far. Nevertheless, if we accept the hypothesis regarding the religiousness of the Semitic peoples to which Murtonen and others referred to, the path for further research remains open.

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Ian Upchurch
University of Rzeszów

The God/Nature Mirror. How Our Models of Creation and Evolution Reflect the Structure of Society

Abstract. Throughout history humans have had ideas about how we were created, until we finally discovered our own evolution. Yet still today controversy rages between evidence-based evolution and faith-based creationism in some parts of even the most developed countries. It is not clear why some people and some past societies have preferred one way of seeing our relationship with the natural world to another.

The paper therefore attempts to uncover the social basis for the choice of creation/evolution models in different periods of history. Nine models of creation or evolution are reduced to their core elements and compared to the structure of the society at the time they became popular. The societies concerned are mostly British but also include others that had an influence on thinking in Britain at certain periods (*i.e.* Ancient Greece, Roman Empire and Enlightenment France).

The results show a close similarity between the structure of the society and the structure of God/Nature that was widely believed at the time, for all nine models of creation/evolution analysed. A further result shows that in the latter six of these models of God/Nature (which have become popular during documented history, allowing more precise dating) there was a remarkably consistent time period of around 46 years from the onset of some radical societal change to its conclusion. This was followed by a period of 0–8 years before the proclamation, publication or popularisation of a way of seeing God/Nature that matched the new mode of society.

The results allow us to better understand the motivation of societies who promote a particular model of creation or evolution. The existence of a correlation between belief systems and societal structure demands that we do not take such beliefs at face value, but rather question the real function they serve.

Keywords: creation models, structure of society, belief systems, evolution.

Introduction

Throughout human history we have had belief systems that reflected the structure of our societies. Palaeolithic hunters revered the spirits of animals which provided them with food and clothing. Civilisations of antiquity believed in many gods who controlled the forces of nature that helped or hindered their lives. Egalitarian, nature-loving Celts saw a Christian God as bound up in nature, continually creating it. The authoritarian, militaristic Romans saw that "same" God as the original creator of the universe presiding over it. Britain, after the Glorious Revolution, with the king put in his place as a figurehead who allows the country to be run by laws that parliament makes, believed in a God who also knew His place: creator of the universe who allows it to be run by laws that science discovers. France, after the Revolution, with power for the peasants to control and shape their own lives, believed in a theory of evolution (Lamarck's) that saw animals shaping their own destiny by their choice of behavior leading to development of new characteristics. The British in colonial times, asserting control over other peoples of the world, believed in a theory of evolution (Darwin's) that saw animals competing, with the fittest becoming dominant and improving the race. Britain's early 20th century society, including the newly emancipated women, accepted a new theory of evolution (Darwin's/Fisher's) that saw the crucial role played by female mate choice in directing the course of a species' development.

There is a striking correspondence between the nature of a society, its priorities and preoccupations, and the system by which that society believed the natural world was created. Of course, this is very convenient for the leaders of that society; as Bertrand Russell (1944: 11) said, "Wherever there is power, there is a temptation to encourage irrational credulity in those who are subject to the power in question." Our belief systems seem to reflect, support and strengthen our faith in our social system. When a society believes in a relationship of God and nature that is a metaphysical analogue of the physical and social power structures of that society, "God help" anyone who questions that belief, as in doing so they are actually questioning the basis of the society itself. Time and again, thinkers who cast doubt on the dominant belief system were seen as attacking the foundation of the country which that belief stood for. The list of such "heretics" includes many people who persisted in religious beliefs, such as Paganism

or the "wrong" kind of Christianity, and many scientists with new ideas, such as Copernicus, Galileo and Darwin. History, then, has shown us the powerful mechanism for maintaining a belief system that suits the society. The question is by what mechanism does the belief system change when it is no longer convenient for a society that has transformed?

Theories for their times

1. Palaeolithic peoples and Animism

At some points in the Palaeolithic, people developed worldviews that we could describe as Animistic or Totemistic. In common with modern-day Shamans of traditional societies they would likely have regarded animals, plants and geographical features as having living spirits. They would have seen themselves as being part of nature, rather than separate from it, as Western people generally do, especially after Descartes. This would produce an empathy with animals and an understanding of how they live. For people whose daily lives were so dependent on nature, this worldview was clearly very useful. It would help them to predict the movements of animals, the fruiting of plants and the shifting of the seasons.

2. Ancient civilisations and Mythology

The typical religion of the Bronze Age, Iron Age and ancient civilisations such as Greek and Roman, was polytheistic. These religions included many gods, each with their own characteristics, often responsible for such natural elements as creation, life, death, love, motherhood, sun and water as well as human activities including music, farming, art and war. The gods were, then, personifications of the elements of the natural and human world that mattered most to these peoples. Worship, or mere awareness, of these gods allowed people to make sense of nature which often hindered their attempts at successful civilised living.

3. Egalitarian society and Continuous Creation

Celtic society in the British Isles had no national power structure, no king or government and a reverence for nature. When it became Christian, then, the creation story was interpreted to suit.

> The great Celtic teachers repeatedly point to the fundamental truth of Genesis … to recall us to the essential nature of creation … There is a phrase repeated after each day in the creation story 'And God saw that it was good … And God saw that it was good … And God saw that all had been made and beheld it was very good' (Genesis 1). Creation is viewed not simply as something that occurred at one point in the past. Creation is forever being born. It is forever coming out of the Womb of the Eternal, and God forever sees what is being born as sacred. (Newell 2009: 39)

So the divine hierarchy is flattened like the Celts' social hierarchy. God did not create at the beginning a natural world that is below Him, but He continually creates, making nature itself sacred.

4. Divine rulers and Divine Creation

The Romans, who successfully invaded Celtic Britain in 43 AD, were spurred on by a completely different social system. They had a multinational power structure with an emperor seen as a living god on top of a government in Rome that controlled most of the countries across Europe. The whole of Roman society was based on hierarchy: from the roads that brought goods from the subjugated periphery to the dominant centre, to the family that was led by the active, virile male. Rome had only one important characteristic in common with the Celts: when they became Christian they also interpreted the creation story to suit themselves. The God of the Christian Roman Empire was seen, like the emperor, as the authority over the universe with the power to create and destroy, who all should praise with gratitude for His grace in allowing them to exist.

For the next 13 centuries after the Romans left, England, and much of the rest of Europe, was under the control of monarchs who wielded, sometimes, absolute power. The feudal system, established by the Saxons and perfected by the Normans, set up a 'top-down' power structure making the king the Lord and master of the country. In this climate it should not be surprising that the dominant explanation of human origins was the Roman, authoritarian version of the biblical creation story. The king's grip on power was strengthened by his people's belief in an analogous story of how humanity was created top-down by a supreme Lord. The feudal structure itself, establishing a hierarchy from king to virtual slave peasants, could be seen as an extension of the Great Chain of Being: an ancient idea that orders the value of entities in a sequence, which still influences the way

we talk about nature today (Lakoff, Turner 1989: 160–180). The peasants at the bottom of the feudal system are only slightly above the level of animals and the king at the top is only just below the God who put him there (Figure 1). The God of this time, like the king, was active and involved: answering prayers and constantly intervening in the affairs of men and nature. In Tudor England, when the feudal system had long gone thanks to the decimation of the nobles in the Wars of the Roses, the monarchs remained in complete control with the help of the authority of the Church to support their claim to the right to rule.

God
King
Higher Nobles
Lesser Nobles
Knights
Peasants
Mammals
Reptiles
Amphibians
Fish
Invertebrates
Microscopic Fauna
Inanimate matter

Figure 1. The extended hierarchy of the Great Chain of Being to include the Feudal Hierarchy

5. The Enlightenment and the Clockwork Universe

The Enlightenment, and the spreading of power to the merchant classes, especially in England, changed all that. The 17th and 18th centuries were dominated by the loss of power of the English monarchs. They were still in place, but their prerogative to make decisions and impose them on the country was limited by the power of the new parliament, who insisted on their right to discuss and make laws. The monarch ruled in principle, but in practice only through laws passed by parliament. Meanwhile, Newton's discovery of many of the laws of the universe left God in the same, slightly impotent, position as the monarch. God had

set up a clockwork universe which was now able to run itself by applying the laws He had laid down: there was no need for Him to intervene on a regular basis. Newton's laws of nature mirrored the laws of parliament (of which he was also a member) in making sure that God (like the king) was put in His place as a "hands-off" ruler: a figurehead rather than a dominating personality.

6. French Revolution and Bottom-Up Evolution

The French Revolution in 1783 went further than the English would ever go in, quite literally, cutting the king down to size. The revolution overthrew the power of the king, replacing it with a 'bottom-up' power of the peasants to determine their own lives. The French republic celebrated the ability of the masses to improve themselves and their country. Meanwhile the French biologist Jean Baptiste Lamarck published his theory of evolution which showed life to be similarly self-determining. According to Lamarck, the driving force of evolution is the individual's own willpower which can change them and their offspring into what they want to be. For the evolutionists, "inspired by the revolutionary French (…) power for change came from below in both nature and politics" (Desmond, Moore 1991: 34). Animals, like the revolutionary peasants, were the masters of their own destiny.

7. Colonialism and Darwinism

In the aftermath of the French revolution, during a period of unprecedented repression in Britain, there were riots in 1791 where mobs shouted "No philosophers – Church and King for ever" (Desmond, Moore 1991: 11). Godless evolutionary talk was anathema in conservative Britain. All the collegians at Cambridge, when Darwin attended, were Anglicans accepting Christianity as part and parcel of the law of the land. "Virtually all of the college heads and most of the professors and Fellows had taken holy orders [and] the spires of Cambridge stuck out of the flat fenland like stalagmites, encrustments of feudal privilege built up over six centuries" (Desmond, Moore 1991: 49–50). Anyone who questioned the Creation Story challenged not only the Church but Queen and Country too.

Britain, however, was changing beyond recognition in the early 19th century. The Napoleonic wars established Britain as a world power and

the country went on to create an empire that Napoleon could only have dreamed of, adding ten million square miles of territory and four hundred million people over the next century. The Victorians felt a need to create a narrative that would justify their position as the greatest race on earth. During this time most of the key figures of British history were reinterpreted or popularised in some way to tell a heroic story of progress (Upchurch 2013).[1]

In this climate, 150 years after Newton had discovered physical laws of the universe, the astronomer John Herschel passed on the baton to Darwin, when they met in South Africa during Darwin's journey round the world, by telling him that similar laws should be discovered in the biological arena. However, even in Darwin's time, "old patrician Anglicans still feared that a nature not actively upheld by God's word boded ill, threatening the command structure of a paternalistic society" (Desmond, Moore 1991: 487).

Of course, colonialism was mostly about business and trade. For Darwin, competition pried species apart forcing them:

> to escape the rat-race by finding their own unpressured nook' [similar to the way his Wedgwood cousins in their pottery factories] created a production line mentality with a marked division of labour … The metaphoric extension was complete. Nature was a self-improving 'workshop'; evolution the dynamic economy of life. The creation of wealth and the production of species obeyed similar laws. (Desmond, Moore 1991: 420)

Karl Marx noted, "[i]t is remarkable how Darwin rediscovers, among the beasts and plants, the society of England with its division of labour, competition, opening up of new markets, 'inventions' and Malthusian 'struggle for existence'" (Marx, Engels 1862: 380). In 1866 William Robert Grove, the President of a meeting of the British Association, claimed that Darwin's gradualist, competition-based evolution theory served the nation's interests:

> Our language, our social institutions, our laws, the constitution of which we are proud, are the growth of time, the product of slow adaptations, resulting from continuous struggles. Happily in this country practical

1 The list includes Christ, on his legendary visit to England, Boadicea, King Arthur, Alfred the Great, Robin Hood, Robert the Bruce, William Shakespeare and Charles Darwin.

> experience has taught us to improve rather than remodel; we follow the law of nature and avoid cataclysms. (Desmond, Moore 1991: 536)

England had found that Nature did things her way. The theory of evolution was as English as a cup of milky tea.

You cannot understand an evolutionary theory produced in the 19th century without understanding the Victorian mindset.

> The general preference that many of us hold for gradualism is a metaphysical stance embodied in the modern history of Western cultures, it is not a high-order empirical observation, induced from the objective study of nature (…) even the greatest scientific achievements are rooted in their cultural contexts – and (…) gradualism was part of the cultural context, not of nature. (Gould, Eldridge 1977: 145)

Dunbar (1996: 112–113) has shown just one example of non-gradual evolution in the case of increasing brain frontal lobe size and level of intentionality from *Homo habilis* to *Homo erectus* to archaic and modern humans. The evidence shows intermittent spurts of these factors over time rather than a smooth, gradual increase.

8. Female emancipation and Sexual Selection

The increasingly liberal society of the late 19th century could not yet claim to be free and democratic until women had equal rights with men; an idea that was still in its infancy in Darwin's time. Only in the 20th century did women have votes and equality in an increasing number of areas of life.

In this same century the Darwinian evolution model was modified to include the phenomenon of sexual selection, whereby females' choice of mates could have an effect on evolution: by deciding which males would father the next generation females could influence the direction their species would go in. This effect is seen as more powerful than natural selection.

Changing societies: changing beliefs?

When Karl Marx said "religion is the opiate of the masses" he was right about the Methodist religion that helped prevent revolution in Britain after the French Revolution. More generally, religion (and the science of evolution) has the function of preparing people to accept the way society is (authoritarian, democratic, pluralistic, competitive, egalitarian, *etc.*).

We have seen how each of the societies discussed had a dominant belief about the way they were created that closely mirrored the society itself. The way people thought about God and nature conveniently predisposed them to view the current social structures positively. So what happens, then, when the social structures change? How does the belief system change to one which suits the new order?

This question can be answered for the societal transformations that have taken place in the historical age, for which we have dated evidence. The pre-Christian Roman Empire suffered a crisis in the 3rd century (invasion, civil war, plague, economic depression) which resulted in it being divided into three parts in the years 258–260. This led to profound changes in the Empire's institutions, society, economy and, eventually, religion. Historians regard this division as defining the transition from classical antiquity to late antiquity. Only in 306, 48 years after the division, did the new emperor Constantine unite the Western Empire again and establish himself as a living god. Seven years later the Edict of Milan, created under Constantine's close supervision, established that Jesus is one body with God. It took 48 years to make the change in the society and then seven years to reflect it in a new version of religion.

The Roman Church sent Augustine to England in 598 to establish the Roman Church amongst non-Christian and Celtic Christian people. By 617 this mission was regarded to have been a failure as little progress had been made in converting the population. However, by 660, 43 years later, the Saxon kingdoms were complete and virtually all of England was Christian. Four years after that, the Synod of Whitby chose to follow the Roman Church, with its authoritarian God, rather than the more egalitarian Celtic Church. It took 43 years to make the change in the society and then four years to reflect it in a new version of religion.

England's split with Rome came in 1534 with the Act of Supremacy making Henry VIII head of the Church of England. It was the culmination of a bitter dispute with Rome over Henry's divorce and the Church's money. The dispute raged even after Henry's death as, in turn, his children Edward (Protestant) and Mary (Catholic) tried to take the country in different directions. Elizabeth then desired to find a balance that would keep both sides happy, but it fell to her to make the decision that would end any doubt about England's ruling religion: the execution of Mary Queen of Scots in 1587. It is clear that Elizabeth delayed this

decision during the 18 years Mary was imprisoned, though the climate for a decisive resolution of England's religious question had already been in existence for a few years. The real turning point had come in 1581, 47 years after the Act of Supremacy, when parliament made it a treasonable offence to convert an English subject to Catholicism with the intent of supplanting their allegiance to the Queen. England was now firmly Protestant, with a work ethic promoting hard work, frugality and diligence over the Catholic focus on religious attendance, ceremonies and confession. What was good for business was good for England. God helped those who helped themselves; and England helped herself to an Empire. The new ethos led to Gilbert claiming the first overseas colony in Newfoundland in 1583, two years after the treason act. It took 47 years to make the change in the society and then two years to reflect it with a new version of England's relationship with God.

The Civil War from 1642 was the first major challenge to the authority of the king in a thousand years. The parliamentarians did not accept what King Charles I believed so passionately: that he ruled by divine right. The republic that followed was not successful and the country returned to the king, but still the doubt concerning the king's right to rule remained. Finally in 1688, 46 years after the start of the war, parliament implemented the Glorious Revolution which established that the king's power was limited and it could make laws. One year earlier, in July 1687, Isaac Newton published his *Philosophiae Naturalis Principia Mathematica* [*The Mathematical Principles of Natural Philosophy*] (1803, English edition). which is the most important work in the development of the "clockwork universe," which sees God as staying out of the actual running of the universe, leaving it to physical laws. However, acceptance of Newton's theories was not immediate; only by the end of the century was it clear that the work had sparked a scientific revolution to match the political one (Smith 2008). A large part of the delay in Newton's work being widely accepted is that it was written in Latin during a time when that had become an obstacle to understanding. It also seems that Newton's theory had to wait for the full ramifications of the political revolution first. It took 46 years to make the change in the society and then a few more to reflect it in a new version of God's place in the universe.

At the same time France was probably leading the world in science and philosophy, and also politically. However, the king's disastrous decision

to engage in the Seven Years' War changed that. The war was fought in many areas around the world and stretched France's power to breaking point. It was now the turn of the French to realise that perhaps the king did not have the benefit of divine judgement, guidance and providence. This led, of course, to the French Revolution, which continued until 1799, 45 years after the original shock. In that same year Jean Baptiste Lamarck published his theory of evolution which portrayed animals as shaping their lives as the French peasants had done. It took 45 years to make the change in the society which was then immediately reflected in a new version of where we came from.

The Napoleonic War that followed proved to be a turning point for Britain, as joining it in 1803 represented a choice to engage with Europe and try to become a power greater than France on the world stage. The war, though successful for Britain, was followed by a recession as soldiers returned to a battered economy without the demand for goods generated by the war. Despite this, Britain managed to become a military, scientific and economic superpower in the early Victorian era, building a global empire. The peak of this was celebrated in 1851, 48 years after joining the war against Napoleon, in the Great Exhibition, which was a demonstration of Britain's dominance in the world. Eight years later Darwin finally published his *The Origin of Species* which showed that animal species develop and improve as a result of competition and superiority. It took 48 years to make the change in the society and then eight years to reflect it in a new version of where we came from.

The late-Victorian period saw the beginning of the suffragette movement campaigning for emancipation for women. The struggle started gradually during the 1870s after John Stuart Mill published *The Subjection of Women* in 1869. Women eventually won the vote at the same age as men in 1928. Two years later, in 1930, Robert Fisher published a work popularising the idea of sexual selection. Darwin himself had seen the potential affect that females choosing mates could have on the direction of a species' evolution, but he had found little interest in this idea during the mid 19th century (it did not fit the politics of the age). Only after female emancipation was Fisher able to pick up the theory of sexual selection and extend it. It took 59 years to make the change in the society and then two years to reflect it in a new version of where we came from.

So, creationism, the Protestant work ethic, the clockwork universe, Lamarck's evolution theory, natural selection and sexual selection were all themselves selected to fit the times they were created in. They each described nature by holding up a mirror to society and showing the same structures and agendas that existed in the human world. They provided justification for the existing social order by showing that it was a reflection of the natural order. They may or may not have been right; what matters is that they were right for their times. They worked as stories: as creation myths. Table 1 shows the timetable of key events in the parallel development of societies and theories of where we came from.

Table 1. The process of social change and the development of new belief systems

Start of social change	**Gap (years)**	**Conclusion of social change**	**Gap (years)**	**New belief system**
Crisis splits Roman Empire into three – 258	48	Constantine unites Western Empire – Emperor is a god – 306	7	Edict of Milan establishes Jesus is one body with God – 313
'Failure' of Augustine's mission – 617	43	Virtually all Saxon England Christian – 660	4	Synod of Whitby affirms authoritarian God – 664
Split with Rome – 1534	47	Act making Catholic conversion treason – 1581	2	Founding of first overseas colony – 1583
Start of Civil War – 1642	46	Glorious Revolution limits power of king – 1688	<10	Clockwork universe limits power of God – 1690s
Start of Seven-Years' War – 1754	45	French Revolution – 1789–1799	0	Lamarckian bottom-up evolution – 1799
Britain joins Napoleonic Wars – 1803	48	Great Exhibition represents peak of Victorian power and Empire –1851	8	Darwinism justifies conquest and competition – 1859
Start of Suffragette movement – 1869	59	Votes and rights for women – 1928	2	Sexual selection theory gives key role for females – 1930

Conclusions

There appears to be a regular, predictable process of change in societies and belief systems. Most of the time, social systems are stabilised by belief systems that make them appear to be a reflection of the cosmic order. The way things are is the right, God-given and natural way of things. When that social system is forced to face an inevitable change there is crisis and conflict. For approximately 46 years this conflict is not fully resolved until finally a political decision is made by those in power which provides the solution. In the next few years comes the proclamation, publication or popularisation of a way of seeing God and nature that fits the new social order. The revolutionary idea then becomes the doctrine of the new society, defending it against more heresy.

Why does it take around 46 years to complete the revolutions in society that spark the corresponding revolutions in belief? One possible explanation is that it is an inevitable consequence of the human lifespan. The crises or conflicts that start the revolutions divide society into camps for and against the new idea of itself, making instant resolution impossible. Only after a generation has passed do most people agree to implement the new idea. Fundamentally changing society and personal belief requires personnel change. People who have grown up in the old order will never completely accept the new one. Only the generation born after the start of the conflict, growing up aware of the new idea, can fully implement it when they are in positions of power, which they most often achieve in their mid- or late forties.

It is crucial that the people who made the decisions that resolved the issues were born after the original conflict started and could not remember a time when the issue was not burning. The parliamentarians who made Catholic conversion treason could not remember England before the Act of Supremacy. The parliamentarians who brought about the Glorious Revolution could not remember England before the start of the Civil War. The French revolutionists could not remember France before the Seven Years' War. The organizers of the Great Exhibition could not remember Britain before the Napoleonic Wars. The politicians who allowed votes for women could not remember Britain before the start of the Suffragette movement. The majority of the decision makers in these cases had grown up knowing this as an issue that needed to be resolved.

Of course there would have been older members of those bodies who had not known this issue in their younger days, but by around 46 years from the start there seems to be a critical mass of decision makers who would be young enough to be open to completing the change and regard those older members as behind the times.[2]

It seems that belief systems are not what they seem. There is a remarkable consistency between ancient worldviews, religious beliefs and scientific theories. They all function to protect the order of the society that chose them. They are positions to be defended; and their adherents will often use any means necessary in their defence. In fact, conversations about God and the nature of the universe actually convey allegorical meaning regarding something which we tend to see as much more important: our own lives and societies. If a person is content to have their consciousness limited by the society they were born into, this phenomenon can be safely ignored. However, those who wish to understand something about the enormous, ancient universe around us must first recognize how their perception has been conditioned by their society and attempt to remove these tinted and tainted spectacles.

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2 The exception to this is the 59 years it took from Mill's essay to equal voting rights for women. Despite this early starting point, the Suffragette movement did not take off quickly during the next 10 years, so the true period could be shorter. In addition the First World War may have interrupted the process, raising other concerns and killing off a large section of the generation that would be more likely to support the change.

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Szymon Wach
Opole University of Technology

Towards a Broader Explanation of Phenomena in Contact Linguistics. An Outline Proposal

Abstract. The aim in this paper is to present various possibilities of looking at the phenomena in contact linguistics. The departure is made from the classical Weinreich's (1953) contact phenomena and Haugen's (1950) classification of borrowings, later to say that they do not offer any explanation of various forms used throughout a text corpus. Another approach has been offered by the idea of sociolinguistic domains proposed by Fishmann (1972); however, some situations lead to a conflicting language choice in a single domain. It is therefore better to speak of code switching since it involves situations of alternative uses of languages or other linguistic forms in a speech community. The best explanation of the phenomena is offered by Communication Accommodation Theory (Street, Giles 1982) since it explains language choices in terms of convergence and divergence, in which justification of a behavior is made in terms of association or dissociation from an interlocutor. Examples are provided from computing terminology and the scarcity of research into the topic is indicated. Examples used to illustrate the language choice made in the analyzed written sources are taken from a variety of Polish magazines, especially in the area in which borrowings are most prominent, *i.e.* in computing and Internet terminology.

Keywords: code switching, borrowing, diglossia, social meaning.

Introduction

The ways in which languages influence one another are numerous and the description of such processes are found in the literature. However, the combination of processes which produce the effect of a maintenance of features of a single language in another are not difficult to predict. It appears that only a study which takes into account both

social and linguistic processes should be able to sufficiently account for the true effect of any language contact. Traditionally, the consequence of contact was analyzed in terms of the phenomenon of interference, as originally defined by Uriel Weinreich (1953). Interference refers to the adoption into a language of a linguistic feature previously used in another one. This kind of contact also leads to a linguistic influence of one language on another one, often in one direction, especially when one of the languages is looked upon as being superior or as representing a more developed culture. The simplest form of influence one language can exert on another one is the borrowing of vocabulary. It would be of value to look at some tendencies in both to determine which processes are resulting from various processes defined in the research of cultural and linguistic contact. The intensity of such processes are due to the enormous spread of information technology in everyday life and the necessity of being up-to-date in the continuously changing world today. Many areas have been the object of influence of technology brought into other languages along with terminology, including computing vocabulary, virtually all of which is made from borrowings from American English. One can note that the process of adoption of terminology in the field of computer engineering and technology from American English to Polish occurred in a hasty way and resulted from the rapid development of computer programs, literature as well as the spread of the Internet.

However, the true effect of interference cannot be explained only by means of "structural differences" between linguistic systems and the "lexical inadequacies" of one of them (Weinreich 1953: 3). However, language contact must be investigated within a broad psychological and socio-cultural setting. The extent of interference can be accounted for when the speech behavior of individuals and social relations in the community in which they live have been taken into account (Weinreich 1953: 4–5). An important insight into such problems has been offered by other branches of science, including sociology and psychology among many others. I would like to come in this paper to emphasize the role of the first two areas, which can contribute towards the explanation of some problems that are clear in Polish computer terminology but can be explained better in sociological and psychological terms rather than by the simple borrowing phenomena.

Calques *vs.* loanwords

The most popular approach in linguistic involves the description of tendencies and developments in a language or its terminology, according to various classifications offered in contact linguistics with regard to categories of borrowings. The lists of terms are derived from such studies and many questions are left unanswered. An important distinction in this respect can be made between *loanwords – complete importation* in Haugen's terminology and *calques – partial* or *no importation* (Haugen 1950: 34). The group of loanwords involves the words taken over in the graphical or phonological form, and calques – new terms formed by means of Polish morphemes.

A study which was applied the purposes of this paper involved the analysis of several journals and papers in an area in which borrowings from English are particularly prominent. The sources taken into account include *PC Magazine* in Polish (1991–2000), *Informatyka* journal (1991–2001) and a weekly supplement to *Gazeta Wyborcza – Komputer* published over the period from June, 1991 to March, 2003. Some of the most notable tendencies in Polish regarding the use of borrowings in computer terminology are associated with the use of many alternative forms – one of which is often a loanword and the other a calque. In brief, two or more equivalent terms are used interchangeably, for instance *driver* and *sterownik*, *aplikacja* and *program użytkowy*, *on-line* and *na bieżąco*. On the basis of text corpus analysis the conclusion might be reached that there is no uniform tendency or prevalence of borrowed forms over calques. Another tendency is that some English terms have a number of various calques developed over time, *e.g.* a *link* is either *łącze* or *odnośnik*; a *slot* is *gniazdo* or *szczelina*; *to find* has been rendered either as *znajdź* and *wyszukaj*. We can take it for granted that the use of any such terms is relative to the context in which a word is deemed more natural.

A more detailed analysis of specialist journals indicates that random sources prefer to use calques rather than foreign forms. In popular computer literature loanwords are used more frequently. In general, terms that form calques easily in Polish are mostly the ones that are formed on the basis of analogy to other existing terms. In this way tree diagrams of words can be formed with the items grouped under a heading or a general term. For instance, by analogy to English names of computer

memories or card names, Polish equivalents are formed, as in the examples below:

- English computer card types: *expansion card*, *memory c.*, *Ethernet c.*, *music c.*, *TV c.*, *measurement c.*,
- and the respective Polish calques: *karta rozszerzeń*, *k. pamięci*, *k. sieciowa*, *k. muzyczna*, *k. telewizyjna*, *k. pomiarowa*.

Attempts have been made to form calques in a way that follows a long established model in Polish technological terms. This model has been followed in Polish technical terminology and applies the ending of the Polish noun with a suffix (*e.g. -ownia*, *-arka*). Examples of such terms follow on from the models established in Polish engineering terminology: *wciągarka* (*car winch*), *elektrownia* (*power plant*), *ciepłownia* (*thermal power plant*). Such a model has enabled the formation of other ones in the field of computer applications – *przeglądarka* (*web browser*), *nagrywarka DVD* (*DVD burner*), *serwerownia* (*server room*). They are easy to understand since the root of these terms is often informative of the meaning and hence, their meaning is clear. On the other hand, basic hardware terminology yields itself to easy formation in this manner but the use of such forms is uncommon (*router* from *route* + agentive ending) is *trasownik* (form use not noted in *GW*), *switch* (*przełącznik*, rare in *GW*).

It is generally agreed that terminology can be enriched either by neologisms, new meanings given to existing words and as a result of borrowing (Mazur 1961). Many other sources directly state the preference of Polish language towards the formation of neologisms (*e.g.* Mańczak-Wohlfeld 1995). Such statements do not recognize the role of the fast development of computer terms and mutual penetration of unofficial jargon with the basic 19th century technical terms in computer terminology. Old terminology created over time in mathematics and physics forms a considerable share of computer terminology and this issue has also been recognized and described by computer users and translators who tried to have a share in the discussion about the use of calques and loanwords. An attempt at identifying "Polish" categories of new words was made for instance in the computer journal *Informatyka*, 5/1986: 27. A list with examples of such calques is provided: *czas rzeczywisty* (real time), *podział czasu* (time sharing), *przerwanie wektorowe* (vectored interrupt), *punkt kontrolny* (checkpoint), *skok warunkowy* (conditional jump), *system programowania* (programming system), *wyszukiwanie informacji* (information retrieval),

and *złożoność obliczeniowa* (computational complexity). However, one can immediately note that these items are formed by analogy to technical terms that are common to historical terms originating from the past two centuries of developments in mathematics, physics and other branches of engineering. It is easy to note that it is just the combination of the words that is new in computer science.

Approaches to the problem of code switching

Whether the problem addressed in terms of borrowing or code switching, the phenomena described regard the alternate use of two or more languages or its varieties. Normally, code switching will refer to the cases when bilingual speakers alternate between languages or its varieties in utterances as well as intra-sentential mixture while borrowing is often referred to a situation with a single word switching to fill a lexical gap (Myers-Scotton 2002: 183). However, such systems of classifications are complex and one can note that the phenomena in Polish computer terminology cannot be easily explained by Uriel Weinreich's model of borrowing. It is better to refer to it in terms of phenomena code switching. Additionally, the models of enriching technical vocabulary presented earlier do not account for the many alternatives of the forms being in the corpus currently. The models of factors that influence language contact processes have been established by the framework defined by the sociology of language, linguistic anthropology and psychology of language choice. It appears that only a thorough examination of each of them can contribute towards the comprehensive interaction of social norms and factors that influence the linguistic behavior of individuals. The following sections will refer to the insights that have been offered by studies conducted in each of these areas.

Approach in sociolinguistic domain analysis

One of the ideas brought forward in the research of the subject has been the concept of sociolinguistic domains. A domain is defined as the notion of domain and was formalized by Joshua Fishman (1972: 441), who defined it as a context of interaction into which social life is organized. It involves the use of different languages or its varieties in a multilingual society (or varieties of the same language in a monolingual society).

A domain can be a concrete setting like the home, the street, the classroom, a shop, university, a religious institution, the media, *etc.* However, the determinants of using one language variety over another are not associated with the physical setting alone, but an event associated with the setting. Some domains found in the later studies were: family, friendship, work, religion and education (Fishman 1972: 442).

The interrelations between the domains and their components prove satisfactory in explaining language choices in a community, which are relative to status/role relationships, locale and topic. However, the studies also showed that in actual interactions, the elements of this theory do not correspond to the domains defined above. For instance, when the discussion covers a matter of work in a home environment, there is a conflict of language choice. In other studies by Swiss German Richard Keller (1982) he describes the influence of standard German on the Swiss variant named Schweizerhoch, which is normally spoken in the home/neighborhood domain. This influence is due to the borrowing of technology and books in many fields. Hence, again a conflict arises between the Schweizerhoch and standard German. Keller later points to the concepts of code switching and the idea of diglossia to be responsible for the process in question.

Diglossia

The very concept of diglossia was introduced by Charles Ferguson (1964) to describe the alternative use of two related language varieties in complementary distribution in different situations. The very definition states that it is

> a stable language situation in which, in addition to the primary dialect of the language (which may include a standard or regional dialect), there is a divergent, highly codified (often grammatically more complex) superimposed variety, the vehicle of a large and respected body of written literature. (Ferguson 1964: 435)

Other features of a diglossic situation are provided there as well. The best summary of a diglossia in a monolingual environment is found in Saville-Troike ([1982] 2003):

> In each case, there is a high (H) and low (L) variety of a language used in the same society, and they have the following relationship:

- There is a specialization of function for H and L.
- H has a higher level of prestige than L, and is considered superior.
- There is a literary heritage in H, but not in L.
- There are different circumstances of acquisition; children learn L at home,
- and H in school.
- The H variety is standardized, with a tradition of grammatical study
- and established norms and orthography.
- The grammar of the H variety is more complex, more highly inflected.
- H and L varieties share the bulk of their vocabularies, but there is some complementary distribution of terms. (Saville-Troike ([1982] 2003: 45)

Examples given by Ferguson (1964) include Swiss Schwyezertűűtsch and standard German, Dhmotiki and Katharevousa in Greece, as well as examples from the Caribbean languages. It is stated that generally the distribution of H and L variety is well maintained, as H operates as the medium of science and technology, at conferences, and in public domains and L is used in family and personal conversations. However, there are a number of important problems noted, especially when there is a conflict between function and situation. As a result, the language spoken in such a situation is a mixture of the two forms. It is demonstrated by the huge borrowing from H to L and cases when items in L are adapted phonologically under the influence of H. In the case of Swiss diglossia, structural features, including future and participle are introduced into the L variety. Later, studies by Blom and Gumperz (1972) on a Norwegian community observed code switching on the same occasion along with a change in the topic. These studies showed that the choice of a language or a code does not come only as a consequence of a domain but domains "can change as role relationships do and interlocutors assume different stances towards the subject matter in a conversation" (Winford 2003: 116). Therefore, code switching has to have a social meaning and to identify it, it is necessary to define who the speakers are and how they use the codes available to them.

Diglossia in Polish terminology

From the analysis of random materials one can conclude that diglossia is represented by the use of calques in the official variety of the language (specialized journals tend to use more calques than popular papers) *vs.* the use of more borrowings in unofficial ones. In this case, the H variety

will be represented by calquing, while L – borrowing. That is because foreign forms are more natural to computer users, in particular ones who have at least communicative competence in English. Quite clearly computer fans and engineers are a closed group and they communicate in their community with the use of more borrowings (L variety), while the H variety is used in official documents. In addition, it is possible to note that official websites for computer centers tend to use Polish forms (to make their websites sound official). However, there is a large number of other similar terms that are calqued.

Generally, the following conclusion can be made from the study:

- H and L have different functions. This in particular concerns the level of formality. H refers to a standard version of a term which plays the role of a mainly written alternative. L is an unofficial register and often is based on the phonological alternative of the spoken sociolect.
- It is difficult to conclude whether the H and L level are represented by the Polish or English equivalents. Very often the situation involves an alternative use of both versions which represent the H level. However, they have usually L level equivalents found in the same text.
- The elements qualified as H and L change in time. The changed that were noted involve both a transfer from an English version to Polish and the reverse. Very often the L equivalent is found just after or before the H equivalent. In such cases we have usually to do with the L expression in parenthesis.
- The L version often works in the explanation function, operates as a style marker or is a language game.

Social meaning of code switching. Insights from psychology

Various approaches have also been suggested to account for the phenomenon of code switching in the fields that have a relation with linguistics, such as psychology and sociology. Together with the earlier views this will aid in the most accurate possibly explanation of various language choices and switching. First of all, research by Gumperz (1982) has indicated that the instances of code switching in individuals are relative to the situational context, which forms the background knowledge of

participants. This theory is close to the statement that language switch has an inherent meaning and is conveyed through implicatures of the speaker and inferences made by the listener, thus establishing a relation between societal norms of a language and its relation with a specific conversation interaction in question.

Another model, proposed by Myers-Scotton (2002) establishes a model of marked *vs*. unmarked interaction norms obeyed or broken by an individual who can use a language choice in order to introduce changes in the characteristics of a particular situation and relations between participants. In this model, an unmarked choice is the one that conforms to the society norms, while a marked code switch is used to achieve a goal by departing from the normal behavior. The goal of the latter can be to achieve solidarity or become distinct from a situation that would normally require the use of another linguistic model.

In psychology the aim has been to explain the cognitive and affective factors that influence individuals to change in their speech and converge or diverge from the listeners. According to Winford (2003) convergence is a strategy of adjusting to an interlocutor by adjusting language, pronunciation and other features either in order to gain social approval of the speaker or to increase efficiency in communication. In contrast, divergence refers to a tendency to emphasize the linguistic differences between themselves and interlocutors. This can be done with an aim of stressing their distinct group membership or dissociate from a listener. A theory for this is provided in Howard Giles' Communication Accommodation Theory (Street, Giles 1982: 213–214) with the basic propositions which can be summarized as:

- convergence of speech patterns will occur when either social approval or high communication efficiency is desired,
- the degree of divergence will be a function of repertoires available and situational factors that increase the need for social approval in a closed group,
- a positive evaluation of convergence in behavior will come as a consequence of optimal sociolinguistic distance between interlocutors and internal psychological factors awarding this,
- the magnitude of any divergence will be a function of the desire for positive in-group identity or linguistic dissociation from a situation.

Quite obviously from these studies one can conclude that code switching is a function of the individual's need to achieve social approval, social

integration or any particular goal. The theory of communication accommodation is additionally in conformity with the unmarked *vs*. marked language choice. Much of the research into language contact phenomena can be explained in terms of convergence terms, where a benefit is sought in acquiring a different culture and language. Moreover, such studies offer insight into the situations of code switching and the use of language in the relations of power in world's bilingual situations, as in bilingual Quebec, Canada, or trilingual Flemish communities. In such communities, a choice of a language can signal a variety of intentions as well as identity.

It is possible to extend the discussion of such convergence and divergence choices to computing terminology as well. First of all, there is definitely a clear thorough relation between the good command of English among computer specialists and their tendency of using excessive loanwords in speech and writing. They especially tend to use a large number of English loans and foreign acronyms when being in a closed company of peers. The reason is most supposedly associated with the preservation of the identity and facilitation of in-group communication. However, this fact is only partially confirmed by the comparison between specialist journals and popular papers. The existence of diglossia in Polish terminology can lead to a conclusion regarding the awareness of professional groups of a high register which calls for the use of Polish counterparts in official communication. This may be due to the fact that many specialists find a way to switch to a communicative repertoire which is more transparent to their interlocutors. Secondly, there is definitely a case of dinomia in the community which encourages the laws and rules of communication that are distinct from everyday communication in terms of use of special signs, emoticons, acronyms, texting abbreviations and other forms whose understanding is only possible after adequate practice and instruction. Since such forms are derived directly from English we can call it code switching proper. However, many of the facts mentioned here are based rather on the author's perceptions and observations since linguistic research into the matter of communication of computer users and specialists is virtually non-existent. Thirdly, many English forms are part of a spoken jargon. This is due to the economy of many English terms. If the official forms and jargon blend together in this jargon, the finding of many English forms in speech and unofficial communication becomes more justified.

Conclusions

Most of the research into borrowing from English has focused on the graphical, morphological, phonological and semantic adaptation of borrowings in Polish. This has led to the development of various classifications in terminology, which do not contribute towards the explanation of the actual use and distribution of borrowing categories. Insight into the problem from the perspective of domains analysis has indicated some areas in which the use of some language or variety may be more common than others. However, the analysis of domains leads to the conclusion of their variability depending on the motivations and environment of a discourse. It appears that the interchangeable use of various forms in Polish computing terminology may be due to psychological factors associated with linguistic convergence and divergence. In this theory, alternative use of forms is due to the preservation of group identification or abandoning it either in the name of association or dissociation from an interlocutor or promoting effectiveness in communication. Research into the problems of contact phenomena in a bilingual community of strictly professional engineers is virtually non-existent. Information is only available from web pages, which do not provide a consistent image. In addition, the awareness of the non-intelligibility of communication forms in English leads engineers to exercise their choices regarding the use of official register, which is made of Polish calques.

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Piotr P. Chruszczewski
International Communicology Institute, Washington, D.C., USA
Committee for Philology of the Polish Academy of Sciences, Wrocław Branch
University of Wrocław
Philological School of Higher Education, Wrocław

John R. Rickford
Stanford University, USA

Katarzyna Buczek
Committee for Philology of the Polish Academy of Sciences, Wrocław Branch
Adam Mickiewicz University, Poznań

Aleksandra R. Knapik
Committee for Philology of the Polish Academy of Sciences, Wrocław Branch
Philological School of Higher Education, Wrocław

Jacek Mianowski
Committee for Philology of the Polish Academy of Sciences, Wrocław Branch
Koszalin University of Technology

Sławomir Wacewicz
Nicolaus Copernicus University, Toruń

Przemysław Żywiczyński
Nicolaus Copernicus University, Toruń