NEW PATHWAYS IN LINGUISTICS

Institute of Modern Languages and Literature

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edited by
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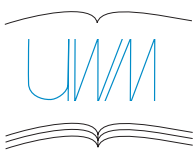

Olsztyn 2009

ISBN 978-83-927141-1-8

Recenzja tomu: Prof. dr hab. Jerzy Zybert
Recenzja rozdziału pt. *An overview of syllable structure research*:
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zdjęcie *Morze i mewa* autorstwa Macieja Jędruszka
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Druk i oprawa:
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11-001 Dywity

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New Pathways in Linguistics

The present volume of New Pathways in Linguistics continues the stance taken in the inaugural 2008 volume. Thus, it is meant to represent the diversified reflexivity within the science of linguistics in the hope that in this way it may join with many similar publication ventures aimed at widening the scope of linguistics. That is why the papers contained in the present volume necessarily represent a wide array of topics which, taken together, contribute, each in its small dimension, to the contemporary 'global predicament' of linguistics as a constantly changing discipline. Within this global framework, the visibly divergent paths taken by the respective papers, seemingly incompatible, may and should be seen as one more exercise aimed at enriching present-day linguistics. This goal seems worth being repeated many times over.

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September 2009

Anna Bączkowska

Mathematical and physical models of language and cognition[1]

1. Introduction

The purpose of this paper is to present an alternative approach to a linguistic description of English prepositions[1] with the view to systematising our understanding of their conceptual meanings, and thus aiding theorists as well as practitioners (i.e. language teachers and learners) in their linguistic endeavours. The approach proposed below is grounded in cognitive linguistics, although some ideas were indirectly inspired by non-linguistic theorems, in particular physics (Einstein's Special Theory of Relativity, Einstein, 1961) and mathematics[2].

[1] Following Langacker (1987: 436, chap. 12), the term 'preposition' used throughout this paper applies to prepositions as well as particles occurring in a number of constructions, such as prepositional phrases, complex prepositions, prepositional verbs, and in addition, to opaque units such as phrasal verbs and idioms. As the purpose of this paper is to show that the preposition preserves its conceptual meaning regardless of the syntactic construction in which they enter, we shall focus here on their semantico-conceptual properties common to a number of constructions (i.e. on similarities), rather than on their distinctive features. For a semantico-syntactic description of constructions which contain prepositions/particles see the following: Lindner (1983), Hawkins (1984), Rauh (1991), Zelinsky-Wibbelt (1993), Rice (1996), and Dirven (2001).

[2] Drawing on physics while providing linguistic explications is not a completely novel methodology, and examples can be found in works by Lewandowska-Tomaszczyk (1987), Fuchs and Victorri (preface 1994), Lakoff and Núñez (2000), and Inchaurralde (1996).

2. Modern physics and spacetime continuum

In modern physics, from 1908 to be more exact, when Herman Minkowski (Einstein's teacher in Zürich) expressed his famous words on the fusion of time and space: "Henceforth space by itself, and time by itself, are doomed to fade away into mere shadows, and only a union of the two will preserve an independent reality" (Taylor and Wheeler, 1992:15), it has become customary to approach time and space as one entity, i.e. as spacetime continuum (Minkowski sees that spacetime constitutes the core of Special Relativity). Contrary to what follows from a Cartesian plane, where there are only three coordinates represented as points (x, y, z), all of which identify the position of an object in space, in spacetime continuum there are four coordinates (t, x, y, z) which represent *events* (marked as ellipses in Figure 2) located both in three traditional planes as well as in relation to time. Viewed in this way, space extends in three directions, while time only in one direction – forward. Future and past spacetime are visualised as two cones which have a common vertex – the point of 'now'. What is outside the region of cones is believed to be out of our reach and perception; hence it is believed to stand for 'absolute elsewhere'. It is intriguing why physicists conceive of spacetime in the form of a conic shape. In order to understand the origin of the conic shape, Hawking (1988: 29-35) uses the metaphor of ripples spreading out on the surface of a pond when a pebble is thrown in it: the ripples form the shape of circles which expand concentrically with the passing of time, and if we were to draw the expanding circles as a timeline they would mark out a cone (Figure 1).

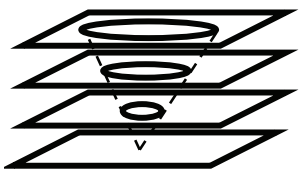


Fig. 1. Circles expanding concentrically

In the same way, a light flash traces out a light cone in the universe, as a pulse of light is believed to expand as a sphere. The angle under which light waves are believed to travel is 45 degrees (Figure 2).

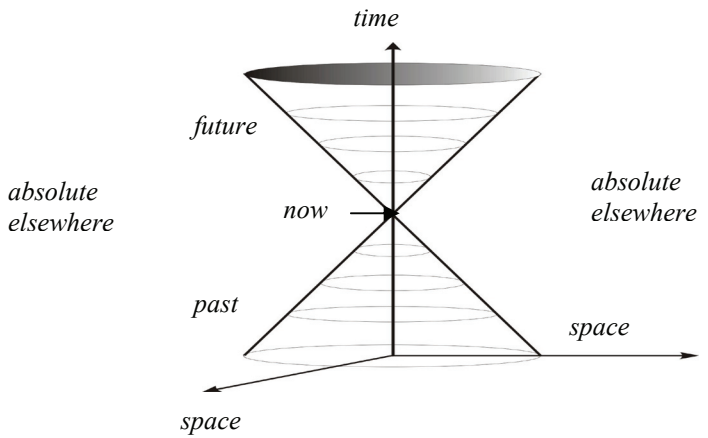


Fig. 2. Minkowski cones

An important point to make clear at this stage is the goal we pursue in this paper, which is only a linguistic one. It is thus important to emphasise that while some laws of physics can be directly translated into linguistics (e.g. four dimensions, spacetime continuum[3], conical shape of spacetime), others should be treated with caution, if not as irrelevant for linguistic purposes. In other words, we should refer to potential similarities found across science and linguistics at a purely metaphorical level[4]. We are thus far from claiming that language usage can be accounted for by laws of physics. This would be rather difficult

[3] The close alliance of space and time and the importance of concerning the temporal facet on a par with spatial properties have been stressed by Fuchs (1994) and Albertazzi (2002). The SPACE IS TIME metaphor, however, seems to be moderately conservative compared to the brave yet thought-provoking statement of Leyton (1999: 3), that SHAPE IS TIME and that "the extraction of time from shape is not just the *technical* activity of countless scientists, but is central to human perception generally".

[4] However, in her recent book on modality Jaszczolt (2009) demonstrates that physics and linguistics *can* converge.

to prove, as laws of physics often apply to extremely large scales (i.e. cosmic) or extremely small scales (concerned with the interior of the atom, e.g. elementary particles), and thus their accessibility to our senses in everyday life, which cognitive linguistics often resorts to, is extremely limited, if not impossible. To be sure, I would like to stress that the present paper is primarily on linguistic phenomena, and its analogy, similarity or convergence with physics could not possibly be treated literally. I would also like to stress that from the point of view of physics, the problem connected with, or rather emerging from, Einstein's Special Theory of Relativity described in this paper might not be free from errors. The analysis, however, is not intended to contribute in any way to physics, rather it is hoped that some linguistic problems, placed in a different light and in a broader context, could perhaps benefit from it. Finally, the cones of the future and the past are used in the methodology (see section 4) only for simplicity reasons. Cones, unlike classical cognitive grammar diagrams, show events in a three dimensional perspective, together with the temporal aspect in which an event is embedded, which I believe facilitates envisaging an event in a spacetime continuum. Our methodology is one which seeks to give an integrated account of spatial and temporal domains, axiological value, and the internal structure of an event. In other words, we wish to pack the maximal number of properties into just one diagram, and at the same time minimise the complexity of the diagram used to illustrate a given conceptual meaning.

Returning to the convention of cones, the borderline between 'absolute elsewhere' and the spacetime accessible for perception is designated by the wordline. 'Absolute elsewhere' is a region which potentially hosts events occurring with speed greater than light. However, as we know nothing can travel faster than light, therefore all events shall be plotted inside the light cone. Depending on the velocity of the object described, the radius of the cone varies: the faster the movement, the longer the radius and the less acute the angle between timeline *t* and cone line; the slower the movement, the smaller the radius of the event cone, and the more acute the angle. It emerges from the above claims that all actions and states which we shall describe should always lie inside the light cone (Figure 3).

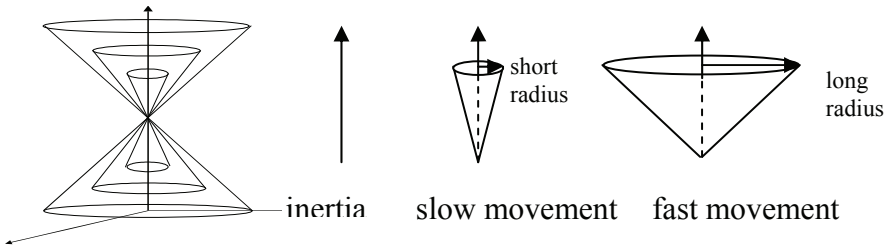


Fig. 3. Cones of events

The range of slopes is numerous and it can be graphically represented as follows (only the future cone slopes are marked) (Figure 4):

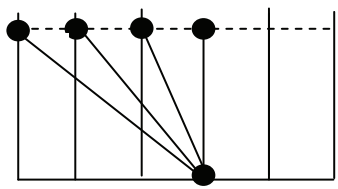


Fig. 4. Range of slopes

Disregarding the vertical timeline *t*, the above cones can be represented as two-dimensional trajectories. Considering solely trajectories in space, the four-dimensional conic spacetime coordinates can be presented as follows (Figure 4 and Figure 5 are based on Taylor and Wheeler, 1992: 145):

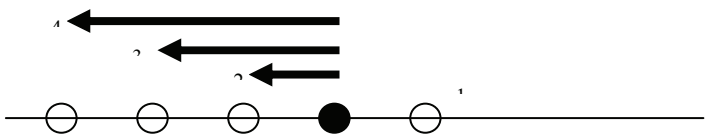


Fig. 5. Two-dimensional representation of four-dimensional spacetime

The longer the radius of a cone (i.e. the arrow in the above two-dimensional diagram), the less acute the angle. A longer radius is indicative of a greater speed of motion observed.

3. Proposal

In our analysis, the two conic shapes which indicate worldlines will be disregarded. Instead, we shall focus on the region between the vertical timeline and the maximal slope of the worldline. I propose to partition this spacetime into several smaller regions, i.e. cones (Figure 6), which, as we shall prove, can indicate a number of parameters, as summarised in Table 1 and described in the remainder of this paper.

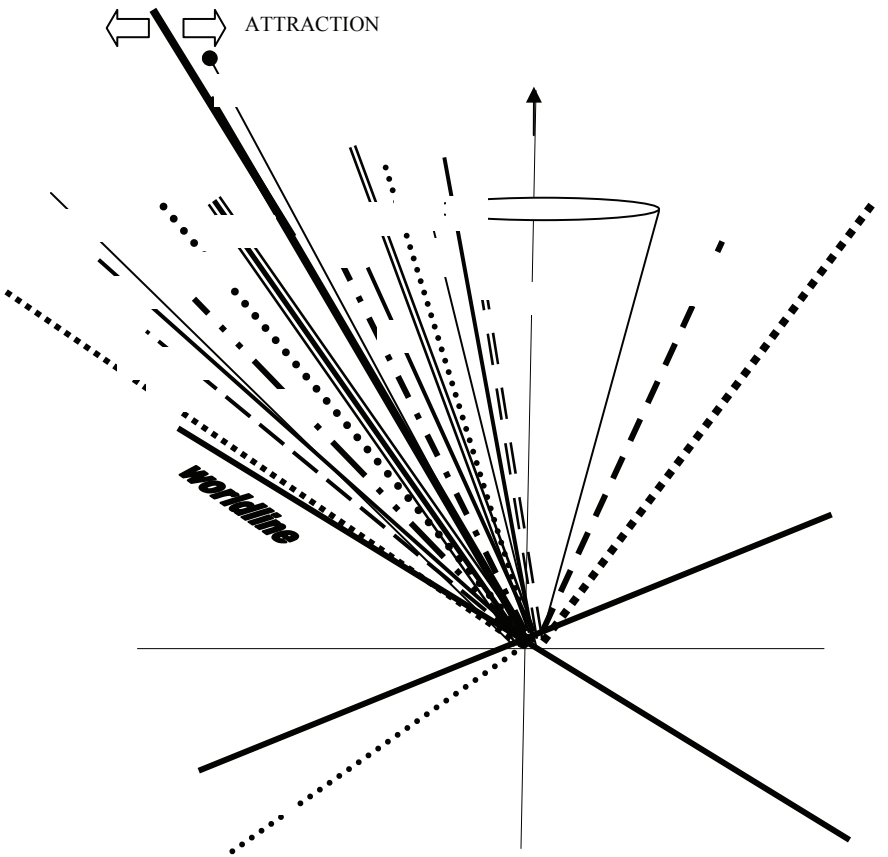


Fig. 6. Spacetime partitioned into regions

The region between the (vertical) timeline and the worldline (Figure 6) is severely limited by the angle of 45 degrees at which the worldline is inclined, and thus the cone lines of particular prepositions presented above make it difficult to read the diagram. Disregarding the vertical timeline allows us to convert Figure 6 into a simplified two-dimensional diagram (Figure 7):

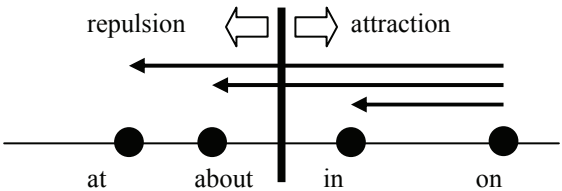


Fig. 7. Two-dimensional representation of Figure 6

In order to appreciate fully the information plotted in the region between the timeline and the worldline, as presented in Figures 6 and 7, we shall reproduce it in the form of a table:

Cone of the future	***t,x, y,z***	**Scope of predication**	**LEFT**							**RIGHT**	
			REPULSION			**ATTRACTION**					
	TIME	local/global perspective	←gradual temporality reiteration time compression			gradual permanence → continuance time protraction					
	SPACE		proximity			precision					
			space expansion			space contraction					
	worldline = sceneline		at	about	from	over	in	of	on	up	right
Cone of the past	worldline = sceneline		down	left							

Tab1e 1. The nature of English prepositions encoded by Figure 6 and 7

The prepositions presented seem to display certain regularities in terms of the number of parameters included in the table above (such as scopes of predication, proximity and precision, temporality and permanence, etc.), some of which will soon receive due attention. Before we analyse the parameters in detail, however, it is of prior importance to explain at this juncture where the repulsion/abstraction demarcation line, which divides the lightcone region into two parts, comes from. The inspiration for this idea can be traced, again, to physics. More precisely, repulsion and attraction are the two main forces recognised by physicists. The analysis of a number of prepositional phrases which contain the English prepositions mentioned above allowed me to notice that the conceptual meanings coded by the prepositions marshal in a sequence which reflects the incremental properties of the two forces. Presented here the demarcation line was not, therefore, imposed arbitrarily; although the theoretical assumptions which underlie it should be sought both from linguistic as well as non-linguistic sources. As far as the sequence of the prepositions is concerned, it has been developed on the basis of an in-depth analysis performed by the author of a number of examples (over 600) containing largely three prepositions – *in*, *on*, and *at*. A selected range of phrases containing the remaining prepositions has been examined so far (cf. for example Bączkowska a and b). We are fully aware that many phrases need to be analysed before this provisional arrangement shall receive its final attestation.

Summing up the information tabulated above, we can observe that some prepositions constitute a part of the set of prepositions of repulsion (**R**), while others belong to the set of prepositions of attraction (**A**):

R = {*at, about, against, out, away, off*}
A = {*over, from, for, to, in, with, of, on*}

Repulsion is typically associated with negative connotations, while attraction with positive connotations:

R = negative
A = positive

3.1. Permanence versus temporality

Permanence gradually increases with the decrease in radius of the cone, therefore *on* and *of* constitute one extreme of the two-dimensional trajectory line, while *over* and *from* are associated with a longer trajectory line (i.e. longer radius). It must be noted at this point that the prepositions *on* and *of* can encode both static and dynamic meanings. For example, in the phrase *the leg of the table* the preposition *of* emphasizes permanent attribution of *the leg* to *the table*. As a result, *the leg* is not conceptualised in abstraction from *the table*, but as one of its constitutive elements which inherits in the process of conceptualisation. This configuration has been elaborated by Langacker (2000, chap. 3) and has been graphically represented as follows (Figure 8, after Langacker, ibid.):

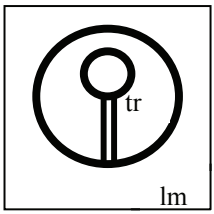


Fig. 8. Graphic representation of the preposition *of*

However, *of* can also highlight the dynamic aspect of trajectory/landmark configuration, as in *X is in walking distance of Y*, where the process of conceptualisation of this scene triggers off a vision of X traversing towards Y. It can be observed that both *on* and *of* are typically used of static configurations. Some examples of *on* and *of* are the following:

on:
on the beach: lie, sunbathe, read, relax
on the horizon (line rather than section)

of:
leg of the table, walking distance of the church;

Mustering the verbs which collocate with nominals elaborating the e-site of prepositions of attraction (p_a), for example *on* and *at*, allows us to observe the occurrence of properties common to all phrases built around one preposition, which may be formulated as follows:

at + verbs indicating fast movement (at^{v}_{f})
on + verbs indicating slow movement (on^{v}_{s})

where

at^{v}_{f} = single or iterative short actions = peck, pick, nibble, sip, etc.
on^{v}_{s} = delayed action, slow process = {accumulate, lie, lurk, mountain, ooze, etc}; on the bottom of the sea, {lie, sunbathe} on the beach, etc.[5]

Associating *at* with short, single and iterative actions can be easily explained by making reference to the general laws of physics. Imagine, for example, a small metal ball dropped on a table from the distance of one metre: the ball will hit the table a number of times with gradual decrease of force and height as well as gradual increase of velocity until the amplitude between the table and the maximal point of deviation equals zero (as the smaller the distance between two objects the stronger the gravitation force). This is possible due to the force with which the ball hits the table, and in this way it contributes to the creation of an opposite force, i.e. repulsion. Short and iterative action is thus typical of a fast movement whereby the lm counter-acts the force, i.e. creates a blockage for the tr, and thus manifests the force of repulsion (Figure 9). In other words, reflexivity entails iterativeness and fast movement.

[5] More examples which illustrate the meanings of *at* and *on* based on the diagram of cones are presented in the appendix. The examples come from language corpora.

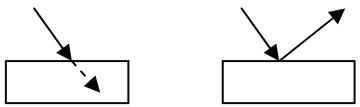


Fig. 9. The force of repulsion

What can be deduced from the above discussion is that repulsion seems to be characteristic of both the tr and the lm: the tr generates the force of repulsion and as a result the lm reflects repulsion towards the tr. In language this law is illustrated by such expressions as: *laugh at somebody*, *throw something* (e.g. *eggs*) *at somebody*, or *to be surprised at seeing somebody* (which is illustrative of reflection rather than repulsion in the linguistic sense). Absorption occurs when the force emitted by tr is deadly for lm, as in e.g. *shoot at somebody* (a single action). Thus in most cases *at* designates negative connotations, such as resistance or repulsion (most often in psychological terms).

The direction of force in the case of both absorption and reflection can be illustrated as follows (Figure 10):

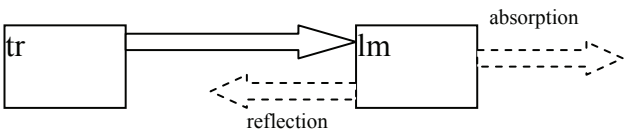


Fig. 10. Graphic representation of two forces: reflection and absorption

3.2. Proximity versus precision

First and foremost, it is of prior importance for the present discussion to understand the difference between the terms 'proximity' and 'precision'. Proximity should not be associated with vicinity, as it might appear, but rather with the distance between the tr and the lm. In other words, proximity should be associated with a negatively profiled *distance*, where the profile coded by the prepositions denotes

repulsion (p_r), as opposed to precision (coded by prepositions of attraction (p_a)), which is a positively profiled short distance or lack of distance between the tr and the lm.

negative charge = long distance = proximity = p_r
positive charge = short distance = precision = p_a

p_r: *at*, *about*, *against*, *out* (*of*), *off*
p_a: *for*, *to*, *in*, *with*, *of*, *on*

We would like to avoid entering into a philosophical or axiological dispute over the issue of what it means to carry a positive or negative charge. For the purpose of our analysis, following the schemas discussed by Krzeszowski (1997), it has been assumed that what is central (i.e. close to the tr) is positive, whereas what is peripheral (i.e. located further away from the tr) tends to be associated with negativity.

We shall now explain how p_r and p_a encode proximity and precision respectively. In order to understand the relationship between tr and lm, let us analyse the verbs, nouns and adjectives which pattern together with the two prepositions:

p_r: *shoot at*, *jump at*, *point at*, *peck at*, *pick at*, *sip at*, *gnaw at*, *nibble at*, etc.
p_a: *on the horizon*, *lie on the beach*, *be on standby*, *on loan*, etc.

It can be observed that words which enter into combinations with *at* express the following aspects: 1. a force of repulsion (*shoot*, *peck*), 2. an intentional outward movement (*point*), 3. short actions (*jump*), 3. a lack of or partial availability of the lm (*sip*, *gnaw*) or limited abilities of the tr (*pick*, *nibble*).

Contrary to *at*, words which collocate with *on* express the following aspects: 1. intensive attraction which results in tangency (*lie on the beach*), 2. a long line extending in two opposite directions (*on the horizon*), 3. a timeline extending in two opposite directions, i.e. protracted states/actions (*be on standby*, *on loan*).

3.3. Scope of predication

Scope of predication is concerned with the position and degree of participation of tr relative to lm: the closer the tr with respect to the lm, the more objective the scene (Figures 12 and 13). A conceptualiser observing a scene from a great distance assesses the scene by filtering facts through his attitude, and thus his conception of the scene observed becomes more subjective; while a conceptualiser who remains close to or participates in the scene observed becomes a constitutive element of the action which is happening. When both the action and the participants have ontological status, the objectivity of the scene increases. It is also important to note that in our analysis an observer and a conceptualiser can, but do not have to, be represented by the same person. An observer will be associated with a person remaining outside the scope of the scene observed, while the term conceptualiser will be ascribed to an observer who is close to the scene observed or who takes part in construing the scene. Of course, to some extent the observer is also the conceptualiser, and the conceptualiser is at the same time observing a scene; yet it is the extent to which they play each role that differs. I attribute to them only one role in each scope of predication depending on the dominant role they are ascribed in a particular scene. The interesting thing is that in most cases the change of the scope of predication and the distance between the observer and the object observed entails a change in the choice of linguistic forms. For example, if an object is far away we tend to perceive it as a point, and thus use *at*, for instance, instead of *in*, as in *at London*, *at a station*, *at a restaurant*. When we approach the object and our perspective narrows down, we often choose a preposition which is used for interiors, closed or semi-closed 'containers', as in *in London*, *in a restaurant*, etc. However, in a small number of cases the preposition can remain the same, and then it is used in non-prototypical contexts, often exactly the reverse. For example, it is typical to use *on* to express prolonged and protracted states or actions, yet some phrases can be found to illustrate exactly the opposite, i.e. short actions, as in *hit on* or *choke on*. This phenomenon will be presented in more detail in the next section. It can be concluded that the less typical, reverse schemas are possible, if we assume that we can delineate the construed scene from

a fundamentally different perspective, wherein the distance between the observer and the scene is the crucial parameter.

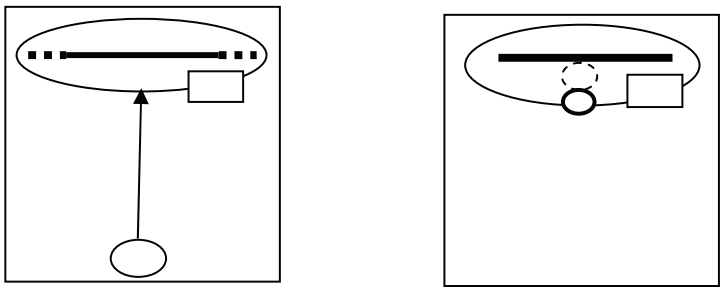


Fig. 11. The scope of predication

Since the present paper has an interdisciplinary slant, it may be interesting to make an analogy of the above claims to science. In physics, the relations of objectivity/subjectivity between the tr and lm can be easily observed. In order to understand the analogy between linguistics and physics, let us briefly mention the nature of spacetime manifold on which Einstein's Special Theory of Relativity is based, i.e. Minkowski spacetime, best illustrated by the well-known 'twin paradox' (Figure 13, based on Penrose, 1989: 256). Imagine that one twin brother (Mr C) spends his life high in the mountains, while the other twin brother (Mr B) spends his life at the seaside. The lifespan of each of them would not be exactly the same: Mr B would die earlier than Mr C (Hawking, 1988: 37). The difference in lifespan in this context would be minimal, yet it would be substantial in a situation where Mr B sets out for a journey in a spacecraft, while Mr C stays on earth. Coming back to earth, Mr B would be much younger than his twin brother Mr C. This is known as the 'twin paradox', yet it is only paradoxical if we adhere to the classical concept of time which treats time as an absolute. In the theory of relativity, however, time is relative rather than absolute, which means that it is measured relative to a specific observer. In other words, everybody has his own clock

which measures time in a different way, allowing for his location in spacetime manifold (Hawking, 2000: 42-43) (Figure 12).

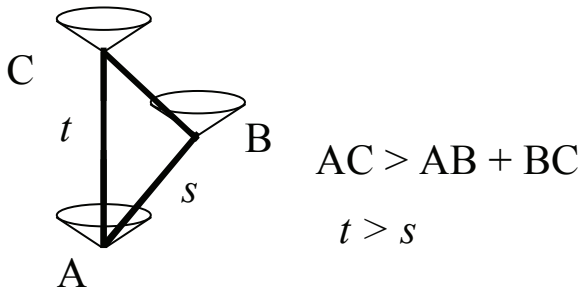


Fig. 12. The 'twin paradox'

In Minkowski, spacetime geometry 'AB+BC' is the time experienced by the observers in motion, i.e. participating in the movement described, and it is symbolically represented by *s*, as opposed to *t* which is concerned with the time measured relative to another (inert) frame of reference and which overlaps with timeline in the spacetime observed 'AC'. Viewed from a local perspective, according to physicists *s* is always shorter than *t* (although in terms of global optics *s* is longer than *t*). For linguistic purposes, we shall call *s* the local perspective (*L*) and *t* shall indicate the global perspective (*G*). Thus, the explanation of the dichotomy objective/subjective optics seen from the standpoint of physics makes more accessible the assumption that the phenomena observable in the world, as well as conceivable by observers/conceptualisers, are relative, and that this relativity can be easily projected onto the grounds of linguistics, regardless of the fact that it originally derives from non-linguistic concepts.

laws of physics:	linguistic applications:
time = (*s*, *t*)	*s* = local perspective
$s \neq t$	*t* = global perspective
$s < t$	

Considering the applicability of the above to linguistic analysis, from the assumptions above it can be concluded that the more active the tr, the slower the passing of time observable globally (as a result the twin in space is much younger, represented by line 'AB+BC' in the diagram), i.e. in comparison to the other state represented in the diagram by a straight line C, which shows tr as a stable one. It must be noted at this juncture that global perspective (*G*) is a reverse of local perspective (*L*). From a local perspective, line C is indicative of slow movement, while line B is indicative of fast movement in linguistic terms (for more examples of local perspective on *on* and *at* see Bączkowska a and b). As proved in the preceding paragraphs, *on* (which overlaps with the vertical timeline) implies a slower movement than *at* (represented as the surface of the cone). However, this is a local perspective, i.e. seen from the point of view of the entity participating in the action/state. The situation appears to be completely reverse when seen from a global perspective: what traverses a straight line C is inert, and hence short-lived, while what is active (line B) lives longer. This observation of entities moving in Minkowski space is compatible with some folk beliefs[6], as well as reactions of elementary particles: It has been experimentally proved that elementary particles placed in an accelerator, which forces particles (muons) to move with high velocity, 'live' (twelve times) longer than in a non-experimental environment (Davies, 1995: 58; Harrison, 2000: 212). In linguistic terms, the differences in the lifeline translate as follows:

at: indicates a quick movement and thus is illustrated as a cone of great slope => from a global perspective it implies a slower movement, and therefore longer life of the tr, which is often expressed implicitly by a postponement of the action/state described;

on: indicates a slow movement (or lack of it) and thus is illustrated as a cone of small slope (or as a line which

[6] Interestingly, in language this belief can be traced in the expressions 'young at heart' and 'coach potatoes': people who are active are believed to live longer and be 'young at heart', contrary to those who are completely inert ('coach potatoes') who are believed to get older much faster.

overlaps the timeline) => from a global perspective it implies a faster movement (but slower passing of time), and therefore shorter life of the tr.

The above claim is illustrated by the following phrases:

G_{at}: *at a later date*, *at another time*, *at rest*, *at sb's disposal*, *at sb's command*, *gnaw at*, etc.

G_{on}: *choke on sth* (*a morsel of food*), *hit on sth* (*the table*), *bring on* (= start an illness), *to be on steroids/antibiotics*, *pass on* (= *die*), *on the ball* (alert or able to think quickly), *on your last legs* (ill and likely to die, very tired LDOCE), (*live*) *on the breadline*, etc. – these phrases describe terminal states or at least serious damage of the tr.

L_{at}: *at a stroke*, *at once*, *nibble at*, etc.
L_{on}: *lie on a beach*, *be on standby*, *be on the ball* (alert or able to think quickly), *to be on steroids/antibiotics*, etc.

There is one problem with this line of reasoning; namely, it seems to imply that both prepositions encode exactly the same property of the tr: they express short actions/states (G_{on} and L_{at}) as well as long-lasting actions/states (G_{at} and L_{on}). This makes the claim unfalsifiable: anything can be accounted for by referring to either the global or local perspective depending on what we wish to prove. The apparent unfalsifiability, however, yields further explanations: one stemming from linguistics and another from modern physics and mathematics.

3.3.1. Linguistics

In one of her papers, Lewandowska-Tomaszczyk (2002) tackles an interesting yet ignored problem of antonymous polysemy seen from the perspective of cognitive linguistics. She makes an attempt to trace the source of this type of polysemy by analysing the Latin word *proclivis*, which is believed to carry two opposing meanings: *easy* (sloping forward/down the hill) and *difficult* (its extension). The apparent contradiction derives from different cultural contexts which

allowed the formulation of alternative conceptualisations of one scene. Thus, *difficult* can be explained by the fact that "goods in Rome were transported in ox-carts without adequate brakes, so they were difficult to control downhill" (2002: 86).

Another example she analyses is a Mod. E *ladder*, which is associated with either ascending or descending (ibid.). An interesting cross-linguistic antonymous polysemy discussed by the same author is the word *handicap*, which in English encodes 'a disadvantage', while in Polish it implies 'an advantage'. In conclusion, Lewandowska-Tomaszczyk ascribes the critical role of scene optics to the creative speaker/hearer who chooses to profile different aspects of the scene observed in outside (objective) reality, thus expressing her contribution to, and agreement with one of the fundamental claims voiced by Langacker (1987) in his Cognitive Grammar, which constitutes the basis of our proposal in linguistic terms.

Following this line of reasoning, it is possible to find other cases which, when analysed at the conceptual or lexical level, illustrate antonymous polysemy. For example, the Polish word *cześć* can be translated into English as *hello* and *bye*. The concept of a *door* triggers the idea of entering as well as leaving a room. Finally, in English the word *yet* can be translated as *już* (*already*) or *jeszcze* (*yet*).

(1) She hasn't eaten her breakfast yet. (= *jeszcze*)
(2) Has she eaten her breakfast yet? (= *już*)

The linguistic analysis presented above proves that words which convey antonymous meanings can be derived from one source and their interpretation is subject to change in opposing socio-cultural and linguistic contexts. In other words, two opposing views can, at some point, achieve the state of equivalence. How two opposing concepts achieve the state of equivalence in non-linguistic contexts, such as mathematics, will now receive further attention.

3.3.2. Mathematics

In mathematics it is relatively easy to find examples of two extrema which converge at some point. Consider a sine wave, for example. The points which constitute the upper curve with the positive sign (denoted by 'a') but which are located close to the horizontal line *x* in the Cartesian system have very similar parameters to the point lying in the lower curve, which is characterised by the negative sign (denoted by 'b'), while the zero point remains neutral, i.e. it is the starting point for both the upper and lower sinusoidal line. The zero point is thus the starting point for two extrema and opposing regions: +5 and – 5 (Figure 16).

a = {5;1}
b = {5;-1}
critical point = c = {5;0}

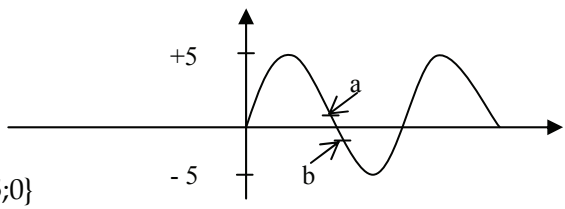


Fig. 13. Sine wave

That such a critical point in the meaning conveyed by English prepositions exists can be confirmed by the use of *on* in contexts which resemble those typical of *at*, such as:

at = *on*
at: short single (or iterative) action(s) = *on*: single actions

examples:
at: *at a stroke, at once, nibble at* = *on: choke on, hit on an idea* (= suddenly discover), *bring on* (= start an illness), *attempt on* (*sb's life*; = kill), *tell on*, *weigh on, it dawned on me, be on the ball* (alert or able to think quickly).

The meaning of *on* is thus defined in terms of its opposite. The situation can also be reversed: *at* can encode contexts typical of *on*, as it is in the case of expressing iterative actions. However, we say *on a regular basis*, yet it is possible to say **at a regular basis*. This 'exception'

can also be accounted for by making explicit reference to modern mathematics expounded by Lakoff and Núñez (2000, parts III and IV). Following these two authors, what modern mathematics claims about the nature of space can be described by the Space-As-Set-of-Points metaphor, at the heart of which lies the contention that space is not discrete but continuous, i.e. 'spaces, planes, and lines (…) *exist independently of* the points' (Lakoff and Núñez, 2000: 265), and that a point is an abstract entity whose properties (i.e. width, length and thickness, which are assigned the zero value) are to be defined by functions, i.e. in terms of Properties Are Functions metaphor (ibid.: 266). Understood in this way, a line is not a set of points but rather a part of space whose location and parameters are determined by a function (i.e. a pattern imposed by a conceptualiser).

Interestingly, this view expressed by modern mathematics and advocated by some cognitive linguists, is reminiscent of claims voiced over two thousand years ago about the continuum of time. Aristotle claims that whilst time consists of infinitely divisible 'nows', which he compares to single points on a timeline, being a collection of single freeze-frame instances of time are finite (thus countable) and indivisible. Time and 'now' have contradictory properties (of being continuous versus punctual), and thus time cannot be identified with a succession of points (i.e. instances of 'now'). In the same vein, space, which is continuous, can be broken down to a set of discrete points, yet these points can be the highlighted (resulting from the application of some function) instances of the fabric of space. What is chosen to be highlighted, however, depends on the perceiver who determines the 'function'.

In language, a series of selected single, short actions (points) can instantiate one 'continuous', i.e. long-lasting, action/state (on a line). In other words, the points, by highlighting selected parts of the continuous space (while 'switching off' others), form 'chunks' of space (and time), i.e. intervals which link a prior state with a posterior state, and these 'chunks' (or 'nows') are characterisable by different qualitative properties, e.g. they can encapsulate shorter or longer motions. The way these lines are perceived is thus dependent on subjective observations which determine (by applying a function) our conception of a given line, rather than the natural components of lines

per se.[7] In sum, our conceptualisation of a line encoded by *on* and *at* is relative rather than absolute, as well as temporal (and, potentially, subject to change) rather than permanent.

Seen in this way, what is typically expressed by *at* (e.g. *at regular intervals*, *at times*) can resemble contexts characterisable by *on* (e.g. *on a regular basis*)[8], because both actions constitute a set of points located sequentially on a timeline. *On*, however, is suggestive of the existence of continuity the points highlight, while *at* tends to profile each discrete constitutive element on the imaginary line. By using iterated action to express continuous action/state, both phrases encode

[7] The construction of a line as a whole requires the mind to remember all points which constitute the line and to marshal them in a sequential order with a causal connection (Albertazzi, 2002: 16), and thus it is a product of 'internal reference', i.e. of psychological higher-order processes. However, whether we notice a sequence of points or a continuous line is not only a psychological question. In fact, neuroscience has determined and precisely delineated the threshold level of two luminous points (highlighted simultaneously or consecutively) to be rendered by the retina as two independent points or as a continuous line. With an interval of 10 msec between stimuli (Varela et al. (1991) extend this time to 200 msecs) we tend to perceive two luminous points in simultaneity, while with an interval of 100 msec between stimuli we perceive a single line of light traversing from point A to point B. Thus, in the case of *on* we fill in the intervals with the missing points in our mind (virtual reality) and create a continuum due to a high frequency of events (i.e. short intervals between flashes of light, shorter than 10 msec); whereas *at* entails a clear-cut boundary between points on which we impose a line moving in time from one point to another as a conscious process as, apart from points, we perceive the intervals between them with equal ease (as flashes of points are of relatively low frequency). In other words, while shorter intervals between stimuli (points of light) and their consequential perception is convergent with the conceptual meaning coded by *on*, the perception of longer intervals between points overlaps with the conception of *at*. From the above discussion it transpires that the way we perceive and conceive of a sequence of points may be explained not only by psychological accounts but also by resorting to neuroscientific experiments (cf. Albertazzi, ibid).

[8] Observe two possible prepositions which collocate with *double*: *at the double* or *on the double* (= very quickly or immediately; at twice normal marching speed), and *on the spot*, which can express two meanings: 1. immediately (quick action is typical of *at*), and 2. at the place in question (lack of movement is typical of *on*). There are a number of examples of phrases wherein the preposition codes elements of meaning of both *on* and *at*, or wherein one of them conveys the meaning typical of the other (i.e. *on* carries the meaning of *at* and vice versa). They include the following phrasal verbs (based on LPVD and ODPV): *fuss at*, *flash on*, *gnaw at*, *call on*, *gabble on*, *work at*, *wink at*, *skimp on*, *come on*, *stamp on*, *touch on*, *keep at*, etc.

(globally) imperfective processes, which consist of (locally) finished actions. Lakoff and Núñez (2000: 157) introduce the metaphor Indefinite Continuous Processes Are Iterative Processes to account for this apparent controversy (Figure 14).

Fig. 14. Graphic representation of the meaning of *at* and *on*

Such channelling of the meaning of *at* results in a proliferation and atomisation of single events which are profiled, whereby an effect of discontinuity emerges. The preposition *on,* on the other hand, profiles an itinerary marked out by unprofiled events/points which are linked virtually, i.e. by a conceptualiser. We can observe here two competing concepts of spacetime: as a homogenous entity (implied by *on*) or as a factorised entity. The boundary between the two states – discreteness and continuity – is not clear-cut but rather incremental. In fact, it seems to exemplify continuity itself.

4. Interpolations

Given the methodology discussed above, presented in this section are examples of phrases which contain some of the remaining prepositions disregarded in the preceding sections. The aim of this section is thus to evidence the appropriateness of the arrangement of prepositions plotted in Table 1. For this purpose, several phrases (illustrated by sentences (1) to (11) will be examined:

(1) He was **excited about** the prospect of going on scholarship to London.
(2) He was **excited at** seeing Mary at the party yesterday.
(3) My daughter's school is a **walking distance from** the hospital.

(4) My daughter's school is a **walking distance of** the hospital.
(5) Tom can't stop talking about the **woman in ribbons** he met at John's party yesterday.
(6) Tom can't stop talking about the **woman with ribbons** he met at John's party yesterday.
(7) He is now **engaged on** his second novel. (OUP)
(8) She was **engaged in** conversation with a client. (Oxford Collocations)
(9) He **delights** his audiences **with** his wit and humour. (LDOCE)
(10) He **delights in** complicating everything. (LDOCE)
(11) I was **delighted at** your news. (CALD)

As can be noticed in (2), *at* is used for short, up-to-date actions, such as seeing somebody at a party, and these events imply a lack of a long-lasting effect on the tr. Contrary to *at*, the preposition *about* (sentence (1)) is suggestive of actions, or even states which tend to span a longer period of time. This is signalled by the noun *prospect*, indicative of a state of expectation for something to occur in the future.

The distance between two objects (tr and lm) can be indicated not only by *at* (temporal and spatial distance), but also by *of* and *from* (spatial distance). In the latter case, distance can be profiled in two alternative ways, depending on whether we wish to highlight the tr or the lm, and also the path linking the two objects:

D_1 = {tr, [**path**, **lm]**} = (3)
D_2 = {**tr**, [path (path≈0), lm]} = (4)

Sentence (3) encodes a situation whereby, implicitly, it is the lm that is profiled (a process known as tr/lm inversion, cf. Herskovits, 1986: 153) as well as the distance which separates tr and lm (the path). It thus answers the question: 'How far is the school relative to the *hospital*?' Sentence (4), on the other hand, manifests the lack of distance between tr and lm, which, as in the case of *of* (e.g. *the leg of the table*), is maximally minimised. It allows one to answer the question: 'Where is

the school?' Moreover, when used with *from*, it seems that the *hospital*, which is the starting point for the trajectory, and the potential tr are located in different places; whereas when used with *of,* the spaces of the *hospital* and the tr seem to overlap. In other words, in the phrase with *of* it is the *hospital* that is in the foreground as it imposes its optics for the conceptualiser (marked 'C'), i.e. the C and *hospital* have the same coordinates. When the C occupies space outside the *hospital*, it is the latter that is brought into focus in a portrayed scene. While it is possible that C and tr constitute one entity in the case of *of*, a higher probability of an imaginary tr conceived of by C is entailed by *from*. A high degree of integrity held between the tr and the lm is thus emphasized. In other words, *from* profiles the existence of (greater) distance between tr and lm (it shows how *far* these objects are relative to each other, and thus profiles a negative curvature), while *of* profiles minimal, or a lack of distance between the tr and lm (it shows how *close* these objects are relative to each other, and thus profiles a positive curvature). Hence, although both *from* and *of* belong to the set of **A** (prepositions of attraction), *from* is localized close to **R** (prepositions of repulsion), whereas *of* is closer to *t*.

Fig. 15. The difference between *of* and *from*

More examples from a dictionary of collocations seem to support the above claim by suggesting the concept of proximity between tr and lm-goal:

(12) The cat was now within striking **distance of** the duck (Oxford Collocations, 2002).
(13) We came within spitting **distance of** winning the cup (Oxford Collocations, 2002).

Corpus data add additional information supporting our hypothesis of using *of* for shorter distances and *from* to express longer distances (and more negative connotations):

> distance of: casting, calling, commuting, delivery, easy, moderate, optimum, spitting, sniffing, striking, strolling, touching, walking.
>
> distance from: considerable, constant, conspicuous, decent, good, great, increasing, infinite, large, little, long, reasonable, safe, short, walking, visible,

Similar to *of* and *from*, sentence (6) illustrates tr/lm inversion: in the scene the word *ribbons* (lm) is given priority over *woman* (tr). The configuration presented in (6), however, differs from that presented in (5), and it can be symbolically illustrated as follows:

(5) $\text{tr} \subset \text{lm}$ (element 'tr' is a member of set 'lm')
(6) $\text{tr} \not\subset \text{lm}$ (element 'tr' is not a member of set 'lm')

In sentence (6), the tr and lm remain apart and constitute two independent sets, or at least two clearly-cut constituents of the lm; while in (5) the tr is identified with the lm (*woman in ribbons* or *glasses*) and they constitute a unified whole. By using the preposition *with* we tend to focus our attention on the *glasses/ribbons* more than on the owner (i.e. *woman*), most probably due to the overpowering effect of the *ribbons* over the *woman.* It seems that the *ribbons* caught the observer's attention to a great extent, perhaps even greater than the *woman* herself. It is thus the *woman* who is profiled in *woman in glasses* but the *glasses* that are given priority in *woman with glasses*. In this respect, sentence (6) resembles sentence (3): both prioritise some degree of disjunction held between tr and lm. Furthermore, *with* makes a strong reference to the current situation, i.e. one which is being perceived at the moment: both the act of wearing ribbons and the act of them being perceived by a conceptualiser occur in a simultaneous space(time). In addition, *with glasses* makes a strong reference to a here-and-now context which functions as a ground, whereas *in glasses* most probably applies to a more permanent tr/lm configuration,

evidence of which is currently accessible to the conceptualiser's perception. From this it follows that *in* implies that the state also exists in spacetime which is not currently accessible, i.e. before and after the event; for example, a *woman in glasses* is likely to wear the glasses after the party at which she was seen, as well as she is expected to wear them before the event, whereas *a woman with glasses* is only applicable to the spacetime of the event. In view of the above discussion it can be claimed that both prepositions are still elements of **A**. However, *in* correlates positively with permanence and hence its position closer to timeline *t*, whereas *with* motivates less permanent states, and therefore in the diagram of the cone of English prepositions (CEP) it has a longer vector of meaning (i.e. it is further to the left).

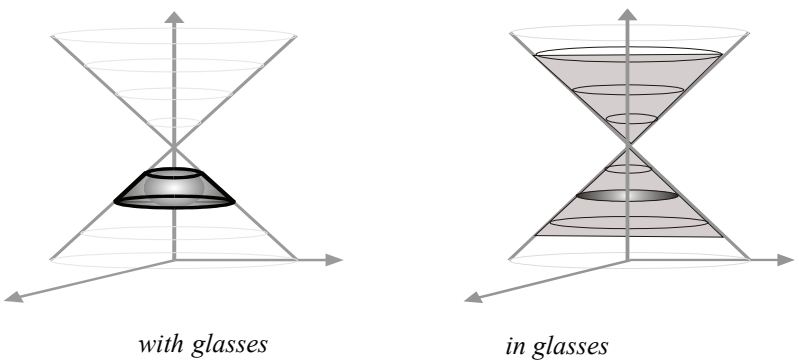


Fig. 15. Graphic representation of the semantic difference between *with* and *in*

By making reference to a temporal aspect, sentences (7) and (8) show the difference between *in* and *on*: while *in* is applicable to short actions, *on* clearly indicates a long-lasting and absorbing project (e.g. *a conversation* which can last a maximum of several hours and *writing a novel* which takes several months). The difference between *on* and *in* can be presented as two extrema on a line:

1	in	on

The meaning of the length of time devoted to being engaged in any activity, however, is extremely relative. The following examples may suggest that the length of time is much shorter for *engage on* than for *engage in* (examples from LPVD):

(14) The chairman, Ed Borkovsky, is **currently** (emphasis mine) **engaged on** a European tour to promote the conference.

(15) The French government were **engaged in** a desperate attempt to maintain their control of Indo-China.

Example (15) describes a situation which is obviously more time-consuming than the one illustrated by sentence (14), thus showing relativity in assessing the length of time devoted to each activity. Interestingly, the length of time indicated in (15) seems to converge with the concept of time encoded by *engage on* (cf. sentence (7) – writing a novel): it is difficult to assess, for example, whether *being engaged on writing a novel* or *being part of a team of scientists who are engaged on cancer research* (CALD) is more time consuming than *being engaged in maintaining control of Indo-China*. In fact, it might happen that the latter situation would last longer than the former ones, or in other words, *in* would indicate a longer activity than *on*, which would only confirm the thesis of relativity (and subjectivity) of time. Given our previous claims (which assumed that *on* encodes long and *in* shorter states/actions), the definitions of these phrasal verbs and their examples appear to be surprisingly contradictory:

engage in: to be involved in something, especially something that continues for a **long time** (emphasis mine) (LPVD);

engage on: if you are engaged on a particular type of piece of work, that is what you are doing **at the time** (LPVD, emphasis mine);

(16) During the war Richards was **engaged on** work of a secret nature.
(17) She tried to **engage** Anthony **in** conversation, but he didn't respond.

At first glance, it is *in* that seems to encode a shorter span of time than *on*: engaging somebody in a conversation seems to take less time than being engaged on work of a secret nature during the war. However, it is possible to uncover yet another aspect of the meanings designated by the two phrases; namely, *on* is indicative of 'here-and-now' (*currently, at the time*) optics chosen for describing the scene observed. Assuming such a convergence between space and time encapsulated by *on*, we are brought closer to what is shown by the cone of English prepositions: *on* is mapped onto axis *t*, which entails a thorough convergence of time and space. In other words, apart from highlighting the duration of time (subjectively assessed as long), *on* applies to actions conceived of as contemporary with the present time (i.e. tr's spacetime), even though it extends beyond perceived time. The 'here-and-now' perspective should thus be interpreted indirectly, i.e. in a way similar to that typical of one of the uses of the Present Continuous Tense illustrated by the following sentence:

(18) I am reading an interesting book now.

whereby the speaker informs us about the action of reading a book performed throughout the time which spans much longer than just the moment of speaking. In fact, at the time 'now', i.e. at the moment of uttering these words, the speaker is not reading the book. This activity is only parallel to the moment of communicating the information. It is obvious that apart from *reading a book* the speaker performs a number of other actions. This can be graphically presented as a new cone inscribed in the template cone:

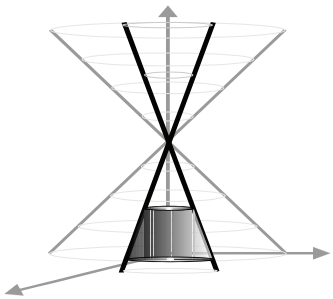


Fig. 16. *Engage on*

The time span of this activity extends in both directions (in the past and the present), and now (meaning at the moment of speaking) is only a point on the timeline, i.e. a small fragment of the stretch of time encompassed by 'now'. Thus, 'now' should be distinguished from 'the moment of speaking' because 'now' has a wider range of meanings and it encompasses 'the moment of speaking' as well as other 'moments'. In line with Aristotle, 'now' can thus designate various portions of time, from spanning just an 'instant' to several days or even years (Turetzky, 1998:25). Put another way, 'now' can have different 'spacetime locality' (Bączkowska, 2008).

Another important aspect of meaning imposed by *on* is the finate state of the action described. Using the terminology typical of cognitive grammar (see Langacker, 2000:7-8), the actions encoded by *on* in (16) and (14) exemplify perfective processes, whereby the maximal and the immediate scope overlap and stand for a bounded process. Portrayed as a coarse-grained process, it disallows observing single, repeated actions which constitute the composite elements of the whole. Rather, the process is conceived of globally, i.e. as a finite action/state, as what is profiled is not the constituent but the 'silhouette' of the action (after Langacker, 2000:8), as illustrated by Figure 17. and sentence (19):

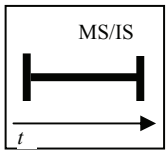


Fig. 17. *Perfective process*

(19) The two parties **engaged upon/on** an escalating political struggle (LDOCE)

Contrary to *on*, the preposition *in* profiles the constitutive elements of the final 'figure', which entails envisaging the scene as a series of actions. In most of the contexts presented above, *in* denotes actions which span beyond 'here-and-now', and thus 'the immediate scope subtends only an arbitrary portion of its internal development' (Langacker, 2000:8). This can be illustrated by Figure 18 (based on Langacker, ibid.) and sentences (20) and (21):

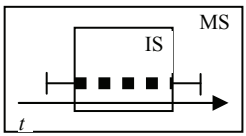
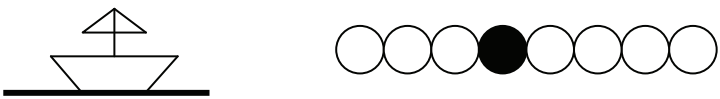


Fig. 18. *Progressive process*

(20) Only 10% of American adults **engage in** regular exercise. (LDOCE)
(21) We try to create opportunities for students to **engage in** new and challenging activities.

In summary, it can be argued that it is an abstract noun that typically patterns with *engage on*, and a countable noun which combines with *engage in*. This observation can be supported by the argument that by using a countable noun it is possible to discern the constitutive elements of the line arising from merging a number of points (elements), as in the phrase *to sit in the first row in the theatre* we tend to envisage a number of adjacent places (and/or people sitting on them)

which constitute the concept of *the row*. The use of an abstract noun, however, disallows such visualisations, e.g. in *ships on horizon*, it is impossible to conceptualise the points which make up the *horizon*. Therefore, we say ***on*** *the horizon* but ***in*** *the first row*; although on the conceptual level both phrases refer to the concept of a 'line' (which is typical of *on*). The two concepts of a 'line' can be graphically represented as follows (Figure 19):



on the horizon *in the first row*

Fig. 19. Two conceptualisations of a line

From the above discussion it transpires that:

1. The preposition *in* (sentences (17), (20) and (21)) designates a progressive process, while the preposition *on* (sentences (16) and (19)) presents a perfective process.
2. The preposition *in* (sentences (20) and (21)) entails the visualisation of the internal development of a single realisation of the action described, while *on* imputes a global perspective, i.e. without scanning the internal structure of the action described one visualises a bounded region.

The last set of examples we wish to present illustrates the conceptual distance between three prepositions, *at*, *in*, and *with*, when combined with *delight*. As can be observed in sentences (9) to (11), the first preposition denotes actions rather than states, and these actions are relatively short and typically single. For example, one can delight at hearing some news or at seeing somebody at a party. The second preposition displays two main aspects of the action described: the length of time of the action is typically longer than in the case of *at*, and the actions tend to affect the addressee as well as involve the

sender to a greater extent. The preposition *with*, on the other hand, seems to encode contexts whereby either an action or state are described (thus sharing properties of either *at* or *in*), and, although they tend to illustrate only short and single instantiations, they can refer to situations which apply to a longer period of time as well, i.e. a series of such instantiations which can be visualised as atomised instantiations of one concept. It is perhaps worth mentioning at this point that although occasionally *delight in* is also applicable to iterative actions, it tends to form a more homogenous and unified concept than *with* (we shall return to this question below). These aspects of *delight with* can be graphically illustrated (Figure 20) and proved by the examples below:

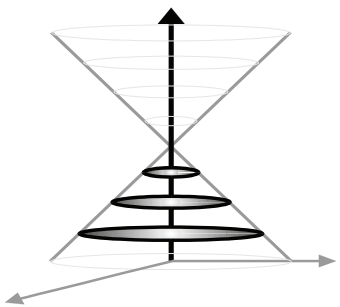


Fig. 20. *Delight with*

delight in: MED: to give someone a lot of enjoyment or pleasure; OPVD: to get a lot of pleasure from sth or from doing sth, especially sth that annoys or upsets other people; LPVD: to get of lot of pleasure from sth, often from doing sth that other people disapprove of;

delight with: MED: very happy, especially because something good has happened;

The first observation stemming from the above dictionary definitions is strikingly obvious: *delight in* can bear negative connotations, while *delight with* is implicative of positive consequences of a past action. It can be tentatively assumed then that while *with*

often makes reference to a past event, *in* can apply to both past as well as future, potential actions.

We shall now have a closer look at possible syntagmatic relations into which the two expressions enter and compare them with another alternative of combining *delight* with *at*:

delight in: your boyfriend, holiday, teasing one's friend, sb's misfortunes, failure, making things more difficult than they are, telling sb what to do, interesting conversation, washing up and dusting, success, etc.;
delight with: one's new car, he delights children with his stories [PWN], *sb is delighting audiences with wit and humour* [LDCE];
delight at: seeing sb, the sight of sth, having a date with sb, sb's decision, sb's beautiful dress, finding a date, landscapes, sunrise, the smell of roses, etc.

(22) She seemed to **delight in** making her parents angry. (OPVD)
(23) We're **delighted with** our new grandson. (MED)
(24) She was **delighted with** her new home. (LDOCE)

In is used for less concrete situations than *with* (*delight in*: success, holiday vs. telling stories), which tend to cover longer spans of time, and imply a steadily increasing level of experiences or emotions whose beginning and end is not clear-cut. Occasionally it may also be used of short yet iterative actions (*delight in failures*) which, seen globally, cover an extended period of time. *With*, on the other hand, seems to be suggestive of experiences or emotions which last a shorter period of time than those coded by *in*, and typically have clearer demarcation lines and boundaries. Different spans of time covered by *with* and *in* can be illustrated by the following examples (corpus data):

in: *in sb's company/delighted in the sounds the words made /in sb's presence/in conversation as I did/in sb's charm and attractiveness /in American naïve painting/finding resemblance between father and son/ the breadth and fullness of her singing/she delighted in her femininity/in wearing no underwear/in his preaching and made him sb/offending people/a mind that delighted in problems/in telling tales of sb/reading/careful observation of*

birds/generosity of the poor/chatting about his progress (all the time)/idleness/etc.

with: *delighted with results/a picture in a gallery while visiting it/with sb's sentence for violent disorder/the deal/with sb progress/sb's reaction/a performance/a gift/with the new building (while seeing it and describing it)/responses/sb's protest/decision/success/purchase/arrangement/sb's charm (at a single reception)/mixture on the plate/expertise shown by the interpreters/etc.*

The above expressions were carefully studied in a wide (one paragraph long) context, to ensure correct interpretation of the event described, as in some cases the reading of the units under investigation did not emerge from the immediate (2-3 words to the left and right of the key word) surroundings. For example, *delight in chatting about sb's progress*, *delight in a conversation*, or *delight in sb's charm and attractiveness* can invoke either a scene illustrating a single event or a permanent and iterative inclination. For this reason, whenever the single-line context displayed by a concordancer by default raised any doubts, the lines were expanded and analysed at above phrase level. Examples which illustrate the three expressions mentioned above are presented below:

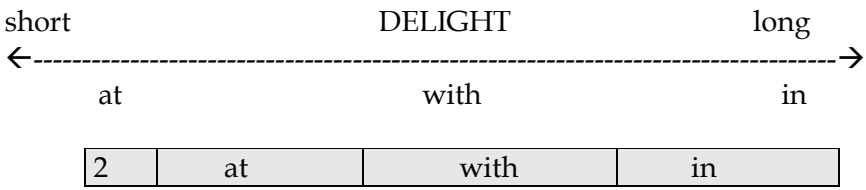
(1) I took Peggy home, to Maryhill, by tramcar. We kissed goodnight, and I again apologised to her for the fright she had. We dated for three months. Then I met another girl, an art student, who **delighted in** conversation as I did. We really had much more in common. We both enjoyed tennis, dancing, swimming, and good music.

(2) She saw two young men, at a neighbouring table, eying her appreciatively. They were quite her style, she thought. They grinned at her in an easy, friendly way and she returned their smiles. Their obvious interest warmed and comforted her. **She delighted in** their charm and their attractiveness, responded without reservation to these two young men, who would, more than likely, speak her language; who were familiar and reassuring in their dress, their speech, the way they thought.

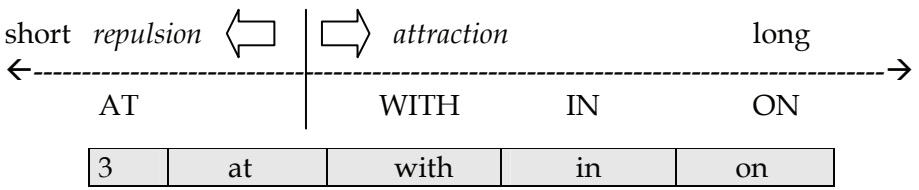
(3) His presence in the country was a useful talking point during their endless walkabouts and Diana in particular delighted in chatting about his progress. That visit was a test of endurance for Diana. There have been few occasions since then when she has experienced such remorseless enthusiasm.

In context (1) the delight in conversing is a permanent characteristic of both persons described: the man and the woman simply love talking. Permanence of the lm is expressed in context (2). Interestingly, the event described is a single one and it is the lm that is attributed permanence, which is more typical of *in*. Contrary to *in*, the preposition *with* profiles the relation between the tr and lm, or the tr as such, which will be illustrated in the second part of this analysis. In context (3), *chatting about progress* is preceded by *endless walkabouts in the country*, which is indicative of a repetitive rather than single event and seems to be perceived as a long event, dictated by the verb *chat* (*chatting* usually takes some time).

The relation of the three prepositions can be graphically presented as follows:



By mapping the first diagram onto the second one, we obtain the following:



Displaying smaller stability and less obvious inherence than *on*, the preposition *with* is placed before *on*. The properties encoded by *in* are active during a longer span of time than ones conveyed by *with*.

Let us now add the prepositions *of* and *from* to the diagram. As already proved, *from* is indicative of the force of attraction (although relatively weak compared to that implied by *of*), emerging between tr and lm, yet it is close to the **A/R** borderline; hence it must be placed before *in* (either between *with* and *in* or between *at* and *with*). It is located in the region following *at*, as *from* is not used in contexts implying a short and abrupt movement or a series of actions, but instead a single action or even a stable configuration.

4	at	from?	with?	in	on

By profiling inherence, the preposition *of*, on the other hand, is suggestive of strong attraction (e.g. positive curvature of spacetime), hence its presence close to the axis *t*, i.e. to *on*, placed at the extreme point of the cone. This diagram is convergent with the cone of English prepositions presented in section three.

5	at	from?	with?	in	on/of

5. Conclusion

In this short paper, by presenting a methodology inspired by some ideas typical of modern physics and mathematics, and drawing on modern linguistics (cognitive linguistics), I wished to trigger a spurt of interest in creating an alternative linguistic analysis of English prepositions. Of course, I am acutely aware of the sketchiness and inchoateness of the proposal presented in this paper. However, bearing in mind that the main aim of this paper has been to delineate a provisional approach to language description, instead of presenting an in-depth analysis of one linguistic structure, our discussion has been limited to emphasising the usage of selected phrases presented against more general aspects of English prepositions with the hope to setting up a general framework for future analysis. The prepositions described have been marshalled in a comprehensive table, which is believed to furnish the generic pattern of conceptualisations of English prepositions. The paper is thus believed to contribute to the attempts at novel language analysis which, I hope, have the power to promise an exhaustive, convincing (for teachers and learners in particular), and thorough language description. I would also like to stress that the very brief glimpse into the methodology presented in this paper still requires extensive research before it can obtain its final attestation. Therefore, I suggest the methodology presented in this paper be viewed only as a proposal, which presents a number of preliminary assumptions and invites us to see linguistic matters within a wider framework. Designed for linguists unacquainted with the ideas inherent in science, it was my intention to unearth a limited number of aspects of modern physics and mathematics in order to observe how a methodology inspired by non-linguistic assumptions can contribute to attempts at seeking explanations about language by reaching beyond pure linguistics.

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Dictionaries:

LPVD – Longman Phrasal Verbs Dictionary. 2000.

ODPV – Oxford Dictionary of Phrasal Verbs. 1998.

CALD – Cambridge Advanced Learner Dictionary. 2003.

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PWN – Państwowe Wydawnictwo Naukowe. 2001.

Appendix

on – permanence or long-lasting states/actions: *on standby, on guard, on (the) alert, on call, on demand, (be) on e-mail, on loan, on a dole, on scholarship, on a mission, on patrol, on duty, linger on, on a ramble, dwell on, (run) on batteries, insist on, sit on (a book), on sale, on the run from, be intent on, focus on, concentrate on, engage on (cancer research/writing a novel, etc.), spy on, attend on, be on the ball, sleep on it, keen on, sponge on sb, drone on, harp on, run on, gabble on, plod on, live on, feed on, draw on, drag on, fix on, crack on, be hooked on, get on well with sb, have sb on (=tease), pick on, egg sb on, be on sb's mind, (live) on the breadline, be getting on, gas on*; etc.; line: *on the horizon, on the bottom of the ocean, on a ski lift, on the border, on the verge of (extinction), on the knife(s) edge, on the brink of (war), on the beach, on a par, on the level*, etc.

at – fast movement: *at once, at one go, call at, dab at, pluck at, tug at, tear at, get at, poke at, paw at, nibble at, balk at, buck at, jib at, grab at, at a stroke, at a speed, jump at, at one single blow, glimpse at, taken aback at, shocked at, grab at, have at it, catch at; etc.;* reflection/absorption: *shoot at, yell at, laugh at, smile at, etc.; repeated actions: jab at, nibble at, dab at, at (regular) intervals, at times, pick at, paw at, pluck at, tug at.*

SUMMARY

The purpose of this paper is to present an alternative approach to a linguistic description of English prepositions. The methodology proposed in this paper is grounded in cognitive linguistics, although some ideas were indirectly inspired by non-linguistic theorems, in particular physics (Einstein's Special Theory of Relativity) and mathematics. The prepositions described have been marshalled in a table (CEP) which encodes their semantic meanings. CEP is believed to furnish the generic pattern of conceptualisations of English prepositions.

Keywords: cognitive linguistics, prepositions, spacetime, semantics

Marta Bogusławska-Tafelska

Quality management and standards control strategy implemented at Polish universities after the Bologna Declaration: a psychodynamic perspective

1. Introduction

The present analysis is intended to discuss the Polish response to the European guidelines for higher education framework formulated in the Bologna Declaration. The Polish edcational system dynamics will be analysed with reference to the formulated directives for the European educational space. The current analysis consists of two parts, namely, it contains the introductory brief survey of the Bologna Process and Bologna Declaration, as well as the conceptual content of the proposals formulated in this document. While, the second part of the study will be devoted to the critical evaluation of the Polish reaction to these proposals, with special attention given to the notion of the quality management and standards control, as highlighted in the Bologna Declaration by Ministers of European countries participating in the meetings. The controlling hypothesis in this study has it that the educational policy, in order to be functionally effective, has to be designed and maintained 'locally', that is, with reference to a given educational ecosystem, rather than from the 'global' macroperspective of the European structures and/or policies;while the European declarations respect the autonomy of the sociocultural-educational

environments of the countries involved in the joint policy, it is the local institutions and the Polish university itself which are to work out the educational mechanisms attuned to the European suggested code of educational practice at points where the educational standards control is brought to debate. The problem of university education standards and optimal control procedures will be discussed here from the ecological and psychodynamic perspectives; the ecosystem of University of Warmia and Mazury, Poland, will serve here as an illustration of the learning-teaching environment in which the problems to be signalled here are recognisable and distort the educational process.

1.1. European higher education policy: the European process

Joint procedures towards the consolidation of the European Higher Education Area (EHEA) have resulted in the following reports: The Sorbonne Joint Declaration which was signed by the four Ministers in charge for France, Germany, Italy and the United Kingdom during the conference on 25 May 1998; The Bologna Declaration which was signed by the Ministers of Education from 29 European countries, including Poland, on 18-19 June 1999. Further governmental meetings were held in Prague (2001), Berlin (2003), Bergen (2005) and London in spring 2007. Together these conferences have been referred to as the European Process, which denotes the intention of educational policy-makers and governments of European countries to work out a common educational framework within the area of higher education in Europe.

Another key notion within this educational initiative is 'A Europe of Knowledge', which is to be declared in 2010, when the general guidelines and proposals agreed upon will have been reflected in the national educational systems. 'A Europe of Knowledge' labels two unification processes Europe-wide, namely, the process of higher education integration and coordination, together with the process of creating a common policy of European science and research work.

What is also worth adding in this concise historical sketch is the popularity of the whole idea of integration and cooperation in the sphere of higher education. The international response to the whole

idea of a European common educational policy has largely extended the EU borders, as today it is 40 countries that have their governments and academics participating in the joint conferences.

Since 1999, The Bologna Declaration has started to signify the general unificational practices towards rising the competitiveness of European high education with reference to American high education institutions. Consequent objectives frequently put forth include the intention to maintain the European sense of identity and democracy principles. As can be found in the joint declarations, the aims of the European process can be grouped into the following general topics for consideration and local application (see: Deklaracja Bolońska, i co dalej? http://www.uka.amu.edu.pl/pictures/bolonia/pdf):

1. introduction of the comparable system of certificates
2. the two-levels and three-levels systems of studies
3. the implementation of the ECTS system of achievement evaluation
4. student and academic teacher mobility
5. cooperation for maintaining high educational standards
6. European issues included in the curricula
7. lifelong education
8. an active participation in the local implementation of the general policy.

Returning to the objective of this paper, it can be noticed that the issue of standards control is not explicit or detailed in this document, the general prerequisites being left for local educators to adapt to the parameters of their educational environments. Another report, following the Bergen Conference of European Ministers on 19-20 May 2005, offers an elaboration of the general remarks about the quality assessment and control in higher education. The Bergen report 'Standards and Guidelines for Quality Assurance in the European Higher Education Area' points to the following issues:

- policies and procedures which are to assure educational programmes and awards
- procedures to continually enhance quality
- the public announcement of adopted strategies, policies and procedures
- the role for students and other stakeholders in the controlling mechanisms
- the publicly available assessment procedures of students
- monitoring and maintaining the learning recourses, information systems and public communication
- quality assurance of the teaching staff (see: http://www.bologna-bergen2005.no/EN/BASIC/050520_European_Quality_Assurance_Standards.pdf).

Among the issues listed above, two points are relevant for the present analysis and will be discussed more thoroughly in the subsequent sections. Namely, the prerequisite for teaching staff evaluation and the prerequisite for the student role in the quality monitor. In particular, I intend to put to debate a procedure of anonymous questionnaires which students are asked to fill after completing a university course; such questionnaires are gaining popularity at Polish universities and serve to be the basis for the assessment of the educational offer quality as well as the teaching academic and his/her professional profile and work. I intend to argue here that, while student questionnaires as such may constitute a useful quality monitoring technique, the very technique has no universal applicability. In other words, student questionnaires or any other organizational strategy is to be adjusted to the psychological-cognitive, social and systemic specificity of a given educational ecosystem, the functional effectiveness of such testing techniques being dependent on the locality of a given educational environment.

1.2. European standards for internal quality assurance at universities

Following the fairly general guidelines of the Bologna Declaration, the 2005 Bergen report says the following about assessing teaching staff and educational offer (see: http://www.bologna-bergen2005.no/EN/BASIC/050520_European_Quality_AssuranceStandards.pdf):

Quality assurance of teaching staff:

> *Institutions should have ways of satisfying themselves that staff involved in the teaching of students are qualified and competent with regard to teaching. The methods and procedures for ensuring that this is the case should be available to those undertaking external reviews, and commented upon in reports.*

Again, while reading this recommendation one cannot escape a conclusion that a number of essential additions have to be worked out 'locally', that is, within a given educational system and particular institutions, before this general prerequisite becomes methodologically or systemically helpful. Firstly, the guidelines make it a task for local authorities to create the procedures of monitoring the qualifications and competence of teaching staff; no universal solutions are given here for automatic implementation. Moreover, one does not find here the suggestion to place the student in the position of the educational offer and academic staff consultant. Second, it seems essential to notice the suggestion that it is the procedures and strategy which are to be publically available; this prerequisite presupposes the idea of building, controlling and improving the mechanisms rather than particular people. It is the system and mechanisms which are to be put to evaluation. The idea behind is that the effectiveness of the educational system and the functional value of assessment and monitoring procedures will in consequence result in optimal management of the human resources. Mechanisms rather than people are to guarantee stable educational standards at the university. The problems that emerge here are, first, the question of who is to assess and monitor the quality at the university; so, one faces here the emerging issue of experts and their expert profile

being evaluated by non-experts, if one considers 'the student as a consultant' proposal. Second, misunderstood quality monitoring policy at the Polish university incites existing already defective cognitive-emotional processes which I describe as 'cognitive-emotional' noise; in consequence, it is assumed in this study that the effects of the quality management based on the strategy chosen at the Polish university violates the original intention of its advocates. Interestingly enough, such psychological phenomena can be traced down across borders and start to manifest themselves at universities worldwide. For example, in reports on Australian higher education system evolution, the notion of student and staff anxiety is introduced in a similar context to refer to the psychodynamics of the university ecosystem. In the subsequent sections these topics are elaborated on (White, 2007).

2. Polish university: education based on knowledge or education based on emotional noise and interpersonal opposition?

In the following sections the perspective will be changed. The macroperspective of European high educational space has been introduced and now I will summarize the present effects of European policy formulation on the Polish high educational ecosystem in the context of standards control strategies. At this point it has to be noted that the current report cannot be regarded as complete and exhaustive; rather, it is a voice in a discussion about the observable changes in higher education in Poland. Further research will verity the theses put forth here.

To begin with, the presently operating system of quality control in Polish higher education institutions is twofold, that is, it comprises the external system of control and the internal system of control. The external system can have the alternative forms (see: http://www.cbe.lodz.pl/index.php?id=103):

- state accreditation
- non-governmental committee monitor
- 'best college' rankings.

The parameter of 'educational standards' remains within the scope of interest of the non-governmental committee known as Uniwersytecka Komisja Akredytacyjna (UKA); state accreditation concentrates on formal-legal matters, while rankings are to navigate public information about the high education offer.

To monitor the process of European directives implementation at Polish universities, UKA created a portfolio format which was filled and submitted by 18 colleges in Poland and which constitutes a source of up-to-date information about the present systemic solutions at universities Poland-wide as far as standards control is considered. For the purpose of this analysis it is essential to discuss one section of the portfolio in which the issues of quality control are raised. In the portfolio, the educational standards are to be specified in the following points to be commented upon by the university authorities (see: http://www.uka.amu.edu.pl/pictures/bolonia/pdf):

1. *Are there any internal quality control measures with regard to classes and lectures which involve students' opinions? If yes, at how many majors?*

2. *How are the student-filled questionnaires used?*
   - *in the periodic academic teacher evaluation*
   - *in the process of didactic work distribution among academic teachers*
   - *in promotion or dismissal of academic staff*
   - *in joint meetings with students*
   - *other.*

3. *How many majors have been given accreditation by UKA:*
   - *for 5 years*
   - *for 2 years*
   - *under certain conditions*
   - *no accreditation was given.*

4. *How many majors have been given accreditation by PKA (the government, external control committee):*

- *for 5 years*
- *for 2 years*
- *under certain conditions*
- *no accreditation was given.*

5. *Does the university/college have any internally operating body for educational quality control and regular monitoring?*

6. *Does the university/college, according to UKA and PKA, comply with the external regulations concerning the standards of its majors. If not, what are the reasons ?*

(English translation of the portfolio excerpt - M. B-T).

In the UKA portfolio, the idea of student opinion-giving as well as the direct influence of students' opinions on the future career and work of academic staff have been introduced. What has been suggested indirectly in the section on quality control is that the student is to assess the academic offer, namely, the course/lecture content and the academic teacher leading the course/lecture.

The resulting response on the part of the Polish university is well-illustrated by the example of the strategy of anonymous questionnaires reached for at Warmia and Mazury University, Olsztyn, Poland. Specifically, I will present the example of such a questionnaire used in the Institute of Modern Languages and Literature, at the Faculty of Humanities. There is one psycholinguistic feature of this questionnaire which is not reflected in the below presented English translation of the form, namely, the Polish wording of the questionnaire includes the lexeme 'employee' in the places where the English translation below refers to 'academic teacher'; so, in fact, the student is asked to assess the work and profile of the academic teacher being 'the employee at the university'. No reference to expert consultant or scientist can be found in the questionnaire form under discussion. The preliminary psycholinguistic diagnosis is that an apparent shift within the university social structure, as a result of which the academic teacher's position is reduced to the position of a regular 'employee', brings further disturbing psychodynamic

consequences in the educational environment. Namely, it deforms or destroys the dyad of expert consultant – student which is the basis of the education process as such; second, it contributes to negative emotional reactions of both the academic teacher himself/herself and the student-evaluator. The anonymous questionnaires which students fill in the Institute of Modern languages and Literature, having completed each university course, have the following form:

Anonymous questionnaire to assess the academic teacher

Academic unit: The Institute of Modern Languages and Literature
Name of the academic teacher:
Course:
Type of course:
Academic year: semester:
Date of filling the questionnaire:

(anonymous questionnaire)

Lp.	The evaluation criteria	Insert YES or NO
1.	Did the academic teacher provide the students with the course description and schedule?	
2.	Did the academic teacher provide the students with the course requirements?	
3.	Did the academic teacher realize the course systematically and in agreement with the schedule?	
4.	Was the academic teacher prepared for the classes/lectures?	

Lp.	The evaluation criteria	Grades : 2 – below expected level 3 – satisfactory 4 – good 5 - excellent
1.	How do you assess the quality of the classes/lectures?	
2.	Did the academic teacher present the knowledge in an interesting and clear way?	
3.	Was the academic teacher tactful and friendly for students?	

Additional
remarks……
……
……

(English translation of the questionnaire – M. B-T)

As it has been indicated in this analysis, the anonymous voices of students being the quality evaluators constitutes a local, Polish response to the general Bologna Declaration proposals. In order to comply with the European directives, the Polish university has decided to ask students about the educational offer they receive; student consultation and assessment has started to function as the basic - often the only - quality evaluating and monitoring strategy. It is essential to notice that this strategy reflects a world-wide tendency in higher education described as 'academic capitalism', in which educational institutions sell 'educational products' to the student acting as a customer. In such a system, the customer has a say in the service providing process; moreover, more and more frequently the principle that 'the customer is always right' is realized at Polish universities. In short, one notices here an indication of a process of

internal and external redefinition of the university, its aims/priorities, strategies and social reception (cf. White, 2007).

2.1. Anonymous questionnaires as (mis)understood requirements of the Bologna Declaration

It is proposed in the present analysis that in order to discuss the (non) applicability of the student anonymous questionnaires as a quality assessment strategy, one needs three parameters to consider:

I. intended aims

II. reached aims

III. the ecosystem.

To begin with, the idea behind student opinion-giving after course completion is to continually monitor and evaluate the educational offer and the academic who navigates the course/lecture. Another argument often declared by university authorities is the discipline-inducing aspect; by means of the strategy under discussion the authorities intend to enforce wanted and expected behaviours on the part of academic teachers.

The second parameter to consider is the effect of the procedure; in other words, it seems essential to distinguish between what one intends to achieve and what actually is the achieved feedback of a given procedure. While the intended aims behind the questionnaire strategy implementation are relevant and agree with the European educational programme, the effects obtained can only be judged 'locally', that is from the perspective of a given educational environment, including into the analysis the broad psychodynamic context. So, to discuss the educational effects of the monitoring strategy chosen in University of Warmia and Mazury, it is essential to start form describing the ecosystem.

2.1.1. The minimal learner profile

The ecological perspective chosen for the purpose of the present discussion presupposes an individualized approach. I assume here that the intrapersonal/endogenic and interpersonal/environmental/exogenic parameters concretize and particularize each educational setting, thus, make it essential to start a talk about the applicability value of any strategy or procedure.

From the psychodynamic point of view, three educational relations have to be considered:

1. student - student dyad
2. student - academic teacher dyad
3. the triad of the student - academic teacher - the educational institution (Bogusławska-Tafelska, 2006a; 2006b; 2007).

These three relations form a system of interrelated psychological-emotional-social parameters describing the participants, while the educational institution is both a controlling factor in the system and an effect of the relation between the student and the academic teacher. The post-communicative approach in foreign language education promotes individuation in methodology in which no universal model or method are possible with a vast repertoire of situation-specific, environment-specific and organism-specific contextual data which are to be regarded every time a university teacher enters the predidactic or didactic phases of the educational process. What is more, as psychological, cognitive, linguistic or sociological variables, characterizing the educational situation, students and teachers embedded in it, are in a constant state of flux, one can describe both a given group of students or an educational ecosystem only in terms of dynamically transforming processes rather than finite, constant values (Bogusławska-Tafelska, 2006a, 2006b, 2007).

The present ecosystem of University of Warmia and Mazury is strongly influenced by the minimal learner profile, which was observed and put to analysis in the study conducted on the sample of English Philology students (see the reports of the study: Bogusławska-

Tafelska, 2006a; 2006b, 2007). The minimal psycholinguistic profile of the learner co-creates a theoretical trichotomous model of the maximal learner profile – the optimal learner profile– the minimal learner profile. The model was the starting point of the earlier conducted analysis of the UWM educational ecosystem. In the model built and applied, the cognitive-linguistic, emotional and motivational features of the minimal learner are in one or many respects disfunctional. In other words, one or more cognitive, emotional or motivational parameters in a minimal learner realize minimal or borderline values ('borderline' referring to the limits of norm in the ontogenic development of the organism). Earlier studies showed that even one defectively operating cognitive mechanism brings about further negative cognitive, emotional or motivational consequences in a student in an intrapersonal perspective; and emotional or social consequences in an interpersonal perspective of the group and university. Hence, the minimal learner needs a dynamically designed educational offer to overcome cognitive-emotional-motivational limitations he/she displays. Emotional illiteracy (bringing about symptoms of alexithymia) together with defective psychosomatic self-regulatory mechanisms seem to be two main obstacles in the educational process of the minimal learner. What is essential, the intellectual parameters denoting 'specialist' starting competence of the student remain secondary issues, because loopholes in knowledge or underdeveloped skills can be made up for during the educational process and, alone, do not block the very process. It is the cognitive-emotional-social tension/noise caused by the minimal profile domination which often disturbs and blocks the educational process.

As regards the dyad relations specified above, the minimal psychodynamic profile of the student affects and modifies the relations with other students, with the academic teacher and, ultimately, has a bearing on the triad relation of the student - academic teacher - the university:

a. the most undesirable aspect of the minimal student building communicative/educational relations with other students is the mechanism of 'psychological radiation' referred to as the group mind or the group psychology. The research

shows that, on the one hand, minimal students often take up the leadership within a group, and on the other hand, it is also minimal students who are very susceptible to external influence and manipulation. Cognitive-emotional noise exercises a strong impact on the cognitive-emotional-behavioral basis of the minimal student. While an optimal student would self-regulate, the minimal student gets entangled into the defective mechanisms (for a detailed analysis see Bogusławska-Tafelska, 2006a, 2006b, 2007).

b. the most undesirable consequence of the minimal student building communicative/educational relations with the academic teacher is the defective or blocked communication between the student and the academic, which in consequence brings the mechanism of the academic teacher frustration, growing anxiety and contributes to the minimal psychodynamic profile development on the part of the teacher (Bogusławska-Tafelska, 2007).

c. a weighty consequence of the psychodynamic deformations signaled above is the reformulation of the triad relation between the minimal student – the academic teacher - the educational institution; namely, the educational process at the university is no longer based on discussing, negotiating and proposing knowledge, but on negative emotions and growing anxiety.

2.2. The research

For the purpose of this preliminary study, five portfolios with anonymous student evaluations were randomly singled out. The portfolios include anonymously filled student questionnaires on five academic teachers and their courses; the time span taken into consideration in the opinion poll are winter and spring semesters of the academic year 2006/2007. The courses that underwent evaluation were included in the educational offer at the Institute of Modern Languages and Literature, University of Warmia and Mazury,

Olsztyn. What I aimed to check in the research was the emotionally-marked commentaries formulated by the respondents in the questionnaires; specifically, I intended to check the ratio of informative/relevant information to the emotional information, and the ratio of positive emotional remarks to the negative emotional remarks.

It has to be added that five portfolios studied included unequal number of questionnaires, depending on the number of students participating in the course and on the number of students participating in the evaluation procedure. Second, it has to be noted that this preliminary research did not include an analysis of the course requirements and course design as proposed and realized by the teachers involved in the evaluation process; taking into account these parameters could shed light on connection/lack of connection between a minimal course program and positive remarks on the part of the students-respondents; or, conversely, some possible connection between a demanding course offer and negative evaluation on the part of the students. This is a preliminary study, so I assume that further studies will verify whether a type of a university course/subject and the scope of material to study bear any relation to the number of negative emotional remarks on the part of students-respondents.

	relevant information/evaluation (total of the relevant remarks)	emotional information (total of the emotionally-marked remarks)
P1	19	23
P2	12	7
P3	21	29
P4	24	33
P5	13	8

Table 1. The ratio of the relevant information to the emotional information, as observed in the portfolios (P1,P2,P3, P4,P5) of five academic teachers from the Institute of Modern Languages and Literature, UWM, Olsztyn

	positive emotions (total of the positive emotional remarks)	negative emotions (total of the negative emotional remarks)
P1	22	1
P2	7	0
P3	23	6
P4	31	2
P5	3	5

Table 2. The ratio of the negative emotional remarks to the positive emotional remarks, as observed in the portfolios (P1,P2,P3, P4,P5) of five academic teachers from the Institute of Modern Languages and Literature, UWM, Olsztyn

	Total	Percentage
emotional remarks (all the emotional remarks as found in five portfolios)	100 remarks	53 %
relevant remarks (all the relevant remarks as found in five portfolios)	89 remarks	47 %

Table 3. The ratio of all the emotionally-marked opinions to the relevant/informative opinions, as found in the portfolios put to analysis

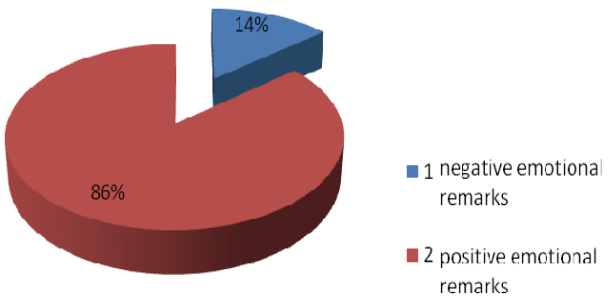

Diagram 1. The ratio of the negative emotional remarks to the positive emotional remarks

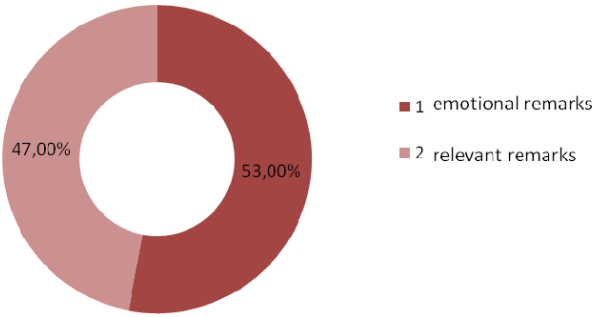

Diagram 2. The ratio of the emotional remarks to the relevant remarks

The research undertaken for the purpose of this enquiry was to assess the informativeness value of the anonymous commentaries and opinions of the students-respondents. A sample of five portfolios with five academic teachers under assessment makes it a qualitative type of research procedure; this methodological choice implies that it was the locality of mechanisms and the psychodynamics of the control strategy that were in the focus of attention, rather than statistical data analysis. Hence, the above tabulated results are to be regarded as the results of the case study, the 'case' being the university ecosystem chosen here.

The above presented results support the preliminary assumption that in the very educational ecosystem the anonymous questionnaire strategy is not an effective standards control procedure. Emotional remarks of the students-respondents constitute more than a half of all the remarks put by the students into the questionnaires. These emotionally-marked commentaries are written in an emotional style and do not comment upon the relevant, educational parameters of the educational offers they are to comment upon. Examples of emotions in the questionnaires include such remarks as:

> **Bardzo ciekawe zajęcia. Miła atmosfera. / A very interesting course. A nice atmosphere.*
>
> **Zajęcia prowadzone w sposób interesujący – jedyne zajęcia (z nielicznych) które miło wspominam. / The course was led in a very interesting way – one of few courses which I remember with pleasure.*
>
> **Zajęcia nie były najgorsze, ale czasem trochę 'nieprzewidywalne'. / The course wasn't bad, but sometimes slightly unpredictable.*
>
> **(..) Poza tym Pani Magister jest bardzo fajna. / Besides the assistant lecturer is cool.*
>
> **Miła, sympatyczna, zorganizowana. She is nice, friendly, organized.*

Although the above commentaries, mostly, depict positive attitude to the teacher and the course, the question remains open whether such general and emotional information was the objective behind the control procedure implementation. The fact that only 14% of all the emotional opinions found in the questionnaires are classified as reflecting negative attitudes of the students can indicate two psycholinguistic phenomena:

a. either the psycho-emotive noise in the university ecosystem under analysis is not as defective as previously observed; positive emotions (86%) suggest a positive attitude of students to teachers (Bogusławska-Tafelska, 2006a, 2006b, 2007).

b. or that the academics in the analyzed ecosystem realized the minimal educational offer to adjust their courses to the expectations and abilities of the minimal student. The following commentary taken from one of the questionnaires may indicate this possibility:

Zajęcia nie podobały mi się, gdyż wymagania na ćwiczeniach były o wiele niższe niż na egzaminie i nauczyciel nie przygotował nas do egzaminu. / I didn't like the course, because the course requirements were lower than the examination requirements, and the teacher did not prepare us for the examination.

There are two psychodynamic phenomena that can be traced in the above citation: first, the minimal educational offer to satisfy the needs of the minimal student; second, the teacher-oriented model of education, in which the external attribution of students is reflected in them shifting the responsibility onto the teacher. In other words, it is well-evident in the above commentary that according to students the academic teacher is to control and take care of the dynamics and ultimate outcome of the student's educational process.

3. Conclusions: the effects obtained

The psychodynamic effects of anonymous questionnaires strategy implemented to control the education quality at University of Warmia and Mazury, Olsztyn, can be synthesized into the following points for consideration and further scientific verification:

I. the cognitive-emotional-motivational chaos which is experienced by a typical student in the discussed ecosystem incites emotions, which are voiced in the anonymous questionnaires; these emotions, regardless their positive or negative index, may be the reflection of the external attribution

mechanism of the students (Bogusławska-Tafelska, 2006a, 2006b, 2007);

II. the formulation of the questionnaire and the psycholinguistics of the phraseology used in it place the academic teacher in the position of a contracted employee rather than an expert consultant in the scientific-didactic institution and with the scientific-didactic mission; this reorganization of the social structure at the university lowers the prestige and value of professional/scientific expertise represented by scholars / academic teachers and, what is essential, it strengthens the minimal student in the conviction that the educational setting is a for-profit institution, his or her role being a role of a client rather than an adept and seeker of knowledge. The academic ideal of knowledge is beyond consideration.

III. a lack of functional, psychodynamic diagnosis of these defective mechanisms leaves the minimal student without proper methodological help, both before and after questionnaire filling; so, the questionnaire strategy does not fulfill its therapeutic or organizational role; on the contrary, this strategy enhances the unwanted psychodynamic mechanisms in students and in academic teachers;

IV. a lack of diagnosis and a thorough analysis of dynamics of this educational ecosystem makes the main subject and receiver of the questionnaires - the academic teacher – react emotionally and develop minimal reactions i.e. the internal attribution mechanism, or reluctance towards the students; in addition, the academic teacher feels forced to reduce his/her course requirements to the minimal offer;

V. the defective processes - intrapersonal and interpersonal - which have been signaled above and which create the dynamics of the higher education ecosystem under discussion, in effect make the disorientated authorities at the university agree gradually to the minimal educational offer, under the

pressure of the minimal students dominating the student population in the educational environment.

In conclusion, the evolution towards the minimal educational offer and minimal educational standards – paradoxically – seems to constitute the main effects of the control strategy of anonymous questionnaires. The minimalism is perceived here in two dimensions: as an educational environment built on the interpersonal oppositions and anxiety rather than on negotiating knowledge and providing expertise; and as gradually lowered educational requirements and psycho-social norm for students, formulated under the pressure of the minimal student whose emotional opinions are the deciding point of reference in quality control procedures. If any higher education ecosystem is to co-build the European higher education macrosystem, its control strategies instead of modeling and monitoring people have to start modeling the systemic mechanisms of control and regulation. Above all, what seems the best direction is education focused on knowledge and common values shared by all interactants in the educational situation, rather than on emotional-cognitive-motivational noise and confrontation.

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SUMMARY

The analysis is aimed to discuss the Polish response to the European guidelines for higher education framework formulated in the Bologna Declaration. The Polish educational system dynamics will be analyzed with reference to the formulated directives for the European educational space. The current analysis consists of two parts, namely, it contains the outline of historical background to the Bologna Process and Bologna Declaration, as well as the conceptual content of the proposals formulated in this document. It is hypothesized in this study that the educational policy in order to be functionally effective has to be designed and maintained 'locally', that is, with reference to a given educational ecosystem, rather than from the 'global' macroperspective of the European structures and/or policies. The problem of university education standards and optimal control procedures will be discussed here from the ecological and psychodynamic perspectives; the ecosystem of University of Warmia and Mazury, Poland, will serve as an illustration of the learning-teaching environment in which the problems to be signaled here are recognizable and distort the educational process.

Keywords: the psychodynamics of the university education, quality monitoring procedures, education based on knowledge vs. education based on emotional noise, the minimal learner, the minimal educational offer

Tomasz Chyrzyński

Trends in creating Internet nicknames in Polish and English: a comparative study

1. Introduction

The development of the Internet set communication on the new course. Although the "global network" makes it possible to have a voice conversation accompanied by video transmission, a "written conversation", joining features of a written and spoken language, remains the most popular way of communication.

A conversation held by means of a computer keyboard may be synchronic or asynchronic (Wood, Smith, 2005:42). All Internet chats (chat room, IRC) that take place in real time are of synchronic nature. Such messages are spontaneous and thus more conversational. An asynchronic mode is characteristic of any other forms of computer-mediated communication (Grzenia, 2008:67).

However, no matter how dynamic the communication process is, all users have to have their unique identifiers. As an identifier I understand every kind of a username necessary to use the services mentioned above. Therefore, in order to receive and send emails one has to register an email address. Whereas, users of social networking sites and discussion forums need usernames. In order to hold a conversation in a chat room one needs a nickname.

2. Range, aim and method of the research

The two kinds of identifiers mentioned above are in the area of interest of the present analysis. It results from their similarity. The word *login* originates in the verb *log in* referring to the action of gaining access to a system, network, server or a website. The term *nick* is a variant of the word *nickname*, translated into Polish as *pseudonim.* In a popular Internet encyclopedia Wikipedia (http://en.wikipedia.org) we read that in computer slang *nick is* a term used to identify a person in a system for synchronous conferencing. On English websites (e.g. social networking services, forums) login usually seems to be a general and superior category in relation to a nickname. Logging in is giving a username and a password, whilst on Polish websites *login* is identical with a username followed by a password. The conclusion is that the meaning of the word login, after a direct transfer, changed in Polish. In English it is an action and in Polish the word is equal with a noun referring to an anthroponym. In case of joining a chat room or an IRC channel, the word nick is used in the same way in both Polish and English. However, to avoid confusion, in the article, the word nick or nickname is going to be used as referring to pseudonyms of the users of social networking sites, discussion forums and chat rooms.

The analysis is not going to be devoted to email addresses. Although they are also a kind of identifiers, they are distinctly different from nicknames and thereby, email addresses do not fit the category of Internet pseudonyms, distinguished above. The structure of an address is one of differences. It is composed of the username which is obligatorily followed by the symbol "@" (at) and the name of the server where the account is registered (login@server.name.pl). Thus, such a structure imposes specific meaning. An email address may be treated as a metonymy: "user X registered on the server Y". D. Crystal (2001:159) pointed out that a nick is only one element of an email address. Another difference is a technical aspect. First of all, an email address can be composed of fewer characters available on a keyboard. Most ASCII characters (e.g. Polish diacritics) are not allowed, but they are more often possible in nicknames. Moreover, Internet pseudonyms can frequently be longer than email addresses. Another discrepancy between electronic mail and communication

methods discussed in this article is that an email can be accessed via software and not only a website which is a basis for a forum, chat room and social networking service.

The present article is devoted to the contrastive analysis of Internet nicknames of Polish and English users. The aim is to show similarities and differences in trends governing creation of nicks in the two groups of Internet users. Three main communication environments, ie. a social networking service, discussion forum and a chat room, are going to be confronted.

A social networking service (site) is a network of websites gathering the community of Internet users having similar hobbies, professions, etc. (www. whatissocialnetworking.com). These users can browse their websites (profiles), send messages and exchange files. A social networking service enables to search for friends as well as to establish new connections. Nicknames of Polish and American users of an international service "MySpace"[1] are going to be analysed.

A discussion forum "is an online discussion site. It is the modern equivalent of a traditional bulletin board, and a technological evolution of the dialup bulletin board system. From a technological standpoint, forums or boards are web applications managing user-generated content" (http://en.wikipedia.org/wiki/Discussion_forum). The analysis of nicknames used in a forum is going to be based on the names of the users of a general Polish forum "Forumowisko"[2] and English "GeneralChat"[3].

A chat room stands for a communication channel that makes it possible to exchange messages and hold a conversation in real time (Holt, 2004:31). Nicknames of Polish users were collected in a general room of the web portal "Onet"[4], nicknames of English interlocutors were also collected in a general room at www.ukchatterbox.co.uk.

The comparison is to be based on 160 nicknames of Polish and American users of "MySpace". 130 nicks were collected from Polish as well as English forum. The same number of Polish and English

[1] www.myspace.com

[2] www.forumowisko.pl

[3] www.generalchat.co.uk

[4] www.onet.pl

nicknames was gathered from chat rooms. Thus, the comparative analysis is going to be conducted on the material of 840 Internet pseudonyms. No selection was made while collecting the analytical material. People currently present online were recorded.

First, the contrastive analysis is going to be conducted in each environment (social networking service, forum, chat room). It will enable to draw conclusions about all investigated nicknames. As a result, it will be possible to determine differences and similarities in the ways of choosing nicks in Polish and English.

3. Types of Internet nicknames

The Hebrew University of Jerusalem researcher H. Bechar-Israeli (1995, http://jcmc.indiana.edu/vol1/issue2/bechar.html) distinguished seven basic categories of Internet nicknames:

1. people using their real name;
2. self related names;
3. names related to medium, technology and their nature;
4. names of flora, fauna, objects;
5. play on words and sounds;
6. names related to figures in literature, films, fairytales and famous people;
7. names related to sex and provocation.

The first group is constituted by pseudonyms which reveal the real name of a user (e.g. *Erika*, *ewelina*[5]). The second category includes these nicks which tell about location of a user, their age, appearance, emotions or relations with other people (e.g. *blondie86047*, *inteligentnyizmysłowy38POZNAN*). Another category contains nicknames referring to the medium of the Internet and a computer, technology and its specificity (e.g. *NieMamPomysłuNaNick*, *NickOfTime*). In the fourth group there are nicks related to names of animals, plants and inanimate objects (e.g. *BlackRabbit*, *cytrynkaaa88*). In the next category there are nicknames based on play on words,

[5] All examples are given with original spelling.

sounds and typography (e.g. ♫♥*Ar@y@*♥♫, *Oooh_snap*). The sixth group includes pseudonyms which consist of names of figures known in literature, films, music, history, politics and other areas of life. Moreover, this category encompasses allusions to the activity of these people, such as quotations or titles (e.g. *Joanna d'Arc*, *Shaggy*). The last category includes nicknames related to sex and provocation. These are not only anthroponyms of this kind but also apostrophes to prospective interlocutors (e.g. *sexy_girl123*, *Zdobądź_mnie_ON*).

As H. Bechar-Israeli (1995) noted, the categories distinguished and described above encompass most Internet nicknames. Nevertheless, it is possible that some nicks will not be classified as belonging to any of them. One of the reasons may be intended use of random characters accessible on a keyboard because a given communication medium does not allow to leave a username field empty. However, usually, the researcher is not able to classify certain nicknames due to lack of knowledge indispensable to comprehend allusions which are often clear only for the authors.

Furthermore, it is important to notice that a given nickname may fit two or more categories. The username *KRZYSIEK_26_LATEK* [Krzysiek 26 years old] belongs to the first category (name of the user) and the second one (age). The pseudonym *piękna_czy_bestia* [beauty or a beast] fits category six (allusion to the film "Beauty and the Beast"), category five (wordplay) and category seven (the nick provokes to starting a conversation and assessing the user).

4. Analysis

4.1. Nicknames used in a social networking service

The first group of analysed nicknames are these used in a social networking service. The collected material was classified in accordance with the categories distinguished above:

Category		Polish nicknames		American nicknames	
No.	*Name*	*Number*	*%*	*Number*	*%*
1.	people using their real name	101	63	105	65,6
2.	self related names	12	7,5	22	13,7
3.	names related to medium, technology and their nature	1	0,6	2	1,2
4.	names of flora, fauna, objects	5	3,1	6	3,7
5.	play on words and sounds	68	42,5	62	38,7
6.	names related to figures in literature, films, fairytales and famous people	23	14,4	8	5
7.	names related to sex and provocation	4	2,5	18	11,2

From the presented table it results that there are similarities as well as obvious differences between Polish and American users of "MySpace" while creating their nicknames. The number of nicks belonging to the first, third, fourth and fifth category is approximate in Polish and English. However, undisputed difference emerge in nicknames classified in the second, sixth and seventh category.

Both Poles and Americans, most often, decide on using their real names. Among Polish nicks pseudonyms revealing the real name constitute 63% (e.g. *Iwona*, *Karolina*, *barbara*). English nicks included in this category are 65.6% of all nicknames (e.g. *Daniele*, *Erika*, *CINDY*).

In the two cultures nicks based on play on words, sounds and typographic experiments are popular to the same degree. Out of 160 Polish users 68 (42.5%) chose nicks categorised in the fifth group (e.g. ·.·.•●ღ♥*DevilOfBeauty*, ♫♥*Ar@y@*♥♫, *krizztopher*). Whereas, a tendency to playing on words was recorded among 62 Americans, which gives 38.7% (e.g. ♠*PiFf*♠, ~* *Dirrrty Swagg* *~, *I NEED A GENIE 2 GRANT ME MY 3 WISHES*).

Another common tendency in creating nicknames is rare use of names related to flora, fauna and objects (category four). 5 Polish nicks were noticed (3.1%): *bubleblus*, *vaniliowa panienka.! ;** [vanilla girl], *ATOM*, *czacha* [skull], *szyna.*[rail] and 6 (3.7%) English ones: ~**Forget-*

Me-Not~*, **CaReBeAr**, *Chronic*, *hungry hungry hippos*, *Mustang Dan*, *creamer*.

Polish and English users even more seldom create nicknames belonging to the third category. Names referring to medium and technology were chosen by 1 (0.6%) Polish user (*spaceboy*) and 2 (1.2%) American users: *e.Ray [[.:wink:.]]* (the phrase *[[.:wink:.]]* in a programming language is a command for an emoticon), *I Am Me. Nothing More* (the nick refers to the specificity of medium; it is a user's response to the request for giving a username while logging in).

The biggest differences between Polish and English nicknames are noticeable among pseudonyms related to figures in literature, films, fairytales and famous people (category six). Polish users used them much more often than Americans. Among Polish nicks they constitute 14.4% (23 names), e.g. *Joanna d'Arc*, *Guliwer*, *PHILADELPHIA EAGLES* and among English nicknames only 5% (8 users), e.g. *Terri Lynn* (singer), *Agent Skully* (allusion to a computer game character or modification of a TV character's name –FBI agent Scully), *when it rains it pours. damn tryin 2 get back on my* (allusion to a song by an American rapper 50Cent).

A further difference becomes visible in a tendency to using nicknames classified in the second category. Nicks which give information about a user were created by 13.7% of Americans (22 people), e.g. *blondie86047* (date of birth), *NEW MOMMY!!!*, *Joe_Crack20* (user's age). Such nicknames were chosen by 7.5% of Polish users (12), e.g. *miss_anna80* (marital status and the date of birth), *KaroOlinaKg* (place of residence – Kołobrzeg), *mgr Lapex* (education).

What is more, English nicknames more often than Polish ones refer to sex and provocation (category seven). There were 18 (11.2%) nicks of Americans (e.g. *Fuck Your Yankee Blue Jeans*, *You Are My Everything<3*, *BEAUTY*) and 4 nicks of Polish users (2.5%): ·.·•●ღ♥*DevilOfBeauty*, *DIAMONDS ARE FOREVER but you're fuckin not*, *NIghtprince*, *czemutak*. [why so].

As noticed above, part of pseudonyms can simultaneously fit more than one category. It is a feature characteristic of both Polish and American nicknames in the service "MySpace". 36.8% of investigated Polish nicknames (59) fit two categories, e.g. *EvA]:-]* (1 and 5), *Tomasz Św* (1 and 6), *KaroOlinaKg* (1 and 2). Whilst, only one nick (0.6%) was

recognised as fitting more than two categories: *ATOM* – (1), (4) and (5). The user decided on wordplay: the word "atom" contains the name of the user (Tomasz). In case of American nicknames, 50 of them (31%) refer to two categories, e.g. ~*_*i lOvE pABlO*~*_ (2 and 5), *Mustang Dan* (1 and 4), J-y-Y (1, 5). There were 7 nicks (4.3%) belonging to more than two categories, e.g. *e.Ray [[.:wink:.]]* (1, 3, 5), *GeNESiS loves to laugh n do her thang!!* (1, 2, 5), *YOLANDA A.K.A MISS CLASSY BEAUTY *Strikin A Pose** (1, 2, 5, 7).

The contrastive analysis of nicknames of the members of the social networking service indicates only partial similarity between Polish and English speaking users. Over half the people, whose nicks were investigated, created their Internet *alter ego* using their real names. However, not much less than half the users created their nicks implementing play on words and typography. Clear dominance of these tendencies over others (in the two groups) may result from the function performed by a social networking service; disclosure of one's name increases credibility of a user and makes it easier to find and gain friends. Further, wordplays serve as a means of attracting attention and arousing interest. Thus, either Polish or English users did not often use nicks related to flora, fauna, objects and technology. Although in the two analysed groups the tendency of referring to known figures (real or fictional) was not dominant, Polish users did it more often than American ones. However, the former more frequently avoided giving their age, place of residence etc. What is more, Polish nicknames, in contrast to English ones, were occasionally provocative and sporadically referred to sex.

4.2. Analysis of nicknames used in a discussion forum

Another group of analysed Internet nicknames are these used in discussion forums. The comparison of Polish and English usernames is presented in the table below:

Category		Polish nicknames		English nicknames	
No.	*Name*	*Number*	*%*	*Number*	*%*
1.	people using their real name	40	30,7	44	33,8
2.	self related names	33	25,4	39	30
3.	names related to medium, technology and their nature	3	2,3	2	1,5
4.	names of flora, fauna, objects	14	10,7	30	23
5.	play on words and sounds	47	36	35	27
6.	names related to figures in literature, films, fairytales and famous people	21	16	18	13,8
7.	names related to sex and provocation	10	7,7	8	6

After comparing tendencies in creating nicknames in a discussion forum, more similarities than differences between English and Polish users are noticeable.

Debaters in the Polish forum decide on using their real name in nicknames as often as the English forum members. Nicks of this kind (fitting category one) are 30.7% of all the investigated nicknames in the Polish forum, e.g. *agatka*, *Asiula12345*, *jerzy72*. In the English forum 33.7% of nicks belong to the first category: *_Frank_1979*, *sophie.c*, *Mark_H*.

Nicknames revealing information about a user are equally popular. Among Polish users they were chosen by 25.4% of them (33 nicks), e.g. *Darek93*, *gofer83*, *zagubiona20* [lost], whilst among English users 30% (39 people) chose such nicks, e.g. np. *soldier8686*, *mark94*, *studyinghard*.

Pseudonyms based on allusions to known characters (category six) are also created with similar frequency. 21 nicknames (16%) of this kind were noticed in the material collected in the Polish forum, e.g. *Mały_Książe_r.89* (Little Prince – a literary character), *MaTa_HaRi* (Dutch dancer and prostitute), *Tommy_Lee_Jones* (an actor). Nicknames classified in the sixth category constitute 13.8% (18 nicks) of collected English nicknames, e.g. *Smithers* (a character from the cartoon "The Simpsons"), *muradona* (allusion to the football player Maradona), *lush* (British music band).

Another common feature of Polish and English nicks used in the forum is a tendency to using names that provoke and refer to sex. Creation of such nicknames is rare in both cultures. They were chosen by 10 (7.7%) Polish users whose nicks were analysed (e.g. *Bad_Boy*, *PinkSexBoy*, *honey39*) and by 8 English users (6%), e.g. *VeRyLoNgDoNg*, *pussy*, *munty13*.

Users of Polish and English forums seldom use nicknames related to technology (category three). In the material collected there were 3 (2.3%) Polish names (*NieMamPomysłuNaNick* [I have no idea for a nick], *Rotfl*[6], *Whateva*) and 2 (1.5%) nicks of English users (*silicon_Chip*, *nitepostie*).

Differences between Polish and English forum users come out in the fifth category which encompasses nicknames based on wordplay. Such nicks are 36% of collected Polish pseudonyms. There were 47 people that decided on them, e.g. *Kapciuszek* [a little slipper] (play on the word "Kopciuszek" [Cinderella], *szinajs7* (Polish transcription of English words: „she" and „nice"), *adeaem* (spelled name "Adam"). There were 35 (27%) English users who chose nicks from this category, e.g. *vicki_val1* („1" functions as the letter „l"), *Splash*, *Razr* (razor).

The clearest difference between Polish and English users of the forum is noticeable in the tendency to creating nicknames related flora, fauna and inanimate objects. From the analysed material it results that users of "GeneralChat" more often create nicks fitting category four than users of "Forumowisko". 30 English pseudonyms (23%) were recorded (e.g. *wolfman*, *warthog*, *Whisky1*), whereas there were 14 (10.7%) Polish nicks, e.g. *cytrynkaaa88* [lemon], **czarna_owca** [black sheep], *nika_czekolada* [chocolate].

Similarly to nicknames in the social networking service, part of pseudonyms used in the forum fits more than one category. 45 (34.6%) out of 130 Polish nicks belong to two categories, e.g. *Bad_Boy* (the name may provoke but it also can refer to an American rapper), *moniczka_15* (category 1 and 2), *Victor_* (category 1 and 5). No nicknames fitting more categories were recorded. In case of the English forum, there were 39 nicks (30%) classified in two categories, e.g. *uk_elle*, *mark94* (category 1 and 2), *welsh-dragon* (category 2 and 6). Furthermore, there were 4 (3%) nicknames fitting more than two

[6] ROTFL – Rolling on the floor laughing. It is an acronym common in Internet conversations.

categories: *odysseuswolf* (4, 5, 6), *nitepostie* (2, 3, 5), *MsChief* (2, 5, 7)[7], *MrsRussllB* (2, 5, 6)[8].

The analysis conducted allows to draw a conclusion that trends in creating nicknames used by Polish and English users in the discussion forum are similar. The users, to the comparable degree, base nicks on their real names, add information about their age, place of residence and occupation. Some members of both Polish and English forum use names of real and fictional figures, characteristic of a given culture. In the two compared communities nicks related to sex and provocation are infrequent. Allusions to medium and technology are even more uncommon. However, English users more often create nicks related to flora, fauna and objects.

4.3. Analysis of nicknames used in a chat room

The third and the last group of analysed nicknames are names of users of a chat room. Nicknames were categorised and presented in the following table:

Category		**Polish nicknames**		**English nicknames**	
No.	*Name*	*Number*	*%*	*Number*	*%*
1.	people using their real name	75	57,7	49	37,7
2.	self related names	66	50,7	59	45,4
3.	names related to medium, technology and their nature	2	1,5	1	0,7
4.	names of flora, fauna, objects	8	6,1	18	13,8
5.	play on words and sounds	25	19,2	30	23
6.	names related to figures in literature, films, fairytales and famous people	9	6,9	8	6,1
7.	names related to sex and provocation	20	15,4	23	17,7

[7] The name literally tells the marital status of the user and her position. Moreover, it is pronounced like the word „mischief", thus it is a provocative wordplay.

[8] From this name one can find out about the user's marital status but further, "RussllB" is a play consisting in simplified spelling of the name of a famous philosopher Bertrand Russell.

Trends in creating nicknames used by Polish and English members of the chat room are very similar. Nevertheless, some differences are also noticeable.

Self related nicknames were chosen more or less by a half of the participants of a synchronous conversation – 66 (50.7%) Polish nicks (e.g. *on49* [he49], *wolny_on_21*[single_he_21], *wrocławianin* [citizen of Wrocław]) and 59 (45.4%) English nicks (e.g. *katyuk*, *jugarman89*, *gem23*).

Names based on play on words and sounds are popular to the similar degree in the two investigated groups. Among Polish users 25 (19.2%) of them decided on such nicks (e.g. *aaaa*, *SaM*, *Rafau23Gda*), whereas among English users nicknames of this kind were chosen by 30 (23%) people, e.g. *jz89* [= Jess], *fl1pps* [„1" used instead of „i"], *aayymmee* [Amy].

Both Polish and English users of the chat room use provocative nicknames as well as these related to sex. Such names were created by 20 (15.4%) Poles (e.g. *DYSKRETNY* [discreet], *lubie_duzy_biust* [I like big breasts], *Zdobądź_mnie_ON* [win me]) and by 23 (17.7%) English people, e.g. *longhairedbrunette*, *a_handsome_guy*, *manafterfun*.

What is more, Polish and English users occasionally choose nicks based on names related to literary, film and fable characters as well as famous figures. In the collected material such allusions were noticed in 9 (6.9%) Polish nicknames, e.g. *39_i_pół* (TV series), *Gonzo_wroclaw* (allusion to a character from „The Muppet Show"), *madonna_z_Port_Ligat* (painting by Salvador Dali) and in 8 (6.1%) English nicks, e.g. *Bride_of_Frankenstein* (film title), *conan22* (allusion to a literary character), *mourningpalace* (song title).

Another common feature of nicknames created in the two languages is occasional reference to the medium of the Internet and technology. In the collected material such nicknames are 1.5%. They were chosen by 2 users: *on_chetny_z_kam* [he_willing_with_a_cam] (the user informs about a possibility of having a video conversation), *jedna_taka36* [some girl] (user's reaction to a requirement of giving a nickname). Among English users, whose nicknames were analysed, only 1 person (0.7%) decided on a nick from this category: *iamwotiam*.

The clearest differences between Polish and English users are noticeable in the tendency to using the real name while creating the

nickname. This practice is dominant in the Polish chat room. Nicknames based on real names of users were chosen by 75 people (57.7%), e.g. *andzela*, *basia*, *darek*. Among English users 49 nicks (37.7%) were recorded, e.g. *chris44*, *ben_1989*, *andy454545*.

Furthermore, names related to flora, fauna and objects were more frequent among English users. Such nicknames were created by 18 people (13.8%), e.g. *blackmountain*, *funkimonki*, *butterfly_caught*. In case of Polish users, 8 of them (6.1%) chose nicks fitting this category, e.g. *kąsający_nietoperzyk* [biting bat], *kot_zmeczony* [tired cat], *róża1* [rose].

As in case of pseudonyms in environments discussed above, nicknames of users of the chat room can be classified in more than one category. Among Polish nicks 55.4% (72) of them fit two categories, e.g. *ania31* (category 1 and 2), *Gonzo_wroclaw* (2 and 6), *fijolek* (4 and 5). There were 4 nicks (3%) belonging to more than two categories: *39_i_pół* [39 and a half] (the user plays on words and alludes to a TV series as well as tells his age), *3lancer* (because of a wordplay the name can be read as *freelancer* or as an allusion to a car make), *agga34* (category 1, 2 and 5), *piękna_czy_bestia* (category 5, 6, 7). Among English pseudonyms 48 (36.9%) were classified as fitting two categories, e.g. *eva1983* (category 1 and 2), *j0ee* (1 and 5), *mourningpalace* (4 and 6). Further, there were 7 (5.3%) nicks classified in more than two groups, e.g. *babysara17* (category 1, 2, 7), *huni_19* (category 2, 5, 7), *bettyboo1978* (1, 2, 5).

Analysis of the collected material indicates numerous similarities of trends in creating nicknames by users of Polish and English chat rooms. In the two groups self related names and play on words and sounds were used with nearly the same frequency. Moreover, users of Polish and English chat rooms decided on provocative and sex-related nicknames. Furthermore, both groups are characterised by uncommon use of names related to characters form literature, films, etc. Additionally, nicknames based on medium and technology are infrequent. The differences are noticeable in the tendency to using real names; it is more popular among Polish users. On the other hand, English users more often refer to flora, fauna and objects.

4.4. Summary

After a detailed description of trends in creating nicknames in basic communication environments on the Internet it is possible to make general characterisation of nicks of Polish and English users. The table below presents comparison of all the nicknames discussed in the analytical part:

Category		**Polish nicknames**		**English nicknames**	
No.	*Name*	*Number*	*%*	*Number*	*%*
1.	people using their real name	216	51,4	198	47,1
2.	self related names	109	26	120	28,5
3.	names related to medium, technology and their nature	6	1,4	5	1,2
4.	names of flora, fauna, objects	27	6,4	54	12,8
5.	play on words and sounds	130	31	127	30,2
6.	names related to figures in literature, films, fairytales and famous people	53	12,6	34	8,1
7.	names related to sex and provocation	34	8,1	49	11,6

From the table it results that differences between nicks of Polish and English users are not significant. The biggest difference is noticeable in the tendency to using names related to flora, fauna and objects. On the other hand, the clearest similarity is visible in the tendency to creating names that refer to medium and technology.

Among Polish nicks which were investigated, 176 (42%) were classified as fitting two categories and only 5 (1.2%) belong to more than two categories. In case of English nicknames, 137 (32.6%) fit two categories and 18 (4.2%) more than two.

5. Conclusions

The aim of the present analysis was the comparison of Internet nicknames used by Polish and English users. Further, the indication of similarities and differences between the tendencies governing creation of nicks was intended. The research was conducted in three main communication environments where using nicknames is obligatory. At

each level tendencies more or less common to the two groups of Internet users were noticed.

However, differences and similarities are also noticeable between the names of users of the social networking service, forum and chat room. Pseudonyms containing a real name are usually used by both Polish and English members of the social networking service. Nevertheless, using real names is the rarest in Polish as well as English discussion forum but English users, contrarily to Poles, use them very rarely in the chat room. What is more, self related names are the most popular in the chat room but Polish users follow this tendency to a much lower degree. Another common feature of the nicknames analysed is occasional reference to technology and its specificity; it is the most popular in the forum. Names related to flora, fauna and objects are also the most common in the forum. However, English users always create them more often than Polish ones. Whilst, nicknames characterised by play on words and sounds are dominant in the social networking service. In the chat room they appear the most rarely. Poles use them more frequently than Englishmen[9] (except for the chat room where this tendency is equally common in the two investigated groups). In case of names related to characters from literature, films, tales and to famous people, they are the most often used by the groups of Internet users in the discussion forum. Nonetheless, Poles use them the most rarely in the chat room, whereas English people try to avoid them in the social networking service. The last kind of nicknames, i.e. provocative and sex-related names, is the most popular in the chat room. However, as Polish users keep away from them in the social networking service, English users do not often choose such names in the discussion forum.

The analysis conducted proves only partial diversity of trends in creating nicknames by Polish and English users. Separate investigation of usernames in the social networking service, discussion forum and

[9] In the beginning it was surprising because it seems that English gives more opportunities for wordplay than Polish. Nevertheless, after studying the nicknames, it became clear that Poles often used nicks in English (or imitated English spelling and pronunciation). No nicks of English users, referring to other languages than English were recorded. Another difference is that Polish users rarer than English ones use non-standard ASCII characters.

chat room made it possible to indicate precisely tendencies that are dominant and minor in the two compared groups of Internet users. The juxtaposition of all the researched nicknames indicates high similarity between nicknames of Polish and English users. Thereby, linguistic and cultural differences between Polish and English Internet users do not have significant influence on creating usernames in the "global network".

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SUMMARY

The present paper is devoted to the trends in creating nicknames which are used by Polish and English users of the Internet. This new kind of a pseudonym is required for any person that wants to communicate with other people in "the global network". So far, a nick has been discussed in terms of a pseudonym necessary to log in a "chat room" or IRC channel. However, a nick is also needed in order to join a discussion forum or a social network service.

After the analysis of trends in constructing Internet nicknames, it seems crucial to take into consideration the communication environment and the role it plays. An environment influences not only the language used there but it also affects a language form of identifiers used for signing the messages sent by participants of "conversations". Thus, it is important to avoid generalizations and names of users of chat rooms, discussion forums and social network services should be investigated separately, as three main types of nicknames present on the Internet. Therefore, the analysis conducted concentrates discretely on Polish and English pseudonyms in each communication environment mentioned above. Nevertheless, disparities may appear in an environment itself; different names are used in a chat room devoted to motorization and in a chat room for love seekers. Taking this fact into account, the material analyzed was gathered from forums, chat rooms and social network services dedicated to similar subjects. Identification of fields which constitute categories of Internet usernames enabled determination of dominant trends in Polish and English. The analysis conducted indicates only partial differences between the two groups of users. Separate investigation of nicknames in a social networking service, forum and chat room made it possible to present major and minor trends among the users. While, the comparison of all the nicks researched proved a high degree of similarity between Polish and English users. Thus, language and culture differences do not influence the process of creating Internet nicknames significantly.

Keywords: Internet nicknames, Polish nicknames, American nicknames, linguistic and cultural differences

Tomasz Ciszewski

Morpho-phonological '*controversy*'. On the 'visibility' of morphological information in English word stress

1. Introduction

The stress system of English has puzzled phonologists of all theoretical orientations. The main impact of inquiry, however, was often confined to the analysis of underived lexical items for fear of blurring the picture with putative morphological interference. It cannot be overemphasized, however, how much the synchronically 'exceptional' stress behaviour owes to historically rooted morphological complexity, whose present phonological visibility is none, but whose effects may not conform to otherwise regular stress pattern(s). This, in turn, opens the way for various forms of *ad hoc* theorizing, including extrametricality rules or de-stressing rules, to name but a few proposals.

Our intuition, however, prompts a hypothesis that an explanation may be sought in complex morphological domains, which offer an invaluable synchronic insight into phonological mechanisms involving stress shifting and melodic/skeletal adjustments. The assumption that underlies the present analysis is that (i) morphology-induced stress shifts occur only when required by phonological (metrical) conditioning, (ii) the existence of stress variants (ˈ*contro*ˌ*versy* ~

*con*ˈ*troversy* or ˈ*organdy* ~ *or*ˈ*gandy*) is due to peculiar metrical circumstances rather than morphological complexity.

This paper confronts these assumptions with a selection of examples, making explicit references to weight-sensitivity, feet structure and their internal licensing relations. In general, the discussion is in line with the spirit of Metrical Phonology where the phenomenon of stress is viewed as a kind of relation that stressable elements (rhymes) contract with each other in the process of parsing a string of rhymes into feet. The parsing process is controlled by a set of principles and checked by language-specific parameters.

2. The English stress system: principles and parameters

From the richness of theoretical concepts, rules and operations advanced within the metrical framework since Liberman and Prince (1977) we adhere mainly to the proposals emphasizing the relational nature of stress, from which the concept of metrical foot can be derived. Many older metrical proposals are rejected, though. These include: (i) extrametricality rules, (ii) destressing rules and (iii) universal binarity of feet (or any other universally valid foot typology, for that matter). Central to our analysis is the concept of metrical foot, i.e. a sequence of rhymes with a terminal dominant rhyme which is the recipient of stress. Feet are constructed in the process of parsing, whose aim is to construct well-formed feet on the metrical projection level. On the prosodic word level the relations between feet are defined. Naturally, in a weight-sensitive system like English a non-branching rhyme cannot dominate a branching one within a foot. Furthermore, in English the main stress falls within a three-syllable stress 'window'. The main metrical parameters for English are summarized below.

Directionality Parameter

Metrical feet are constructed from right to left, subject to the *Well-Formedness Condition*.

Exhaustiveness Principle

a. A single (branching or non-branching) initial rhyme may be unmetrified if it threatens well-formedness.

b. Two initial rhymes must not be a domain of non-exhaustiveness, regardless of the well-formedness of the output.

Metrical Well Formedness Condition

The Foot {F} is well-formed if it consists of a left-headed string of maximally three rhymes {R_1, R_2, (R_3)} such that the head rhyme R_1 is not of lower weight than the rhyme(s) (R_2 R_3) which it dominates.

Word Prosody Dominance Principle

Within the prosodic domain the rightmost well-formed non-weak foot[1] receives primary stress and recessive feet receive a relatively lower degree of prominence.

3. Morphological complexity and stress

The idiosyncratic stress behaviour of morphologically complex items in English was usually linked in the literature (Fudge 1984, Lieberman and Prince, 1977) with special accentual properties of particular morphemes, described by complicated derivational 'repair' mechanisms (SPE, Halle and Vergnaud, 1987), and certain 'unruly' suffixes were labelled 'extrametrical' (Hayes, 1995).

Ideally, simple morphological domains should carry over their accentual potentials onto morphologically complex domains, which would guarantee a perfect stress preservation within independently stressable domains. Such morpho-phonological alignment, however,

[1] The weight of a foot, viewed as the sum of the non-empty rhymal positions it dominates, may not be higher than four and lower than two (Ciszewski, 2005). Well-formed feet which represent the lower end of the scale are labelled 'weak'. Their prosodic weakness (weight deficit) follows from the fact that feet dominating only two rhymal x-positions are neither licensed by weight nor by position, as they may only be of the structure: $_F${L̲L} or $_F$ {H̲Ø}. Another property of weak feet is that they occur at the right edge of the prosodic word.

offers no universally valid generalisations concerning the nature of the 'phonological word', as shown the tables below.

controversy	–METER	–BODY	MIXED	–VALENT
ˈcontroˌv[ɜː]sy	ˈkil[ə]ˌm[iː]ter	ˈsomeb[ə]dy	ˈsentim[ə]nt	amˈbiv[ə]lent
conˈtrov[ə]sy	kiˈl[ɒ]m[ɪ]ter	ˈsomeˌb[ɒ]dy	ˌsentiˈm[e]ntal	ˌambiˈv[eɪ]lent
*conˈtroversial	ˈmilliˌmeter	**–MAN**	ˌsentim[e]nˈtality	
ˌcontroˈv[ɜː]sial	*miˈlimeter	ˈpostm[ə]n	ˌsentim[ə]nˈtality	
	*ˈthermoˌmeter	ˈsuperˌm[æ]n		
	therˈmometer			

In principle, the question how to stress morphologically complex lexical domains boils down to the question of what the actual stress domain is. Since stress is most evident as a product of dominance relations within a metrical foot, it seems plausible to suggest that it is the foot that constitutes the stress domain and distinctions between primary and secondary (or tertiary, etc.) stresses over a multi-pedal lexical domain result from the dependence relations that the feet contract. Van der Hulst and Ritter (1999:118), for example, suggest that a 'word' of more than four syllables must invariably consist of two phonological words, e.g. $[\{\text{hipo}\}_F]_{W1}[\{\text{pota}\}_F\{\text{mus}\}_F]_{W2}$. It remains unclear, though, why the last rhyme may be the head of the foot, as it dominates an already depleted vowel, instead of postulating a ternary foot finally. The assumption opens a further possibility that there may be stressless feet. (Note that weak forms like [həz] could, then, constitute feet.) Moreover, there seem to exist no a priori reasons to assume that the phonological word is synonymous and structurally identical with the prosodic word.

Evidently, morphological complexity is not responsible for phonologically different behaviour of morphologically identical domains. Past accounts (Kaye, 1995) attributed the inconsistencies to analytic vs. non-analytic structure of a compound (ˈ*milliˌmeter* vs. *therˈmometer*), admitting to a fair amount of lexical arbitrariness, e.g. ˈ*kiloˌmeter* ~ *kiˈlometer*. If the presence of a morphological boundary is to be respected by metrical structure, there is little justification for the forms *conˈtrov[ə]sy*, *phoˈtographer*, *phoˈnology*, *anˈtilogy*, *kiˈlomiter*,

*ther*ˈ*mometer*, ˈ*someb[ə]dy*, or *am*ˈ*biv[ə]lent*, since each of the component morphemes is an independently attested word or foot. Similarly, the incorrectness of the forms in *ˌ*photo*ˈ*graphy*, *ˌ*phono*ˈ*logy*, *ˌ*anti*ˈ*logy*, *ˈ*thermo*ˌ*meter* seems inexplicable. Additionally, vowel reductions in the head position of the rightmost domain, which prevent the creation of ill-formed feet *{L̲HL}[2], e.g. **con*ˈ*trov[ɜ:]sy*, render morphological information invisible. The accentual discrepancies between morphologically similar forms (*an*ˈ*tilogy* vs. ˈ*anti*ˌ*body*) or (ˌ*milli*ˈ*meter* vs. *ther*ˈ*mometer*) may, hypothetically, be due to a different lexical frequency of the forms.

The apparent irregularities above receive a non-arbitrary treatment within the framework of metrical phonology, whose central idea is the organisation of metrical material (syllables or moras) into metrical feet, according to the principles of metrical well-formedness and exhaustiveness. The metrical foot, viewed as a left-headed governing domain, consists of the head-rhyme (stressed) and the complement-rhyme(s) (unstressed). In English, the head position is licensed by: (i) weight (heavy syllable head, e.g. H̲L) or (ii) position (left edge of the 'stress window', in the absence of a penultimate heavy syllable, e.g. L̲LL). (Note the ill-formedness of the foot {L̲HL} (*ˈ*veranda*), where a less complex (L̲ight) rhyme would dominate a more complex (H̲eavy) one.)

Existent 'free-variation' stress patterns, like ˈ*contro*ˌ*versy* ~ *con*ˈ*troversy*, suggest that morphological information may be visible to stress if it independently respects metrical requirements, yet the forms preferred in RP English seem to be those in which morphology has been 'erased'. These preliminary observations will be supported in the course of the discussion.

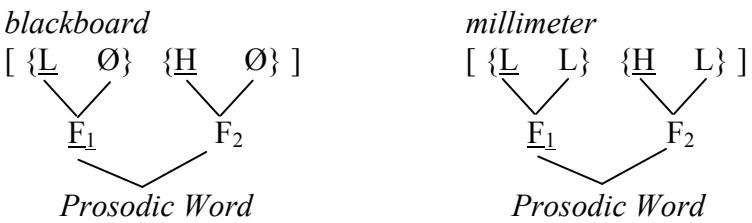
3.1. The right-edge phenomena: *-meter*, *-body*, *-man*, *-valent*

As observed by Kaye (1995:313), the *–meter* compounding, although fairly productive, may be either analytic or non-analytic, e.g. [*milli*][*meter*] and [*thermometer*] respectively. Whether the compound

[2] Where H and L stand for "heavy" and "light", respectively.

constitutes a single metrical domain or is made of two domains has direct phonological consequences, i.e. a single domain is stressed on the antepenult, whereas a two-domain form retains the stresses of each participant morpheme. In the latter case, the stress pattern is ˈ*milli*ˌ*meter*. Under the two-domain analysis double stress is indeed expected as each morpheme simply carries over its own accentual pattern. Somehow puzzling, however, in the light of the *Word Prosody Dominance Principle*, is the fact that the two morphologically and phonologically distinct domains (as argued by Kaye) seem to contract a governing relation between their head rhymes, which is manifested by the subordination of the right foot to the left foot, resulting in a primary/secondary stress pattern, rather that the expected secondary/primary, i.e. *ˌ*milli*ˈ*meter*. (Especially if the final foot is weight-licensed and non-weak, as it is in the case of *–logy* or *–body*.). One may, of course, point out that the primary/secondary pattern is more than natural in compounds, which by no means aspire to be single phonological domains, cf. ˈ*black*ˌ*board* vs. ˌ*black* ˈ*board*. While in the latter case the stress pattern clearly reflects syntactic dependencies, it is not clear how the non-branching rhyme of *black* in the first example could govern the branching rhyme of *board*, i.e. why the Licensing Principle (cf. Kaye, 1995:303) should choose the nucleus [æ] to be the head of the complex domain, apparently promoting the ill-formed foot *$_F${L H}. Therefore, the bi-pedal metrical structure of *blackboard* and *millimeter* must be postulated.

(1)



Obviously, forms like *blackboard* or *millimeter* are not strings inside which phonologically relevant melodic regularities, e.g. consonantal clusters (coda-onset or branching onsets), may be found. Yet, their participant morphemes do no exist in absolute phonological 'isolation'. The fact that, against the (metrical) odds, the lefthand foot receives

primary stress may be considered the first step towards full lexicalisation, as it is synchronically observed in *cupboard*, whose hypothetical 'lexicalisation' path is shown below:

(2)	*cupboard*	ˌcup + ˈboard
	concatenation and stress reversal:	ˈcupˌboard
	vowel reduction:	ˈcupb[ə]d
	pseudo-cluster simplification:	ˈcu[bə]d

This lexicalisation strategy involves the initial recognition of morphological boundaries, the subsequent stress reversal (primary/secondary, most probably for demarcative reasons) and, finally, doctoring the metrical representation (vowel reductions) and the melodic representation (cluster simplifications). There are, however, other means to achieve a similar integration result.

In the forms: *kiˈl[ɒ]m[ɪ]ter and therˈm[ɒ]m[ɪ]ter* the head rhyme of the morpheme *–meter* is reduced and the originally dependent rhyme in the morpheme *kilo-* becomes the head of the whole domain. The solution to bypass morphology is, therefore, straightforward and involves the erasure of morphological boundaries rather than utilizing them as metrical boundaries, as in *ˈkiloˌmeter*. Such a blatant rejection of morphological information, however, calls for immediate adjustments, metrical and subsequently melodic, but allows a more successful 'anchoring' of the integrating morphemes.

(3)	*kilometer*	*kilo + meter*	{L̲ə} {H̲L}
	Compounding:	*ˈkiloˌmeter*	{LəHL}
	Positional licensing		* [L{ə̲HL}F]
	• Metrical adjustment (1)		* [L{L̲HL}F]
	Metrical adjustment (2)		[L(L̲LL)F]
	• Melodic adjustment (2)		[ə] → [ɒ]
	Melodic adjustment (1)		[iː] → [ɪ]

While the strategy presented for *ˈmilliˌmeter* may seem simpler to implement as it implies a fair degree of co-operation between

morphology and phonology, the one suggested for *ki*ˈ*lometer* or *ther*ˈ*mometer* involves a complete erasure of morphological information. The first of the two strategies may therefore be, metaphorically, termed the 'compromise strategy' whereas the latter the 'conquest strategy'.

A fairly productive *'–body'* compounding follows two distinct patterns of metrical behaviour, as shown below.

(4) a. ˈsomeb[ə]dy ~ ˈsomeˌb[ɒ]dy
ˈanyb[ə]dy ~ ˈanyˌb[ɒ]dy
ˈnob[ə]dy ~ ˈnoˌb[ɒ]dy

b. ˈantiˌb[ɒ]dy ~ *ˈantib[ə]dy~ *anˈtib[ə]dy
ˈbusyˌb[ɒ]dy
ˈhomeˌb[ɒ]dy

In (4a) the [ə]~[ɒ] alternation is available in the head position of the *-body* domain. The dominant pronunciations (Jones, 1991) are those with the reduced vowel. In (4b), by contrast, no parallel variants exist, as shown by the incorrectness of *ˈ*antib[ə]dy* or **an*ˈ*tib[ə]dy*. The first group of examples, however, is limited to high-frequency personal pronouns, whereas the other includes nouns.

Whether the forms in (4b) are single or complex phonological domains is disputable. On the one hand, their head rhymes of both morphemes are independently stressed as if they were separate words (note that if *antibody* was a single domain, the rhyme dominating [ɒ] would not be licensed by weight nor by position, hence reduced). It happens so even though in certain configurations such compounding creates a stress clash situation. On the other hand, if the forms in (4b) constitute two separate domains, one would expect the secondary/primary stress pattern to reflect the syntactic relations, as in *a ˌdead* ˈ*body*, for example. This is not the case. In fact, the forms in (4b) are highly reminiscent of certain *–meter* compounds, in which the primary/secondary pattern appears. The crucial difference, however, is the fact that *–body* in (4b) is not eligible for the main stress as the lefthand rhyme in the LL configuration is not metrically licensed,

whereas the corresponding one in *–meter* {HL} is. This observation seems to comply with the assumption that both the *–meter* and *–body* compounds are not fully analytical domains.

The forms in (4a) may be optionally (for stylistic or emphatic reasons) pronounced with a secondary stress on the head rhyme of *-body* and the full vowel [ɒ]. These are metrically (and morphologically) identical with (4b). Since the head of a phonological domain cannot be depleted (nor fully deprived of its melodic content, as in [ˈnəʊbdi]), the forms in the left column in (4a) must be treated as single phonological domains. Such analysis, however, entails a problem. As licensing by weight does not obtain for the non-branching penultimate rhyme [ɒ], the antepenultimate rhyme (branching or not) is eligible for positional licensing and, accordingly, for the main stress in the domain. While the antepenultimate pattern does obtain in ˈ*somebody* and ˈ*nobody*, the forms ˈ*everybody* and ˈ*anybody* are stressed on the pre-antepenult. Hence, the incorrectness of *[evˈrɪbədi] or *[eˈnɪbədi]. As it turns out, in the case of *–body* compounds the morpho-phonological 'compromise' strategy was employed, which initially involved the stress reversal (secondary/primary into primary/secondary) and the subsequent erasure of morphological boundaries, resulting in the vowel reduction in the head position of *–body*. *-Meter*, by contrast, which has a weight-licensed head rhyme, qualifies for both strategies, although if the morpho-phonological 'compromise' is chosen, as in ˈ*milliˌmeter*, no vowel reduction is possible in the head rhyme of *-meter* because it is metrically licensed. Metrically unlicensed head rhymes are, therefore, phonetically depleted.

As far as the compounding with *–man* is concerned, items like (5a), where the vowel in *–man* is reduced, outnumber those where the vowel may be full, like (5b). Moreover, apart from the non-reduced forms in (5b), the reduced variants are often available.

(5) a. ˈpostm[ə]n ˈbushm[ə]n ˈbarm[ə]n ˈchurchm[ə]n ˈEnglishm[ə]n

b. ˈBatˌm[æ]n ~ ˈbatm[ə]n (*military*)
ˈbusinessˌm[æ]n ~ˈbusinesm[ə]n
ˈsuperˌm[æ]n
ˈdeadˌm[æ]n (*engineering*)

According to Kaye (1995:305), the inconsistencies of the ˈ*superˌman*~ˈ*postman* type can be attributed to the different status of *–man*, i.e. [[*super*][*man*]] vs. [[*post*]*man*]. This analysis entails two problems: (i) in *superman* *–man* receives secondary stress, which fact itself is indicative of its metrical subordination. (Consequently, its fully analytical phonological status is questionable.), (ii) an alternative pronunciation of *postman* is available, i.e. [ˈpəʊsmən], which appears to have the non-analytical structure [*postman*]. (The last form is metrically identical with the fully lexicalised *cupboard*.) In this light the vowel reduction in *m[ə]n* is rather natural since it may be linked with the fact that, similarly to personal pronouns with *–body*, certain *–man* forms are items of high lexical frequency, in which morphology is likely to 'wear out', e.g. the military term *batman* constitutes a single prosodic domain, whereas a fairly new lexical item *Batman* has not as yet fully erased morphological boundaries, hence the secondary stress on *–man*.

A question worth considering is to what extent the discrepancies like these are conditioned by the lexical frequency of the items, reinforced by metrical licensing deficiency of their head rhymes. A putative claim, apparently valid for *–meter* and *-body* compounds as well, is that the 'visibility' of morphology to stress phenomena is inversely proportional to the lexical frequency of an item. A further argument in favour of this hypothesis may be sought in *–valent* compounds (6).

(6) a. eˈquiv[ə]lent

b. amˈbiv[ə]lent~ˌambiˈv[eɪ]lent
ˌelecˈtrov[ə]lent~ˌelectroˈv[eɪ]lent
ˈbiv[ələnt~biˈv[eɪ]lent
hepˈtav[ə]lent~ˌheptaˈv[eɪ]lent
poˈliv[ələnt~ˌpolyˈv[eɪ]lent

u'niv[ə]lent~ˌuni'v[eɪ]lent

c. ˌmono'v[eɪ]lent
ˌmulti'v[eɪ]lent
ˌokta'v[eɪ]lent
ˌpenta'v[eɪ]lent
ˌquodri'v[eɪ]lent
ˌsepta'v[eɪ]lent

Metrically, the morpheme *–valent* resembles *–meter* in that its head rhyme branches, i.e. is weight-licensed. Contrary to *–meter*, *–body* or *-man*, however, the form is not a free morpheme and may be vulnerable to metrical subordination (secondary stress), similarly to the form 'milliˌmeter, in which the morpho-phonological 'compromise' strategy is employed. The facts in (6) do not confirm this prediction. In (6c) the head rhyme of *–valent* receives primary stress. This may be indicative of two potential metrical circumstances: (i) the forms in (6c) are not compounds but single phonological domains, hence, according to the *Word Prosody Dominance Principle*, the rightmost non-weak foot bear primary stress, or (ii) the forms in (6c) constitute two fully analytical domains or two separate words, traditionally speaking. Considering the synchronic productivity of *-valent*, the single domain solution must be ruled out. The compounding 'pressure', however, is evident in (6b). Apparently, the 'phonological conquest' strategy is employed, which 'anchors' *–valent* in the newly created prosodic domain. Since the antepenultimate rhymes in the left-hand forms in (6b) do not branch, the original head vowel of *–valent* must be depleted in order to prevent the formation of an ill-formed foot *{L̲HH}, where HH represents *–valent*. The problematic rhymal configuration LLH remains domain finally. As the antepenultimate rhyme bears the primary stress, it should govern all the rhymes within the rightmost dominant foot (*Word Prosody Dominance Principle*). This yields another ill-formed foot *{L̲LH}$_{\text{Foot}}$. Therefore, an alternative parse must be suggested, i.e. {L̲L}$_{\text{Foot}}${H̲Ø}$_{\text{WEAK Foot}}$. The presence of the 'weak' foot domain finally accounts naturally for two facts: (i) the apparent ill-formedness of the final foot *{L̲LH}$_{\text{Foot}}$ since the antepenultimate non-branching rhyme does not directly govern

the final branching one and (ii) the absence of forms like *ˈ*ambivalent*. The latter restriction can be formulated as follows:

The Weak Foot Constraint

> The foot immediately preceding the weak foot must not be a maximal (ternary) expansion.

The word *equivalent* in (6a) seems to be an isolated example of *–valent* compounding in which there is no variant pronunciation with the penultimate primary stress: *ˌ*equi*ˈ*valent*. Again, we may conclude that this is due to the tendency that erases morphological complexity as the lexical frequency of an item grows.

3.2. Multiple suffixation effects

Certainly, the intriguing interactions between English derivational morphology and stress phenomena deserve more than a short paper. This discussion, therefore, will be only fragmentary and incomplete. As we initially hypothesised, morphology-induced stress shifts occur only when required by phonological (metrical) conditioning. This prediction will be checked against multiple suffixation involving (*–ment-*)(*-al-*)(*-ity*). Since *–ment* can be both a nominal suffix and an integral part of morphologically simple domains, our prediction will be confirmed if the suffixed and non-suffixed forms are shown to behave similarly in terms of stress. Metrically, the suffix *–ment* has the structure {H<u>Ø</u>}. In both suffixed and unsuffixed forms the portion *-ment* can be preceded by a branching (H) and a non-branching (L) rhyme, yielding the following metrical configurations.

(7)	a. unsuffixed:	sentiment	{HL}{HØ}
		ligament	{LL}{HØ}
	b. suffixed:	management	{LL}{HØ}
		medicament	L{LL}{HØ}
		{LLL}{HØ}	
		temp*e*rament	{H<*L*>L}{HØ}
		{HL}{HØ}	

The fact that the weight of the antepenultimate rhyme is irrelevant to the position of stress must be ultimately due to the presence of the final weak foot, which only allows maximally binary feet to its left[3]. Whatever its morphological status is, *-ment* does not interfere with stress.

The suffix *–al* has traditionally been classified (Fudge, 1984) as 'mixed': pre-stressed 1/2 or stress neutral.

(8) a. pre-stressed 1/2
H+al sentimental experimental homicidal tribal
LL + al medicinal

b. stress-neutral:
H + al refusal

Phonologically, the suffix *–al* consists of an overt light syllable followed by an final empty nuclear position (filled in with the melody in adverbial derivation), i.e. –[ə]lØ. The source of the apparent stress-shifting potentials, then, must not be sought in the suffix itself, but rather in the phonological environment in which it appears. In our discussion it is *–ment*, i.e. a branching rhyme, but other contexts are also available as shown in (8) above. In fact, (*-al*) displays identical stress behaviour in all cases. Namely, it is sensitive to the type of the rhyme (branching/non branching) that precedes. If a branching rhyme precedes, the stress is penultimate, as the penultimate heavy rhyme is licensed by weight. If the preceding rhyme does not branch, it is not eligible for stress, as it cannot be the head of the final foot. Thus, licensing by position is required, which means antepenultimate stress in words like *me*ˈ*dicinal*. In combination with *–ment*, *–al* will always be 'pre-stressed 1', since then *–ment* becomes a weight-licensed foot head.

[3] In *temperament* and *medicament* the stress may be either antepenultimate or pre-antepenultimate with an initial ternary foot. While the antepenultimate stress follows from the weak foot constraint, the pre-antepenultimate may be a result of a stress preservation tendency. The conflict is resolved in two ways: by the elision of the vowel 'sandwiched' in the interonset government (p → r) in ˈ*temp(e)rament*, or simply by admitting a pre-antepenultimate stress in ˈ*medicament* (Jones, 1991).

The metrical parsing, therefore, is 'blind' to the morphological structure. Similarly, the stress effects of *–ity* suffixation boil down to the shift of stress onto the antepenultimate rhyme to obtain a position-licensed dominant foot finally. Again, making no reference to morphological complexity.

Apart from the fairly straightforward stress shifts within the *–mentality* suffixation, the optional [e]~[ə] alternation in *ˌsentim[e]nˈtality~ˌsentim[ə]nˈtality* must be accounted for. While reduction is expected in unstressed positions, the full vowel in *ˌsentim[e]nˈtality* poses a problem for our analysis. The rhymal configuration of the form is HLHLLL. The antepenultimate non-branching rhyme is positionally licensed to dominate the rightmost foot {LLL}. Further metrical parsing prohibits the creation of the foot *{LH} and must continue, according to the *Exhaustiveness Principle*. Such persistent parsing mode yields the initial foot {HLH}, formally well-formed but unattested in domain final context. (Note that *sentiment* has the following metrical structure: [{HL}{HØ}].) The metrical structure of the word is, therefore, {HL}H{LLL}. The vowel in question is, however, followed by a sonorant-plosive sequence and it may be argued that the coda (sonorant) position must be licensed by a full vowel (Gussmann, 1998). Alternatively, (i) the non-reduced form may be assumed to contain a 'metrical island' (a moraic trochee word internally) (van der Hulst, 1999:37), (ii) the branching rhyme may be footed, i.e. {HLH} and reduced because it is in a dominated position within such a foot, or else (iii) the full vowel in a branching rhyme 'trapped' between two well-formed feet may be licensed by the government between the neighbouring feet, not only when the vowel is followed by a coda consonant, e.g. *Halic[aː]nassus, terror[aɪ]zation*. This problem certainly deserves a separate discussion.

4. Morpho-phonological '*controversy*'

Finally, let us discuss the topical example, i.e. *conˈtroversy ~ ˈcontroˌversy*. Certain doubts may arise regarding the very morphological complexity of the item. Indeed, the synchronic productivity of the hypothetical *–versy* compounding is virtually none. However, two

sorts of arguments in favour of morphological complexity of the form can be invoked: (i) a parallel, yet fairly productive, compounding pattern involving –*version*, which, just like *-versy*, derives from Medieval Latin '*versio*', the difference being the time of the borrowing: 14th century in the case of *controversy* and 16th century in the case of –*version* compounds, or more importantly, (ii) the present-day accentual behaviour of the item, regardless of the variant chosen.

The initially stressed variant ˈ*contro*ˌ*versy*, whose penultimate rhyme branches, has no reasons to reject penultimate main stress, i.e. *ˌ*contro*ˈ*versy*, (especially when the preceding rhyme does not branch) just like words of the *ve*ˈ*randa* {HL} pattern. In other words, its branching (heavy) pre-final rhyme is weight-licensed and may not be unstressed within a single phonological domain. Although the rhyme does receive stress, it is only weak and secondary, whereas the main stress is initial and falls on ˈ*con*-. This is precisely the accentual behaviour of English 'word+word' compounds, e.g. ˈ*black*ˌ*board*. The presence of morphological structure, then, is reflected by denying the penultimate weight-licensed rhyme the right to carry the main stress of the whole domain. In this sense, it is an indication that the structure in question must be viewed as containing two morphemes rather than one.

The forms containing *-version*, on the other hand, recognize the pre-final branching rhyme as the weight-licensed head of the rightmost foot, hence granting the rhyme the main stress of the whole prosodic domain. Such an accentuation pattern may be indicative of either the lack of morphological complexity (which claim is hardly tenable in the light of the synchronic productivity of this derivation) or two independent prosodic domains must be postulated. The remaining metrical material may be either left unstressed (if the initial 'leftover' contains one rhyme, as in (9a)) or receive the secondary stress (as in (9b)), if the initial 'leftover' contains more than one rhyme, according to the *Exhaustiveness Principle*). Therefore, no further phonological adjustments are required, since, similarly to (6c), the forms in (9) below contain two fully analytical domains.

(9) a. aˈversion conˈversion diˈversion inˈversion perˈversion

b. ˌambiˈversion ˌextraˈversion ˌintroˈversion ˌlateroˈversion ˌretroˈversion

Hypothetically, the form *controversy* followed a different path towards its 'lexicalisation'. Namely, it chose positional licensing, just like some of the *–meter* compounds. For positional licensing, which involves the erasure of morphological boundary, it is necessary to modify the skeletal and melodic contents of the representation, since the final configuration of rhymes, i.e. *{L̲HL}#, may not constitute a well-formed foot. Instead of preserving the configuration and reversing the stresses within the domain, the penultimate nucleus is reduced to yield the configuration LLL# in which the ante-penultimate rhyme is positionally licensed as the head of the final foot {L̲LL}#.

Morphology, therefore, tends to be generally inactive in stress phenomena. Where it could interfere with metrical structure, phonological (melodic and skeletal) adjustments occur which erase morphological boundaries that could block correct metrical parsing. Stress domains (prosodic words) are thus defined in terms of metrical licensing and prosodic dominance, only accidentally congruent with independently motivated stress behaviour of their morphological components. *Controversy*, therefore, is idiosyncratic but not phonologically irregular or exceptional.

5. Conclusion

The scale of re-adjustments, both metrical and melodic, e.g. vowel reductions, as in the form *conˈtroversy*, seems to justify the claim that metrical structure is built to a large extent independently of morphological structure. If so, the phonology of word stress in English renders morphology invisible. In cases when morphological structure requires no metrical changes (ˈ*contro*ˌ*versy*), variant pronunciations exist. Bearing in mind that analytic morphology may be diachronically lost (e.g. *cup* + *board* = [ˈkʌbəd]), in time only the morphologically

'blind' forms may prevail. With higher frequency words it is already the case (*ther*ˈ*mometer* vs. ˈ*alti*ˌ*meter*).

Morphology-Phonology interaction in relation to English word stress is, therefore, a game whose rules are imposed by phonological (metrical) licensing and metrical constituency, respecting morphological information only where it is, coincidentally, possible.

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SUMMARY

In most analyses of English word stress the discussion of stress patterns in morphologically complex forms has been avoided. However, their accentual

behavior offers invaluable insight into well-formedness conditions that the system imposes on English metrical feet. In particular, the phenomenon of stress shift under suffixation and the existence of variant stress patterns reveal the principles and parameters that control metrical parsing. The assumption that underlies the present analysis is that (i) morphology-induced stress shifts occur only when required by phonological (metrical) structure, (ii) the existence of stress variants (ˈ*contro*ˌ*versy* ~ *con*ˈ*troversy* or ˈ*organdy* ~ *or*ˈ*gandy*) is due to peculiar metrical circumstances rather than morphological complexity.

Keywords: word stress, metrical phonology, suffixation, stress shift, variant stress patterns, morphophonology

Anna Drogosz

Metaphors of Family, Tree and Struggle in Darwin's *The Origin of Species*

1. Introduction

The objective of this study is an analysis of selected conceptual metaphors constituting Darwin's theory of evolution as presented in his book *The Origin of Species*, that is metaphors based on the source domain of FAMILY, TREE and STRUGGLE. We want to demonstrate that metaphors employed by Darwin (both consciously and unconsciously) enabled him to frame his theory in a coherent and comprehensible form.

As it has been earlier discussed, Darwin's explication of theory of evolution is based on a number of metaphors. We have already argued (Drogosz, 2008) that an analysis of the text of *The Origin of Species* reveals numerous ontological metaphors that were employed by Darwin. However, while ontological metaphors constitute a conceptual precondition for formulating a theory turning abstract and diffuse concepts into concrete and well-delineated ones, structural metaphors that are richer in conceptual content are necessary to flesh out a theory.

Considering the vast body of literature on the subject of Darwin's theory of evolution, its reception and impact, as well as ideas that influenced its creation or questioning Darwin's originality, the research into Darwin's language in general and metaphors he used in particular seems surprisingly modest. One of the first analyses on the

subject is Young (1985). The linguistic approach to Darwin's text and the whole theory has gained more interest lately as manifested in Beer (2000), Goatly (2007), and Al-Zahrani (2008). Our analysis is couched in a framework of the Cognitive Linguistics, in particular in the theory of conceptual metaphor as proposed by Lakoff and Johnson, 1980, 1999; Lakoff, 1987; Kövecses, 2002) and the blending theory (Fauconnier and Turner, 2002) because we believe that this approach offers a unique insight into cognitive processes underlying creation of a scientific theory. This is because of the role that is assigned to the metaphor and imagery in human thought. This approach allows us to analyze Darwin's metaphors not as literary devices but as conceptual tools indispensable in scientific discourse.

The analysis is based on the second edition of Darwin's *On the Origin of Species* (with one exception when we used the first edition) in its 1998 Oxford World's Classic issue. The numbers in brackets next to each quotation make reference to this book.

2. LIVING ORGANISMS ARE MEMBERS OF A FAMILY[1]

Although metaphors based on the source domains of STRUGGLE and TREE used by Darwin to explicate his vision of relationships in the natural world and the chronological arrangement of organisms are perhaps most widely known, we want to begin with the source domain of FAMILY as more basic and, in some cases, prior to other metaphors.

The metaphor LIVING ORGANISMS ARE MEMBERS OF A FAMILY is fundamental to the theory of evolution. However, we have to bear in mind that Darwin uses the terms such as parent, offspring, progeny and ancestor in a non-literal sense, i.e. he is not referring to parents of plants or animals in the direct biological and conventional sense

[1] The order of presentation of the subsequent metaphors is supposed to reveal how metaphors and image schema were joined together by Darwin, but out of necessity this order is fairly arbitrary. The metaphors mesh together and only with some effort can we isolate them for the purpose of our analysis. What is more, most examples involve more than one metaphor which makes the explication even more challenging. We decided to begin with the metaphor of the FAMILY but it could be equally logical to begin with the LINK schema, which is, in fact, conceptually more basic.

(though on some rare occasions when talking about breeding and cultivation he does use the words *parent*, *father* and *mother* in this sense). What he means by a parent, or more precisely parent-form, is the unmodified form of an organism, and what he means by offspring (or child) is the modified and presumably improved form which descended from the parent-form through natural selection and accumulation of modifications.

The meaning the family relationship obtains in Darwin's theory refers to relationships between species or genera and not relationships between individuals. Yet the transition from the literal sense of the parent/child relation to the one intended by Darwin is not as straightforward as is seems. The concept of the parent-species is in fact a blend (a mirror integration network in the sense of Fauconnier and Turner, 2002), integrating the following input spaces: one input space involves parent/ancestor and child/offspring as individuals sequenced in time. In the second input space we have beginning/origin and the end/result conceptualized as separate entities, also sequenced in time. Both these inputs are grounded in the most basic experience. In the blended space we have the parent (or ancestor) as the origin for offspring, which is the result. This blend as it stands is fairly inconspicuous, because parents are indeed an "origin" for their children, but Darwin augments this blend by a powerful metonymy AN INDIVIDUAL FOR A GROUP OF (SIMILAR OR RELATED) INDIVIDUALS. This is what enables him to say that a given species has a common parent and at the same time it makes the family metaphor the core of his theory of descent with modification, i.e. the theory of evolution.[2]

There are many examples throughout the work which exemplify the family metaphor. The most significant are those which support the idea of common descent. Thus, Darwin often says that organisms descend from a common parent (1-7), or that they simply have a common parent (8-12).

[2] Even the frequency of occurrence of words related to family shows how important this metaphor was for Darwin. The count revealed how often the following words occur in the text of *The origin of Species*: *parent* 141 times, *family* 47, *progenitor* 56, *descent* 87, *to descend* 106.

1. [about different kinds of pigeons]...I felt fully as much difficulty in believing that they could ever have descended from a common parent. [25]

2. ...that many our domestic races have descended from the same parents [26]

3. ...they have descended from one or several parent-species. [15]

4. ...all the species of the same genus have descended from a single parent... [114]

5. As all the species of the same genus are supposed to have descended from a common parent ...[132]

6. On the principle of the multiplication and gradual divergence in character of the species descended from a common parent,... [348]

7. ...the breeds to diverge in character both from each other and from their common parent ... [93]

8. ...varieties produced by cultivation from a common parent ... [130]

9. Species inheriting nearly the same constitution from a common parent and exposed to similar influences... [138]

10. The common parent will have had in its whole organisation much general resemblance to the tapir and to the horse; but in some points of structure may have differed considerably from both, even perhaps more than they differ from each other. [227]

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

12. All the modified descendants from A will have inherited something in common from their common parent, as will all the descendants from I; ... [341]

The word *parent* becomes sometimes replaced by *ancestor* and *progenitor* as in (13-19) but they are significantly less frequent.

13. ...but when several characters, let them be ever so trifling, occur together throughout a large group of beings having different habits, we may feel almost sure, on the theory of descent, that these characters have been inherited from a common ancestor. [344]

14. ...an ancient progenitor may have acquired... [120]

15. ...and these characters in common I attribute to inheritance from a common progenitor [127]

16. ...come to differ within the period of the branching off of the species from a common progenitor [128]

17. ... a group having descended from a common progenitor, from whom they have inherited much in common [129]

18. [several bones in the limbs of the monkey (…)], which have been inherited from a common progenitor… [163]

19. Most of the arguments which have convinced me that all the existing species of the same group have descended from one progenitor,... [248]

The metaphor ORGANISMS ARE MEMBERS OF A FAMILY becomes at times pushed to extremes as when Darwin compares related organisms to brethren or cousins (20-22):

20. the arctic forms would seize on the cleared and thawed ground, always ascending higher and higher, as the warmth increased, whilst their brethren were pursuing their northern journey. [297]

21. Thus many of these wanderers, though still plainly related by inheritance to their brethren of the northern or southern hemispheres,

now exist in their new homes as well-marked varieties or as distinct species. [306]

22. Now all these modified descendants from a single species, are represented as related in blood or descent to the same degree; they may metaphorically be called cousins to the same millionth degree; yet they differ widely and in different degrees from each other. [341]

The employment of the source domain of FAMILY to conceptually structure relationships among organisms allowed Darwin to emphasize that even extinct organisms bearing no resemblance to contemporary organisms are related in the same way as ancestors of a given human family are related to living members of the family. Within this analogy, Darwin could freely talk about inheritance of features and modifications and their transmission from generation to generation. While this view seems obvious if not trivial in our times, we have to bear in mind that Darwin was setting his theory against the beliefs in the immutability of species and acts of divine creation of every single species. The family metaphor itself, however, would be insufficient to express the intricate relationships among organisms as they develop in time, which was the main objective of Darwin's theory. That is why Darwin, very much in the spirit of Victorian naturalism, made use of a long tradition to graphically represent relationships between ancestors and progeny of human families in the form of a genealogical tree[3]. The fact that Darwin adopted that visual representation of connections between members of a family in time gave him a powerful explicatory tool and at the same time led to the use of language appealing to the wide public. As we are also going to show, it had implications for the theory itself.

[3] In the time when Darwin was formulating his theory, the convention of representing relationships among different organisms in the shape of a tree was already well established, e.g. by J. B. Lamarck and K.E. von Baer. It was also established to talk about lower and higher animals (in the sense of their complexity) and to place them at the bottom and the top of the tree respectively. The whole convention must have emerged as blending the tree metaphor with the ladder metaphor and the Great Chain of Being metaphor and it itself deserves a more in-depth study. The Great Chain of Being discussed at length by Lakoff and Turner (1989), Krzeszowski (1997), and Kövecses (2002) is the folk theory arranging all beings in the world into the following hierarchy: God(s), humans, animals, plants, things.

3. RELATIONSHIPS AMONG ORGANISMS ARE A TREE

That Darwin was consciously blending the concept of a genealogical tree with his vision of diachronic relationships among organisms is apparent from the excerpt (23):

23. ...and it is notoriously not possible to represent in a series, on a flat surface, the affinities which we discover in nature amongst the beings of the same group. Thus, on the view which I hold, the natural system is genealogical in its arrangement, like a pedigree; ... [342]

The TREE metaphor is elaborated to the full in the following lengthy quotation:

24. The affinities of all the beings of the same class have sometimes been represented by a great tree. I believe this simile largely speaks the truth. The green and budding twigs may represent existing species; and those produced during each former year may represent the long succession of extinct species. At each period of growth all the growing twigs have tried to branch out on all sides, and to overtop and kill the surrounding twigs and branches, in the same manner as species and groups of species have tried to overmaster other species in the great battle for life. The limbs divided into great branches, and these into lesser and lesser branches, were themselves once, when the tree was small, budding twigs; and this connexion of the former and present buds by ramifying branches may well represent the classification of all extinct and living species in groups subordinate to groups. Of the many twigs which flourished when the tree was a mere bush, only two or three, now grown into great branches, yet survive and bear all the other branches; so with the species which lived during long-past geological periods, very few now have living and modified descendants. From the first growth of the tree, many a limb and branch has decayed and dropped off;

> and these lost branches of various sizes may represent those whole orders, families, and genera which have now no living representatives, and which are known to us only from having been found in a fossil state. As we here and there see a thin straggling branch springing from a fork low down in a tree, and which by some chance has been favoured and is still alive on its summit, so we occasionally see an animal like the Ornithorhynchus or Lepidosiren, which in some small degree connects by its affinities two large branches of life, and which has apparently been saved from fatal competition by having inhabited a protected station. As buds give rise by growth to fresh buds, and these, if vigorous, branch out and overtop on all sides many a feebler branch, so by generation I believe it has been with the great Tree of Life, which fills with its dead and broken branches the crust of the earth, and covers the surface with its ever branching and beautiful ramifications. [106-107]

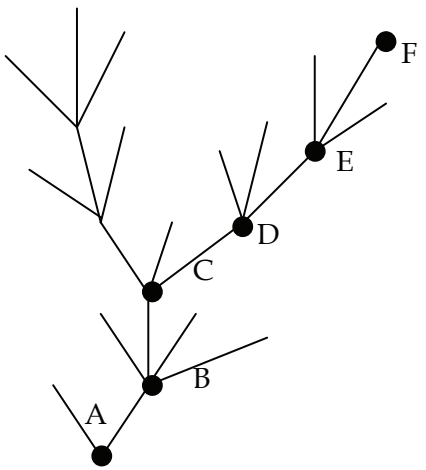
The mappings are so transparent that it is obvious that Darwin makes a conscious exploitation of this metaphor. For the sake of clarity let us trace down all the mappings:

Source domain **A TREE**	**Target domain** **RELATIONSHIP AMONG ORGANISMS IN TIME**
a great tree	the affinities of all the beings of the same class
the green and budding twigs	existing species
those produced during each former year	the long succession of extinct species
at each period of growth all the growing twigs have tried to branch out on all sides, and to overtop and kill the surrounding twigs and branches	species and groups of species have tried to overmaster other species in the great battle for life

the limbs divided into great branches, and these into lesser and lesser branches, were themselves once, when the tree was small, budding twigs ...this connexion of the former and present buds by ramifying branches...	the classification of all extinct and living species in groups subordinate to groups
of the many twigs which flourished when the tree was a mere bush, only two or three, now grown into great branches, yet survive and bear all the other branches	of the species which lived during long-past geological periods, very few now have living and modified descendants
from the first growth of the tree, many a limb and branch has decayed and dropped off; and these lost branches of various sizes may represent...	whole orders, families, and genera which have now no living representatives, and which are known to us only from having been found in a fossil state
as we here and there see a thin straggling branch springing from a fork low down in a tree, and which by some chance has been favoured and is still alive on its summit,	we occasionally see an animal like the Ornithorhynchus or Lepidosiren, which in some small degree connects by its affinities two large branches of life, and which has apparently been saved from fatal competition by having inhabited a protected station

Table 1. Conceptual mappings of the metaphor RELATIONSHIPS AMONG ORGANISMS ARE A TREE

While this metaphor is undoubtedly ornamental, it has little explanatory potential. That is why Darwin simplified it to his famous picture of a schematic tree and used it throughout the book as a diagram. The approximate shape of his diagram is given below:



An application of such a simple diagram made using phrases such as *link, line, branch, to connect, intermediate* etc. perfectly natural for Darwin. When describing his diagram, he uses these phrases in a fairly literal sense, for example:

25. In our diagram the line of succession is broken at regular intervals by small numbered letters marking the successive forms which have become sufficiently distinct to be recorded as varieties. [98]

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

27. The six descendants from (I) will form two sub-genera or even genera. But as the original species (I) differed largely from (A), standing nearly at the extreme points of the original genus, the six descendants from (I) will, owing to inheritance, differ considerably from the eight descendants from (A); the two groups, moreover, are

supposed to have gone on diverging in different directions. The intermediate species, also (and this is a very important consideration), which connected the original species (A) and (I), have all become, excepting (F), extinct, and have left no descendants. [101-102]

28. We shall see this by turning to the diagram: the letters, A to L, may represent eleven Silurian genera, some of which have produced large groups of modified descendants. Every intermediate link between these eleven genera and their primordial parent, and every intermediate link in each branch and sub-branch of their descendants, may be supposed to be still alive; and the links to be as fine as those between the finest varieties. [349]

However, it was equally natural for Darwin to use these expressions independently of any diagram, especially that they trigger a large schema conventionalized in the English language namely the LINK schema. The concepts of the link, transition, connection and chain are all elements of the LINK schema which are mapped onto the target, i.e. the relationships among organisms, as presented in Table 2.

Source domain **the LINK schema**	**Target domain** **the relationships among organisms**
extreme points	unmodified forms in the past contemporary modified forms
link	an organism at a certain moment of time and development
chain/line	a group of organisms (sequenced in time)
intermediate/ transitory (links/forms)	organisms which display features similar to both past unmodified forms and contemporary modified forms
to connect/to link	to show similarity
connections	relationships (of similarity) among organisms

Table 2. Conceptual mappings resulting from the LINK schema

These mappings are well-expressed in the language of *The Origins of Species*: not only entities as concrete as parts and organs (29), two plants (30), or members of a class (31) can be connected, but also conceptually diffuse entities such as forms (32) and (33), varieties (34), species (35), families (36) and even all living and extinct beings (37) or all the species (38).

29. Why should all the parts and organs of many independent beings (…) be so invariably linked together by graduated steps [158]

30. … [two plants] … they are united by many intermediate links, and there is evidence showing that they descend from common parents ... [42]

31. ... how the several members of each class are connected together by the most complex and radiating lines of affinities. [351]

32. an infinite number of those fine transitional forms, which on my theory assuredly have connected all the past and present species of the same group into one long and branching chain of life. [244]

33. Let two forms have not a single character in common, yet if these extreme forms are connected together by a chain of intermediate groups, we may at once infer their community of descent, and we put them all into the same class. [345]

34. … varieties linking two other varieties together have generally in lesser numbers than the forms which they connect ,... [144]

35. We shall, perhaps, best perceive the improbability of our being enabled to connect species by numerous, fine, intermediate, fossil links, by asking ourselves whether, for instance, geologists at some future period will be able to prove, that our different breeds of cattle, sheep, horses, and dogs have descended from a single stock or from several aboriginal stocks. [242]

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

37. In this chapter I have attempted to show, that the subordination of group to group in all organisms throughout all time; that the nature of the relationship, by which all living and extinct beings are united by complex, radiating, and circuitous lines of affinities into one grand system… [369]

38. …numberless intermediate varieties, linking most closely all the species of the same group together, must assuredly have existed. [146]

The most important element of the LINK schema is the concept of the link itself. Following his analogy between producing varieties in domesticated animals or plants by human selection and what he observed in nature, Darwin assumes the existence of organisms which have undergone some modification as compared to their "parent-species", but which are not yet identical to the forms known today. They are the links (linking forms or connecting links). They exist between the living and extinct inhabitants (39) or between the several representative species and the common parent (40), but they also obtain in all the species in each group (41).

39. On this doctrine of the extermination of an infinitude of connecting links, between the living and extinct inhabitants of the world… [374]

40. …intermediate varieties between the several representative species and the common parent, must formerly have existed in each broken portion of land, but these links will have been supplanted and exterminated during the process of natural selection. [146]

41. As on the theory of natural selection an interminable number of intermediate forms must have existed, linking together all the species in each group by gradations as fine as our present varieties, it may be asked, Why do we not see these linking forms all around us? [373-374]

Because these links occur between some forms (and here the influence of the diagram is especially strong), Darwin refers to them as transitional links (42), and intermediate links (43). In order to emphasize their connecting role, they are termed connecting links (44),

and when they relate to extinct organisms the phrase fossil links is used (45).

42. One, namely the distinctness of specific forms, and their not being blended together by innumerable transitional links, is a very obvious difficulty. [226]

43. … [two plants] … they are united by many intermediate links , and there is evidence showing that they descend from common parents [42]

44. Independently of our not finding fossil remains of such infinitely numerous connecting links, ... [228]

45. Owen has discovered so many fossil links … [266]

When such links become conceptually connected into a series, Darwin writes about chains of links (46) or lines of descent (47), the first phrase relying on the diagram, the other incorporating the FAMILY metaphor and the TREE metaphor.

46. Hence in all such cases, we should be unable to recognise the parent-form of any two or more species, even if we closely compared the structure of the parent with that of its modified descendants, unless at the same time we had a nearly perfect chain of the intermediate links. [228]

47. … of the intermediate links in the long lines of descent ... [26]

The idea of transition and intermediacy is an inherent element of the LINK schema. It was very important for Darwin and the way he explained his theory. We remember that he wanted to demonstrate that new species occur in nature as a result of accumulation of little changes, so between the parent-species and the contemporary species there must have existed an indeterminate number of transitory species or varieties. In this sense Darwin writes about intermediate and transitory links (48-50), intermediate varieties (51), (52), and intermediate forms (53). Such forms are intermediate in character and thus occupy the intermediate position in the chain of descent (54).

48. So that the number of intermediate and transitional links, between all living and extinct species, must have been inconceivably great. [228]

49. … [two plants] … they are united by many intermediate links , and there is evidence showing that they descend from common parents [42]

50. One, namely the distinctness of specific forms, and their not being blended together by innumerable transitional links, is a very obvious difficulty. [226]

51. …numberless intermediate varieties, linking most closely all the species of the same group together, must assuredly have existed. [146]

52. in breaking down the distinction between species, by connecting them together by numerous, fine, intermediate varieties; ... [242]

53. …by crossing we can get only forms in some degree intermediate between parents ... [18]

54. The fact of the fossil remains of each formation being in some degree intermediate in character between the fossils in the formations above and below, is simply explained by their intermediate position in the chain of descent. [384]

The last element of the LINK schema that we want to discuss is the idea of branching, again best visible in a tree, both genealogical and its diagrammatic analogue. While line represents a series of varieties which are perceived as similar, a branch represents differentiation (be it differentiation of a species into varieties or classes into groups of species), and distinct species or varieties themselves (55-57). This image corresponds with the conventional metaphors SIMILARITY IS CLOSENESS and DISSIMILARITY IS DISTANCE, which is well visible in (58) and (59).

55. Yet I fully expect to see it hereafter confirmed, at least in regard to subordinate groups, which have branched off from each other within comparatively recent times. [273]

56. Therefore we must suppose either that all Rodents, including the bizcacha, branched off from some very ancient Marsupial, which will have had a character in some degree intermediate with respect to all existing Marsupials; or that both Rodents and Marsupials branched off from a common progenitor, and that both groups have since undergone much modification in divergent directions. [348]

57. …gradations of structure, branching off in two fundamentally different lines… [153]

58. Extinction, as we have seen in the fourth chapter, has played an important part in defining and widening the intervals between the several groups in each class. [349]

59. There are crustaceans at the opposite ends of the series, which have hardly a character in common; yet the species at both ends, from being plainly allied to others, and these to others, and so onwards, can be recognised as unequivocally belonging to this, and to no other class of the Articulata. [339]

Often the LINK schema and the TREE metaphor become explicitly connected with the FAMILY metaphor, as demonstrated by the following examples:

60. …by crossing we can get only forms in some degree intermediate between parents ... [18]

61. … of the intermediate links in the long lines of descent ... [26]

62. …intermediate varieties between the several representative species and the common parent, must formerly have existed in each broken portion of land, but these links will have been supplanted and exterminated during the process of natural selection. [146]

63. we should bear in mind that some are extremely ancient, and must have branched off from a common parent at a remote epoch [328]

64. … the species branched off from the common progenitor of the genus ... [129]

The FAMILY metaphor, the TREE metaphor and the LINK schema proved to be effective tools in Darwin's attempt to explicate his theory and this is because of at least two reasons. Firstly, they are conventional metaphors present in everyday English (both now and in his times) so they did not require any special cognitive effort on part of his readers. Secondly, they are connected with graphic representations (i.e. a genealogical tree and Darwin's diagram). All this made the phrases used by Darwin a standard way of talking about relationships among organisms, especially their historical relationship. These three metaphors all together create what is often referred to as Darwin's Tree of Life.

The Tree of Life metaphor naturally entails other metaphors and schemas of greater and lesser importance to the theory itself. The first schema, very basic but with vast ramifications, is the UP-DOWN schema. Pending the vertical nature of a tree, applying this schema seems obvious. In the Tree of Life (or a phylogenetic tree of living organisms) simpler organisms are located at the bottom and more complex organisms occupy the top of the tree. That is why they are called higher and lower organisms. While neither the genealogical tree nor its schematic analogue are axiologically charged in the sense of Krzeszowski (1997), this spatial arrangement immediately activates the conventional orientational sub-metaphors COMPLEX/GOOD IS HIGH and SIMPLE/PRIMITIVE IS LOW examplified below: [4]

65. Plants low on the scale of organisation ... [46]

66. How low in the scale of nature this law of battle descends, I do not know... [73]

67. ... even in animals very low in the scale of nature... [169]

68. There is some reason to believe that organisms, considered high in the scale of nature, change more quickly than those that are low:… [253]

[4] Naturally, Darwin takes here the anthropocentric view that vertebrates are higher or more developed than invertebrates. Darwin's considerations were ultimately focusing on the decent of man, hence his interest in vertebrates and primates over invertebrates or plants.

69. We should, also, remember that some, perhaps many, fresh-water productions are low in the scale of nature, and that we have reason to believe that such low beings change or become modified less quickly than the high; ... [314]

The valuation is made explicit when Darwin expresses his belief that more recent forms (and hence located higher in the Tree of Life) have some advantage over more ancient forms (70) or are more improved (71).

70. But in one particular sense the more recent forms must, on my theory, be higher than the more ancient; for each new species is formed by having had some advantage in the struggle for life over other and preceding forms. [271]

71. Recent forms are generally looked at as being, in some vague sense, higher than ancient and extinct forms; and they are in so far higher as the later and more improved forms have conquered the older and less improved organic beings in the struggle for life. [384]

The UP-DOWN schema has also been applied to the question of classification of organisms as varieties or species. As the following examples indicate, being classified as a species is conceptualized as a privilege while being classified "only" as a variety is like being denied a privilege or rank.

72. Some experienced conchologists are now sinking many of the very fine species of D'Orbigny and others into the rank of varieties; ... [241]

73. ... first ranked by practised naturalists as only a genus, and then raised to the rank of a sub-family or family ... [340]

We can interpret these sentences as linguistic realisations of the sub-metaphors BEING A SPECIES IS HIGH and BEING A VARIETY IS LOW.

It must be emphasised that these sub-metaphors operate independently of the TREE metaphor (in fact they operate in the opposite direction). In the tree diagram species may become diversified into varieties which are somehow improved as compared to their parent-species (in the diagram we have the "movement" from

the lower part of the tree to the upper). But at the same time having the rank of a species has higher status than the rank of a variety (it would mean the "movement" down the tree). It means that the sub-metaphors BEING A SPECIES IS HIGH and BEING A VARIETY IS LOW rely directly on the POSITIVE IS UP and STATUS IS HIGH metaphors, and make no reference to the TREE metaphor.

The CENTRE-PERIPHERY schema is the second spatial schema implied by the metaphor of the Tree of Life. There are not many realisations of this schema in the text and it seems marginal to the theory itself. While this is a conventional metaphor of the English language, in the case of Darwin's text it seems to be motivated by the vary nature of his diagram. Consider the following examples:

74. …little groups of species are generally clustered like satellites around certain other species… [49]

75. … varieties are groups of form, unequally related to each other, and clustered round certain forms, i.e. their parent-species. [49]

76. In large general the species are at to be closely, but unequally, allied together, forming clusters round certain species. [50]

The tree metaphor enabled Darwin to describe the relationships among organisms in time. The relationships among organisms in a given place were conceptualized mainly as struggle.

4. RELATIONSHIPS AMONG ORGANISMS ARE STRUGGLE

The metaphor RELATIONSHIPS AMONG ORGANISMS ARE STRUGGLE has become perhaps the most influential and at the same time most controversial facet of the Darwinian theory. Darwin openly states that the idea of struggle as a governing principle of the natural world came to him from reading Malthus' sociological works.[5]

[5] Darwin explicitly admits that by saying: "In the next chapter the Struggle for Existence amongst all organic beings throughout the world, which inevitably follows from their high geometrical powers of increase, will be treated of. This is the doctrine of Malthus, applied to the whole animal and vegetable kingdoms. As many more individuals of each species are born than

Following other naturalists,[6] Darwin observes that the world of living organisms is governed by the universal struggle for existence. He explicitly states that the Struggle for Existence is a metaphor[7] and makes this metaphor the backbone of his theory. This is an extremely complex metaphor and we shall try to analyze it step by step.

The struggle in the world of nature can have the nature of a competition (77, 78) or of war (79-81)

77. ... the structure of every organic being is related, in the most essential yet hidden manner, to that of all other organic beings, with which it comes into competition for food or residence. [64]

78. ... owing to the less severe competition to which the inhabitants of these dark abodes will probably have been exposed... [114]

79. ... in the great and complex battle of life ... [67]

80. … a plant, for instance, would find the best-fitted ground more perfectly occupied by distinct plants in one island than in another, and it would be exposed to the attacks of somewhat different enemies. [324]

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can possibly survive; and as, consequently, there is a frequently recurring struggle for existence, it follows that any being, if it vary however slightly in any manner profitable to itself, under the complex and sometimes varying conditions of life, will have a better chance of surviving, and thus be NATURALLY SELECTED. From the strong principle of inheritance, any selected variety will tend to propagate its new and modified form"[6]. And further: "Hence, as more individuals are produced than can possibly survive, there must in every case be a struggle for existence, either one individual with another of the same species, or with the individuals of distinct species, or with the physical conditions of life. It is the doctrine of Malthus applied with manifold force to the whole animal and vegetable kingdoms;..." [41].

[6] Darwin mentions his predecessors: "The elder De Candolle and Lyell have largely and philosophically shown that all organic beings are exposed to severe competition. In regard to plants, no one has treated this subject with more spirit and ability than W. Herbert, Dean of Manchester, evidently the result of his great horticultural knowledge. Nothing is easier than to admit in words the truth of the universal struggle for life, or more difficult--at least I have found it so--than constantly to bear this conclusion in mind"[52].

[7] Darwin writes what follows: "I should premise that I use the term Struggle for Existence in a large and metaphorical sense, including dependence of one being on another, and including (which is more important) not only the life of the individual, but success in leaving progeny"[53].

81. Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of the higher animals, directly follows. [396]

Irrespective of whether it is a war or competition, the struggle results from "the high rate at which all organic beings tend to increase" (82-84):

82. A struggle for existence inevitably follows from the high rate at which all organic beings tend to increase. [53]

83. There is no exception to the rule that every organic being naturally increases at so high a rate, that if not destroyed, the earth would soon be covered by the progeny of a single pair. [54]

84. ... every single organic being around us may be said to be striving to the outmost to increase in number. [56]

Darwin's reasoning was as follows: "as more individuals are produced than can possibly survive, there must in every case be a struggle for existence, either one individual with another of the same species, or with the individuals of distinct species, or with the physical conditions of life" [39]. At the same time Darwin identifies the parties involved in the competition or conflict. The contestants or opponents are also indicated in other examples. As we can see, the struggle obtains not only among organisms, but can also be directed against inanimate environment.

85. The competition should be most severe between allied forms, which fill nearly the same place in the economy of nature. [64]

86. [Sexual selection] depends not on a struggle for existence, but on a struggle between males for possession of the females; the result is not death of the unsuccessful competitor, but few or no offspring ... [73]

87. But a plant on the edge of a desert is said to struggle for life against the drought ... [53]

88. When we reach the Arctic regions, or snow-cupped summits, or absolute deserts, the struggle for life is almost exclusively with the element. [58]

89. With animals having separated sexes there will in most cases be a struggle between the males for possession of the females. [378]

As in any conflict or competition there are those that win and those that lose:

90. But success will often depend on having special weapons or means of defence, or on the charms of the males; and the slightest advantage will lead to victory. [378]

91. … yet the fossil horse would certainly have become rarer and rarer, and finally extinct; – its place being seized on by some more successful competitor. [258]

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

The defeat means destruction (93, 94) and the victory means the survival and leaving progeny (95):

93. ...plants on our gardens which can perfectly well endure our climate, (...) but they cannot compete with our native plants, not resist destruction by our native animals [58]

94. being beaten and supplanted by the naturalised productions from another land. [381]

95. In their new homes they will be exposed to new conditions, and will frequently undergo further modification and improvement; and thus they will become still further victorious, and will produce groups of modified descendants. [283]

The objectives of the struggle are the resources of nature (96) or the chance to leave progeny (97, 98)

96. The structure of every organic being is related (...) to that of all other organic beings, with which it comes into competition for food or residence [64]

97. [Sexual selection] depends not on a struggle for existence, but on a struggle between males for possession of the females; the result is not death of the unsuccessful competitor, but few or no offspring [73]

98. With animals having separated sexes there will in most cases be a struggle between the males for possession of the females. [378]

Now let us turn to a more in-depth analysis of the two specific metaphors: THE RELATIONSHIP AMONG ORGANISMS IS COMPETITION and THE RELATIONSHIP AMONG ORGANISMS IS WAR.

4.1. THE RELATIONSHIPS AMONG ORGANISMS ARE COMPETITION

There are good reasons to believe that the metaphor of competition is a blend, a complex integration network in the sense of Fauconnier and Turner (2002). The input space 1 (and the source domain of the metaphor) is the conventional image of human competition with the notion of success and failure, and desired objects that are gained by the winners. Relationships among living organisms occupying a certain area and having access to limited resources constitute the input space 2 (and the target domain). The generic space that allows Darwin to draw correspondences between these two input spaces comprises such elements as: a group of individuals occupying a certain area, their relation to each other, and limited resources desired by all members of a group. While the frame of competition (sometimes extended even to a race[8]) governs the resulting blend, it has a new quality. The objective

[8] The examples of the race metaphor are as follows:

1. Hence, rare species (...) will consequently be beaten in the race for life by the modified descendants of the commoner species. [91]

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

3. The inhabitants of each successive period in the world's history have beaten their predecessors in the race for life, and are, in so far, higher in the scale of nature... [278]

of competition in the state of nature is getting access to limited resources of the environment. Thus the success means survival and a chance to leave progeny, while defeat means extermination. Unlike the human competition, the competition in nature is the most severe between the allied and related individuals and species because they need exactly the same resources (99-102). What is more, the competition extends over generations: the unmodified and unimproved parent-forms are beaten by modified and improved offspring (105). Finally, Darwin claims that competition among organisms is a principle governing their relationships (103-106).

99. The struggle will generally be more severe between species of the same genus, when they come into competition [64]

100. The competition should be most severe between allied forms, which fill nearly the same place in the economy of nature... [64]

101. The competition will generally be most severe, as formerly explained and illustrated by examples, between the forms which are most like each other in all respects. Hence the improved and modified descendants of a species will generally cause the extermination of the parent-species; [259]

102. As the individuals of the same species come in all respects into the closest competition with each other, the struggle will generally be most severe between them; it will be almost equally severe between the varieties of the same species, and next in severity between the species of the same genus. [378]

103. But such a case would imply that one form had remained for a very long period unaltered, whilst its descendants had undergone a vast amount of change; and the principle of competition between organism and organism, between child and parent, will render this a very rare event; for in all cases the new and improved forms of life will tend to supplant the old and unimproved forms. [228]

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

105. I do not doubt that this process of improvement has affected in a marked and sensible manner the organisation of the more recent and victorious forms of life, in comparison with the ancient and beaten forms; but I can see no way of testing this sort of progress... [272]

106. The inhabitants of each successive period in the world's history have beaten their predecessors in the race for life, and are, in so far, higher in the scale of nature... [278]

The examples above illustrate the use of the metaphor THE RELATIONSHIPS AMONG ORGANISMS ARE COMPETITION. Now we turn to the metaphor THE RELATIONSHIPS AMONG ORGANISMS ARE WAR.

4.2. THE RELATIONSHIP AMONG ORGANISMS IS WAR

In his description of relationships among living organisms Darwin frequently employs military vocabulary which reflects the metaphor THE RELATIONSHIPS AMONG ORGANISMS ARE WAR. On several occasions he explicitly uses the word *war* referring to the struggle for life (107-110) and the word *battle* when talking about the relationships among organisms (111-116).

107. What a struggle between the several kinds of trees must have gone on during long centuries (...), what war between insect and insect—between insects, snails, and other animals with birds and beasts of prey—all striving to increase, and all feeding on each other... [62]

108. When we reflect on this struggle, we may console ourselves with the full belief, that the war of nature is not incessant, that no fear is felt, that death is generally prompt, and that the vigorous, the healthy, and the happy survive and multiply. [66]

109. The war is, perhaps, severest between the males of polygamous animals. [73]

110. Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of the higher animals, directly follows. [396]

111. Battle within battle must ever be recurring with terrifying success ... [61]

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

113. ....in the great and complex battle of life... [67]

114. How low in the scale of nature this law of battle descends, I do not know... [73]

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

116. ….so as to give them a decided advantage over other animals in the battle for life... [149]

Conceptualization of the relationships among organisms in terms of war had an interesting entailment: when talking about migration of plants or animals to new places, Darwin consistently depicts it as an invasion or conquest. The examples below demonstrate how richly this entailment is manifested in Darwin's language:

117. ….for in all countries, the natives have been so far conquered by naturalised productions, that they have allowed foreigners to take possession of the land. And as foreigners have thus everywhere beaten some of the natives, we may safely conclude that the natives might have been modified with advantage, so as to have better resisted such intruders. [69]

118. One large group will slowly conquer another large group, reduce its numbers, and thus lessens the chance for further variation and improvement. [103]

119. Moreover, when by sudden immigration or by unusually rapid development, many species of a new group have taken possession of a new area, they will have exterminated in a correspondingly rapid manner many of the old inhabitants; and the forms which thus yield

their places will commonly be allied, for they will partake of some inferiority in common. [260]

120. If two great regions had been for a long period favourably circumstanced in an equal degree, whenever their inhabitants met, the battle would be prolonged and severe; and some from one birthplace and some from the other might be victorious. [263]

121. The forms which are beaten and which yield their places to the new and victorious forms, will generally be allied in groups, from inheriting some inferiority in common... [264]

122.… bearing in mind that the tropical productions were in a suffering state and could not have presented a firm front against intruders, that a certain number of the more vigorous and dominant temperate forms might have penetrated the native ranks and have reached or even crossed the equator. The invasion would, of course, have been greatly favoured by high land, and perhaps by a dry climate... [305]

123. The mountain-ranges north-west of the Himalaya, and the long line of the Cordillera, seem to have afforded two great lines of invasion… [305]

124.…that all the flowering plants, about forty-six in number, common to Tierra del Fuego and to Europe still exist in North America, which must have lain on the line of march. [305]

125.… the case may have been wholly different with those intruding forms which settled themselves on the intertropical mountains, and in the southern hemisphere. [306]

126.…the northern forms were enabled to beat the less powerful southern forms. [307]

127. Just in the same manner as we see at the present day, that very many European productions cover the ground in La Plata, and in a lesser degree in Australia, and have to a certain extent beaten the natives;…. [307]

128.… a plant, for instance, would find the best-fitted ground more perfectly occupied by distinct plants in one island than in another, and it would be exposed to the attacks of somewhat different enemies. [324]

129. But we often take, I think, an erroneous view of the probability of closely allied species invading each other's territory, when put into free intercommunication. [325]

130. …for we should never forget that to range widely implies not only the power of crossing barriers, but the more important power of being victorious in distant lands in the struggle for life with foreign associates. [327]

The conceptual mappings are presented in Table 3.

Source domain **WAR**	**Target domain** **RELATIONSHIPS AMONG ORGANISMS**
battlefield	an area inhabited by organisms, natural environment
enemies/soldiers	species/individual organisms
victory	survival
victors	surviving species/individuals
weapons	modifications/improvements
invasion/conquest	appearance of organisms in a new area
yielding to an enemy	disappearance of organisms from an area they used to inhabit
natives/inhabitants of a country	organisms inhabiting an area
foreigners/intruders/ foreign troops	organisms migrating to an area
possession of a land	living in an area
beating	replacing indigenous organisms

Table 3. The conceptual mappings of the RELATIONSHIPS AMONG ORGANISMS ARE WAR metaphor

The presented material allows us to make a number of observations. The first observation is that as in the case of the metaphor of competition, Darwin indicates that the war and battle constitute a law or principle determining the relationships among living organisms (cf. 114). The next observation is that, according to Darwin, struggle takes place in the natural world both synchronically and diachronically: synchronically, because all organisms, at all times, are engaged in competition or war; diachronically, because new and more improved forms compete and win with earlier, less improved parent-forms. The third observation is that, as we can clearly see from the presented excerpts of Darwin's work, the general image triggered by the WAR metaphor is rather depressing, which Darwin himself convincingly expresses:

131. We behold the face of nature bright with gladness, we often see superabundance of food; we do not see, or we forget, that the birds which are idly singing round us mostly live on insects or seeds, and are thus constantly destroying life; or we forget how largely these songsters, or their eggs, or their nestlings, are destroyed by birds and beasts of prey; we do not always bear in mind, that though food may be now superabundant, it is not so at all seasons of each recurring year. [52-53]

132. The face of Nature may be compared to a yielding surface, with ten thousand sharp wedges packed close together and driven inwards by incessant blows, sometimes one wedge being struck, and then another with greater force. (381)[9]

The depressing image of the natural world is built not only by the metaphors of war and struggle, but also by a frequent occurrence of such words as *destroy* and *destruction* throughout *The Origin of Species*: these words occur 66 times altogether.

In spite of such a depressing picture, Darwin gives us a consolation that as a result of the struggle better forms are produced (133, 134)

[9] This sentence was removed from the 2nd edition of Darwin's work. This quotation comes from the 1st edition found in *Darwin: The Indelible Stamp* 2005.

133. When we reflect on this struggle, we may console ourselves with the full belief, that the war of nature is not incessant, that no fear is felt, that death is generally prompt, and that the vigorous, the healthy, and the happy survive and multiply... [66]

134. Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of the higher animals, directly follows. [396]

5. Conclusions

This analysis focused on only three structural metaphors employed by Darwin in to give flesh to his theory. These metaphors express only some aspects of his theory of evolution, namely the fact that modifications leading to appearance of new varieties and species are inherited, that changes are gradual so some organisms may be intermediate in form between species, and that relationships among organisms in the state of nature are a constant struggle which together with the Natural Selection are responsible for the survival of the fittest organisms.

Even such a limited study demonstrates how intertwined and complementary these metaphors are. The metaphor of struggle becomes combined with the metaphor of family when Darwin says that the struggle is the most severe between "family members", and the struggle for existence results in appearance of higher organisms which is a reflection of the UP-DOWN schema together with its axiological charge. This allowed Darwin to create a coherent presentation of his theory.

We also hope that this analysis supports Lakoff and Johnson's (1999:134) claim that abstract concepts and philosophical ideas are expressed by metaphors which "tend to be normal, conventional, relatively fixed and stable, nonarbitrary, and widespread throughout the cultures and languages of the world". As we saw, Darwin chose to flesh out his theory in the most basic and widespread conceptual metaphors that can be found in a society: FAMILY, TREE, and STRUGGLE. However, though commonplace in themselves, when combined they gave a new way to interpret the natural world.

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SUMMARY

The paper, couched within the framework of Cognitive Linguistics in general and theory of conceptual metaphors in particular, attempts to present metaphors employed by Charles Darwin in his famous book *On the Origin of Species*. The analysis focuses on three overarching structural metaphors: LIVING ORGANISMS ARE MEMBERS OF A FAMILY, RELATIONSHIPS AMONG ORGANISMS ARE A TREE, and RELATIONSHIPS AMONG ORGANISMS ARE STRUGGLE. The paper argues that the use of conceptual metaphors enabled Darwin to frame his theory of evolution in a coherent and comprehensive form.

Keywords: Cognitive Linguistics; conceptual metaphors; Darwin; theory of evolution

Iwona Góralczyk

On finite complement clause complementizers in English and Polish from a universalist perspective

1. Introduction

In spite of the widely acknowledged parallelisms in the conceptual processing of the complement clause scene in finite indicative complementation, attested for such languages as, for example, English, French or Polish, there are certain areas in this processing where a uniform treatment of such complements cross-linguistically appears at a closer inspection to be too far-fetched. In this paper we examine one such area, focussing on, as we believe, the contrasting roles of the English and Polish correlating structures ***that*** and ***że***/that respectively.

In particular, we shall claim that, if ***that*** indeed conforms , both in its form and function, to the pattern delineated for a correlating structure in a complex clause construction in a variety of cross-linguistic, synchronic and diachronic analyses, ***że*** remains a much more recalcitrant case in that respect.

The methodological framework adopted for the analysis is that of Cognitive Grammar, in the sense of Langacker (starting from 1987), we shall also make recourse to such, including non-cognitive, investigations of complementation, such as presented in Achard (1998), Givón.(1993), Kardela (2000), Noonan (1985), Wierzbicka (1988).

This paper is structured as follows. First, we briefly account for the conceptual processing encoded cross-linguistically as a complex clause

with an indicative complement. Then our focus is placed on the correlating structure *that* as well as on some facts concerning complementizers from other languages. The later sections centre on ***że*** and, further, ***to/i***t, with a view to corroborating the reanalysis we postulate for the status of the correlating structure in Polish. The paper closes with Conclusions.

2. Grounding, backgrounding and event integration in finite complementation

Of a particularly extensive, multifaceted research engendered in the area of complementation cognitive linguistic analyses of Langacker (1991, 2000), Achard (1998), Kardela (2000) respectively for the English, French and Polish data prove to provide substantial argumentation for the potentially universalist claims. Accordingly, they are the focus of the present section. Naturally, many pre-cognitive and non-cognitive investigations are compatible in their postulates and conclusions with the cognitive linguistic accounts and some such selected analyses are referred to when needed.

Let us introduce our presentation of conceptual processes characteristic for finite complementation with Noonan's (1985) observation, possibly universalist, that each complementation system of a vast number of languages and language families his typological studies cover, has a sentence-like complement type (*that* clause).

Proceeding now right to the most notable cognitive linguistic analyses we shall first enlarge on Langacker's (1991) account of complementation in terms of the **layering of semantic functions** on the verb, conveyed by the verb form. A finite clause complement verb is hence taken to provide information about the **process type** (T) , constituting the conceptual essence of the encoded situation, which is **instantiated** (I(T)), i.e. tied to specific participants and time address, which is further **quantified** (Q(I(T))) with respect to its internal structure, reflected grammatically as the verb's aspect and voice and, finally, **grounded** (G(Q(I(T)))), i.e. anchored in the setting and specific interlocutors participating in the speech event. Grounding is linguistically encoded as tense, modality and person markers (cf. Achard 1998:50 on the importance of person markers for the indicative

vs. subjunctive distinction in complementation). Examples (1-7) illustrate all possible complement verb forms in English, leading from the least to the most informative semantic layering of the verb form, i.e. (G(Q(I(T)))) for the indicative complement in (7):

(1) I let *go* of his hand.
(2) I made her *go.*
(3) I saw her *going*.
(4) I wanted her *to go* there.
(5) ? I wanted *for* her *to go* there.
(6) I insist that she *go* there.
(7) I said that she *went* there.

Concluding the above considerations, then, it can be stated that finite indicative complementation is unique in that it has its own access to the **ground**. The ground is the **vantage point** from which the subordinate event is conceptually processed. Such a construal means, in brief, that all the necessary conditions are provided for the event to be conceived as involving a full- fledged, **sequentially** construed process.

Such a temporal scanning is nevertheless superseded at a higher level, when the subordinate event is pushed into the background and viewed at a **greater conceptual distance**. Such **backgrounding**, or **subordination** is a *sine qua non* conceptual operation in complementation. Unique among complement forms, even when backgrounded, the indicative *that* clause retains its own 'window ' on the scene of the event and the speech act participants can still observe the subordinate process in a close-up fashion.

In his analysis Langacker ascribes a most powerful role in the above described conceptual processing of the scene of the complement event to the complementizer *that. That* is taken to act as an **atemporalizer**, or even a **nominalizer** via which the backgrounding is achieved.

" Each complementizer takes a clause some distance along the path leading from a processual to a nominal profile." Langacker (1991:40). We shall return to this issue in the next section.

We can now plausibly sum up all the issues raised in Langacker's analysis of the indicative *that* complement in the following fashion: in

observing what is evidently a fully processual profile of a finite clause verb, with a grounding predication providing a viewing frame, or a window through which the event can directly be observed, a conceptual "step back" is taken, enforced by the complementizer, which allows for a holistic construal of the event from a conceptual distance, reducing the event to a subordinate one, accessed now also via the viewing frame of the main process.

Achard (1998), in turn, handles finite complementation from the other end, so to speak, i.e. via the conceptual dynamics of **event integration**. In particular, the essence of complementation is under Achard's analysis defined as such a **construal** of the conceptualized scene in which two single events are combined to form a complex one. The core meaning of various complement constructions is thus derived directly from "(...) conceptual dynamics of the integration of a subordinate event into the main event along different dimensions of construal." Achard (1998:29). The dimension of construal directly pertaining to finite complementation is **perspective**, especially in its two aspects, i.e. the **vantage point** and the **viewing arrangement**. Achard demonstrates how the former serves to distinguish **main-clause subject-**oriented from the **speaker**-oriented constructions in French, illustrated respectively in (8a) and (b) below:

(8) (a) *Le professeur fait rire ses étudiants.*
'The teacher makes his students laugh.'
(b) *Le professeur crois que ses étudiants rient (de lui)*
'The teacher believes that his students are laughing (at him).'

The latter dimension of construal proves important, yielding two contrasting types of conceptual arrangements which are under Achard's view instrumental in infinitival and finite complements in French.

The complex conceptualizing relations for **all complement types** can be summarized in the following **schema of complementation** (Achard 1998:65):

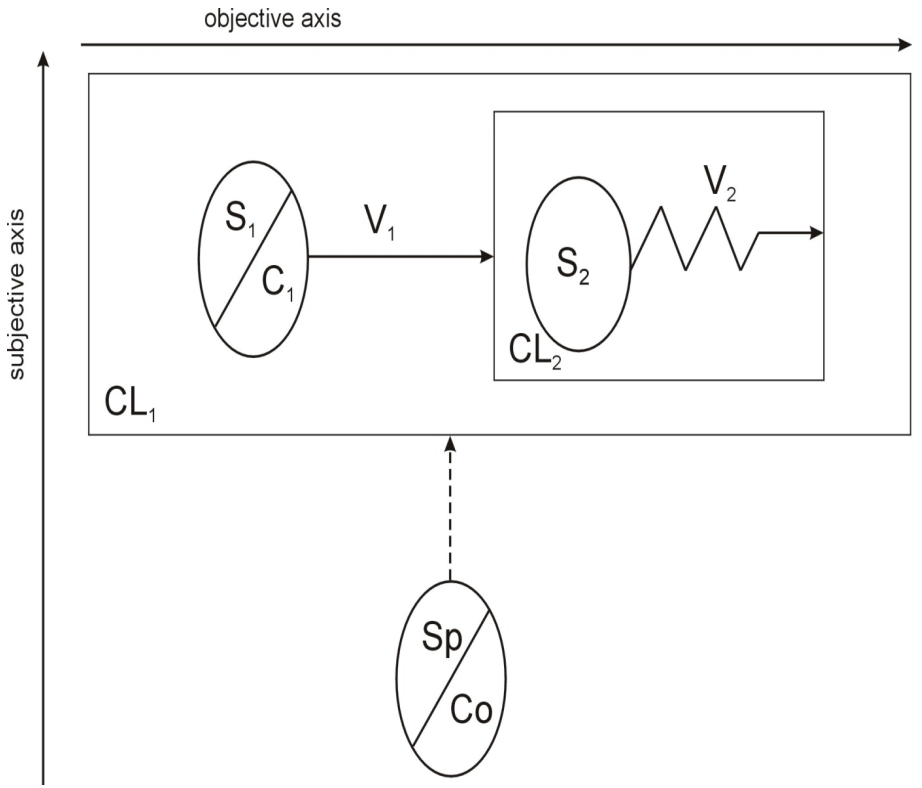

Fig.1. The conceptual schema of complementation

The outer rectangle CL_1 in Fig. 1 represents the whole complex clause, with V_1 as the main verb. The inner rectangle stands for the complement clause, with V_2 as the subordinate verb. Referred to above, the potentially dual role of the speaker is marked as Sp/Co (Speaker and Conceptualizer). CL_1 is here presented as his conceptualization, as indicated by the dashed arrow. Alternatively, when the main clause subject acts as both the subject and the conceptualizer – marked as S_1/C_1, CL_2 represents his conceptualization. Note the direction of the arrow. On Achard's analysis, the two construal relations signalled in the schema represent two **axes of viewing arrangement**, subjective and objective, indicated

by the arrows outside CL_1. Along these axes varying values of viewing configurations are possible for particular constructions.

Narrowing our considerations down to finite complementation we shall re-analyse Figure 1 to include only those configurations that directly pertain to our interests, see Fig. 2
(Achard 1998:188):

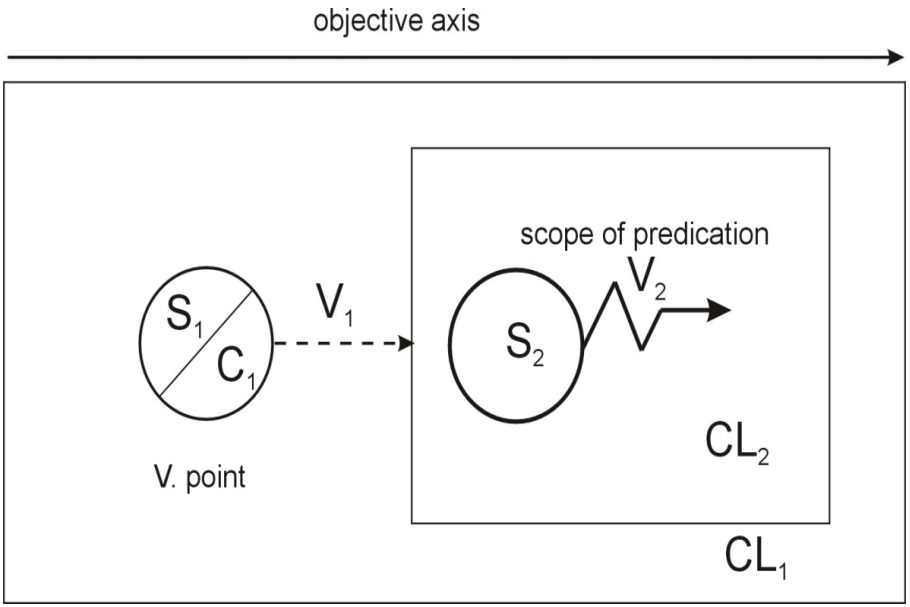

Fig. 2. The conceptual arrangement in finite complementation

The figure marks the fact that finite complements reflect the conceptualization of the main-clause subject, hence S_1/C_1, the role of the speaker Sp, neglected in the figure, is solely that of a reporter of S_1/C_1's conceptualizing presence vis-à-vis the subordinate event. In other words, the main conceptual relation remains to be the one between S_1/C_1 and the complement event scene, or what " C_1 externalizes as an object of conceptualization." (Achard 1998:187). This relation is further described as the **objective viewing arrangement** (**OVA**) along the objective axis, measuring the degree of **objectivity** between the **subject** and the **object** of conceptualization. Under the OVA maximum

asymmetry is retained between C_1 and S_2, as noted in the figure. S_2 is kept at a **full conceptual distance**, clearly conceptually delineated, its separate identity not blurred.

It is important to enlarge on the role of the complementizer *que* in Achard's framework. In a conceptual process identical to that proposed by Langacker *que* is taken to enhance the independence of the subordinate event from the main event, also causing it to become "more noun-like". Importantly for the present paper, Achard never seeks parallelisms to *that* in the historical development of *que* .

Finally, Kardela's (2000) account of Polish complementation assumes full applicability of Achard's analysis to the Polish data. Thus, the vantage point and the viewing arrangement are found to be explanatory dimensions of construal for the Polish structures as well. Accordingly, (10) below delivers the conceptualization of the subject of the main clause *Piotr* engaged in the conceptual effort directed to the complement scene *Marysia to widziała*, the relation between S_1/C_1 and CL_2 expressed linguistically as *sądzić*.

(10) *Piotr sądzi, że Marysia to widziała.* (IND)
'Peter thinks that Mary has seen that.'

On Kardela's analysis the conceptual relations characterizing the scene of the complex event encoded as (10) involve evaluation along the objective axis, being a case of the OVA along that axis, with the speaker's presence not reflected in any way in the conceptualization of the whole speech situation.

Kardela's account further incorporates Givón's (1993) analysis of complementation in terms of the strength of a semantic bond imposed by the main verb over the complement event and its reflection in terms of the degree of event integration and eventually in the syntactic form of the complement.

Let us note at this junction that indicative *that* clause is in such light characterised as the **least integrated** complement type, retaining much conceptual and syntactic **independence** from the grip of the semantics of the main verb, measured by means of a number of parameters Givón (1993) proposes in his descriptions. That iconic relation between the least integrated form of the complement and its relatively greatest

conceptual freedom is also reflected in the role of the complementizer in a finite clause complement. Under such view the complementizer acts as a buffer between the two integrated evens, iconically encoding the (relatively) considerable conceptual distance on the scene of the complex event.

Summarizing our line of reasoning so far let us state that, as evidenced in typological studies of a number of languages, possibly every linguistic system has a finite indicative complement type. Further, as convincingly argued in some cognitive linguistic analyses conceptual processing of an event scene encoded as a multi-clausal construction involves mechanisms of conceptual backgrounding together with the dynamics of event integration along a variety of conceptual dimensions, such as perspective and grounding, important for indicative *that* clauses.

3. *That* as a complementizer

Bearing in mind the powerful role afforded to *that* in Langacker's research recalled in the previous section let us start our analysis with the observation that in the investigations of some linguists (cf. Noonan 1985, Wierzbicka 1988) the function of *that* seems to be at least partly derived from its diachronic characteristics. Briefly, the story of *that* squares with the following, universalist generalizations:

> "Typical of hypotactic developments is the recruitment to connective function of deictics and other demonstratives. The motivation here is the extension of deictic reference from entities referred to in the non-linguistic world to anaphors and cataphors of NPs and then to anaphors or cataphors of propositions (clauses). In other words, deictics may be used for meta-linguistic functions involving clause reference in order to achieve overt linking of clauses. Clause linkage markers are in their origins motivated by speaker's desire to be clear and informative, particularly to give directions to hearers for interpreting clauses in terms of their linguistic environment." Hopper and Traugott (1993:178).

Thus, to present a full picture of the form and function alignment in *that* we need to make recourse to the original meaning of *that* and the process of its grammaticalization.

To begin with grammaticalization itself, it can be most generally defined as the process whereby items or constructions, i.e. words from such major (lexical) categories as verbs, nouns or adjectives, assume in certain contexts a more grammatical function and become minor (grammatical) categories: prepositions, adverbs and auxiliaries, and, if the process continues, the grammaticalizing expressions as a result take on an even more grammatical meaning and increased grammatical function, for example, that of a **complementizer** or an affix (cf. Hopper and Traugott 1993, Lehmann 1995).

Complex clauses with *that* complements originated as an Old English **þæt... þæt** structure. See (11), quoted in Hopper and Traugott (1993:185):

(11) *Ða on morgenne gehierdun **þæt** þæs cyninges*
when/then in morning heard-PL DEM DEM:GEN king's
*þegnas þe him beæftan wærun **þæt** se cyning ofslægen wæs,*
thanes who him behind were COMP the king slain was
þa ridon hie þider.
then rode they thither
'When in the morning the king's thanes who had been left behind heard that he had been killed, then they rode up there.'
(Chron A (Plummer) 755:23)

The example points out the pronominal sense of the first *þæt*, anticipating what functions as an appositional clause, marked off with the second *þæt*, in a hypotactic structure, best captured as (12) below (ibid.:186):

(12) Then in the morning the king's thanes heard this
(these thanes had been left behind earlier)
that the king had been slain.
Then they rode up there.

In the light of Hopper and Traugott's analysis, ***þæt... þæt*** pattern is a combination of a **demonstrative** pronoun and a resumptive **demonstrative**. The motivations for such structuring should be sought in the oral nature of early communication and, as already referred to,

the need to clarify the links between clauses in the flow of speech as a discourse strategy . Hopper and Traugott (1993:187) conclude as follows:

> "It appears that the complementizer *þæt* started out as a "copy" in the margin clause of the object pronoun in the nucleus. It was reanalyzed from a pronoun which was a constituent of the matrix clause to a complementizer that had a whole clause within its scope."

Summarizing the main claims in this section it will be stated that it is not accidental that it is a deictic structure, capable of functioning pro- and prenominally, that has been recruited in English to correlate two component events on a complex event scene. Such a character of the complementizer is coherent with conceptual mechanisms operating in complementation described in the previous section. Finally, let us note the universalist validity of the diachronic research of Hopper and Traugott (1993).

Let us also note in passing the pronominal functions of *que* in current French, or the diachronic link to a deictic form of *dass* in German, for that matter.

4. Że/ that as a complementizer

Such universalist observations are lost when confronted with the Polish data. It is doubtful whether we can felicitously place *że* in a diachronic context presented in the previous section for *that* or a pronominal/deictic current use of *que*. The origins of *że* remain obscure. Rather than seek its pronominal origins, it seems justifiable to capture the story of *że* as follows. *Że* originated as an emphatic clitic, just as in *tenże, tamże, aliż, niżeli, jenże, którąż,* etc., and then continued in its independent usage, assuming the function of a conjunction. Such a development is not unusual in the history of Polish (Klemensiewicz, Lehr-Spławiński, Urbańczyk 1955, Klemensiewicz 1974).

Interestingly, a close synonym of *że* in modern Polish, selected instead of *że* in some contexts, i.e. *iż*, can in actual fact be linked to pronominal roots, as it originated as a morphemic idiom made of ***i*** (the nominative singular masculine third person pronoun in OCS) and an

emphatic clitic ***że***. ***Iże*** was first recorded as the relative pronoun in the Lord's Prayer in OCS "Otьče našъ, iže esi na nebesěchъ..."

If we limit ourselves to *że*, however, we are forced to admit what has been previewed in the introductory section of the present paper, namely that claiming a uniform treatment of complement facts cross-linguistically is not justified for Polish in so far as its choice of the complementizer is concerned. Bearing in mind a crucial conceptual role of the conceptualizer, referred to in many analyses, *że* becomes a heavy argument against the widely adopted universalist perspective in the research on complementation.

5. An alternative to the rescue

The re-analysis we propose in the present paper for the status of *że* is inspired by an intriguing alternation between ***że*** and ***to/***it with the finite *that* complement type in Polish. (cf. Góralczyk 2009).

It seems that the co-occurrence of *to* and *że* in a correlating structure *to*, *że* is systematic: sometimes *to* is obligatorily retained (as in 13−17), in other contexts it is obligatorily omitted (see 18−20), its optional co-occurrence in *to, że* sequence is hence limited (note 22−24):

(13) *Chodzi o to, że wykorzystał swoje stanowisko do wzbogacenia się.*
'It is all about the fact that he took advantage of the post he held to get personal financial benefits.'

(14) *Miał na myśli to, że nie popełni ponownie tego samego błędu.*
Lit. '[He meant that he would not make the same mistake twice.]'

(15) *Student tłumaczył swoją nieobecność nauczycielowi tym, że był chory.*
'The student explained his absence to the teacher by the fact that he was ill.'

(16) *Liczy na to, że dostanie nagrodę.*
'He is counting on getting a prize.'

(17) *Lubię to, że czytasz, ale czy zawsze muszą to być Harlequiny?*
'I like the fact that you read a lot but why does it always have to be some Harlequins?'

(18) *Mówił (*to), że już jej nie kocha.*
'He said that he didn't love her any more.'

As noted by W. Kubiński (personal communication), in (18) the ellipsis is no longer obligatory if the main clause is negated, see (19):

(19) *Wcale nie mówił tego, że już jej nie kocha.*
'He didn't say that he didn't love her.'
(20) *Krzyczała / wyszeptała / powiedziała / zaszlochała (*to), że ma już wszystkiego dosyć.*
'She screamed / whispered / said / wept (*that) that she had enough.'
(21) *Liczy, (*to) że dostanie nagrodę.*
'He counts on getting a prize.'
(22) *Nie mogę zagwarantować (tego), że się nie spóźni.*
'I cannot guarantee that he will not be late .'
(23) *Jaś martwił się (tym), że grzmiało i błyskało.*
'John was worried that there was thunder and lightning.'
(24) *(To) że kłamiesz, (to) (ja) wiem.*
'lit.[That you are lying [that] I know.]

Consider further the patterns with and without ellipsis exhibited in (25 a, b, c) and (26 a, b, c) below (Słownik Staropolski, Słownik Polszczyzny XVI w.):

(25) (a) *Werzisz w **tho**, czlowecze, **iz** Iezucristh prawi czirpal za nasz rani…*
'Do you believe in that it was right for Jesus Christ to suffer for our wounds…'
(b) *Wyerzø **temu**, **yże** angyol bozi gest s nym…*
'They believe in that God's angel is with him'
(c) *…którą y Chriftus zálecal/**tak** mowiąc: **iż** prawdziwi chwalcy/chwalą Bogá oycá w duchu y w prawdzie…*
'…which has been encouraged by Christ as well, who said that those praise God the Father rightly who praise Him in their spirit and righteousness:'
(26) (a) *Widzcze, **isz** slotky iest gospodzin …*
'Notice/see that our Lord is sweet.'
'Videte, quoniam suavis est dominus.'

(b) *Poczęły wschemu lyvdv povyedącz rzękacz* ***ızesmy*** *vydzyely y schlyschely anyely movyącz …*
'They began to talk to all the people saying that we saw and heard the angels say …'

(c) *Nie dofyć ieft człowiekowi walczącemu* ***iż*** *zwycięftwo otrzyma…*
'It is not enough for a warrior that he gains victory…'

Turning back to Modern Polish again, note that *to* seems often to be retained in the **formal register**, as in (27-28), which are quotations from election campaign speeches of Polish politicians:

(27) *Głęboko wierzę w to, że…*
'I deeply believe that…'
(28) *Polacy dość mają tego, że…*
'Polish people have had enough of….'

or in otherwise **emphatic contexts**, such as forceful promises, or emphatic articulation of the point:

(29) *Obiecuję to, że…*
'I promise that…'

Connected to the emphasis mentioned above is the functioning of explicit *to* in situations where **contrasting** one aspect against another is involved, see again (17).

In the syntactically complicated structures, as in (15), repeated here as (30) below, *to* makes it explicit in which place the **new information** is being introduced:

(30) *Student tłumaczył swoją nieobecność nauczycielowi tym, że był chory.*
'The student explained his absence to the teacher by the fact that he had been ill.'

In parallel, the lexemes which in their meanings encode '**making sense of the semantically complicated contexts**' component often obligatorily co-occur with *to*, see (31-33):

(31) *Chodzi o to, że…*
'It is about the fact/It amounts to…'
(32) *Miał na myśli to, że…*
'He meant…'
(33) *Wszystko wskazuje na to, że…*
'All this points to…'

By the same token, *to* is not absolutely necessary in contexts, where it is relatively easy to notice the place in which the new information starts to be distributed, e.g. reporting somebody's message, or when the essence of the message is straightforward:

(34) *Powiedział, że przyjedzie.*
'He said that he will come.'
(35) *Twierdził, że nic o tym nie wie.*
'He said he knows nothing about it.'

Interestingly, some verbs of saying, as *twierdzić* above, *zaznaczyć,* etc. and most, if not all, verbs coding the mode of saying, as *krzyczeć, (za)szlochać, (wy)mamrotać, (wy)szeptać,* disallow *to* altogether, see again (20) , repeated here as (36):

(36) **Wyszeptała / wymamrotała / załkała to, że ma już wszystkiego dość.*
'She whispered, murmured, cried that she had enough.'

The non-uniformity exhibited in (34), (35) and (36) appears to involve the basic opposition between the focus on **what** is being articulated carried by *to* and the focus on **how** it is being articulated, encoded in the verbs in (36). Other verb classes are also not that uniform in their restrictions; for example, the following assessment verbs differ in their acceptability of *to*:

(37) *Przypuszczam /(**to*), że on ma rację.*
'I suspect that he is right.'
(38) *Jestem przekonany (o tym), że on ma rację.*
'I am convinced that he is right.'

Finally, *to* is always retained with the **preposition** if *że* clause follows. The semantic interpretation of such syntactic stipulations would run along the lines determined by Kardela (2000) for *do tego, żeby* structure, involving the image schemata and the meaning of a preposition with *to* elaborating the preposition's salient substructure, locating it precisely on the processual route.

Note, finally, that the *to*/*że* distribution has been long noticed in the tradition of generative grammar and especially in its transformational-generative version, captured by means of the transformation of Extraposition (cf. Kalisz 1981).

Concluding this section it can be stated that it seems justifiable to study Polish complementation also from the angle of a relatedness between what is traditionally referred to as the complementizer *że* and the pronominal *to*/it . Pending direct conclusions in the next section we shall re-cast the distribution of *to* in terms of retaining it or omitting in various contexts enlarged upon above.

6. Conclusions

Precisely what is stipulated with respect to the complementizer in the indicative complement type in Polish in the present paper can be formulated as follows: it is not *że* but *to*/it which is a true atemporalizer or nominalizer, so a true complementizer in Polish, either retained or, optionally or obligatorily, omitted, depending on the context. The role of *że* will under such view be limited to signaling that conceptual subordination has taken place and making explicit the direction of the superordinate - subordinate sequencing of component events.

The advantage of such a re-analysis of the status of both *że* and *to*/it is obvious. If with the advent of Cognitive Linguistics seeking linguistic universals has lost some of its appeal, one cannot escape noticing that seen through the prism of the above postulated solutions Polish data seem now to square with certain cross-linguistic generalizations.

Finally, it remains to be admitted that, even if we do put forward some postulates and offer some potential solutions to the problem

raised in the present paper our objective is to pose questions rather than provide answers. We hope that the cumulative evidence of the data presented in this paper throws some light on some aspects of complementation that, we feel, have so far been neglected.

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SUMMARY

One of the approaches to complementation phenomena is through the prism of the complementizer. This paper aims to put *że/that* in a cross-linguistic perspective, based on both synchronic data and diachronic developments. The analysis we develop postulates a re-analysis of the status of *że/ that* in the Polish indicative complement type. Universalist argumentation leads us to suggest that it is *to/it* and not *że/that* that operates like a 'true' coplementizer in Polish.

Keywords: complementizer, backgrounding, subordination, conceptual distance, objective viewing arrangement, main-clause-subject-oriented construction

Aleksandra Górska

The genre of Instant Messaging

1. Introduction

Computer-mediated communication has attracted the attention of linguists from the very beginning of its existence (for the history of research in CMC c.f. e.g. Herring, 2002). It was not until relatively recently, however, that their attention turned to instant messaging – one-to-one, real-time, computer-mediated communication. It is not surprising; while other modes of communication that emerged within the domain of the Internet struck researchers as being new means of human communication (e-mail, multi-user chatrooms, WWW pages, newsgroups or blogs to name but a few) instant messaging, with its turn by turn one-to-one format must have seemed unchallenging. However, studying one-to-one interactions has its analytical advantages, such as the two given by Murray (1989):

> First, because of the technical constraints on computer conversation, parties do not have to allocate turns; they can be 'taken' more or less at will. Second, interactants have access only to messages specifically sent to them and do not receive interactions between other parties (Murray, 1989: 25).

What is more, a more in-depth analysis, reveals that IM is not only a less convoluted version of the internet chat, but a separate discourse genre in its own right.

2. Computer-mediated communication and computer-mediated discourse

Computer-mediated communication is a term coined to cover any type of data transfer between two or more computers. Understood as such, the term CMC may refer both to human-to-human communication as well as to human-computer communication. However, the term CMC is very often used in a more restricted sense of human-to-human communication facilitated by computer-mediated formats, such as e-mail, discussion boards or instant messaging. The majority of thus defined CMC is text-based, although voice and video communication is also available and considerably popular.

Computer-mediated discourse is a term used to refer to computer-mediated communication in the sense of human-to-human communication, when the focus is on the 'language and language use' (Herring, 2001: 1). The primary channel for language in CMD is visual; the text is mostly typed. While it is produced through writing, CMD exhibits 'features of orality' (Herring, 2001:6), that are discussed in the following sections. As such it presents an 'opportunity to examine again the relationship between written and spoken language' (Ferrara et al. 1991:22). At the same time, researchers speak of 'media effect' on CMD (Herring, 2001:2), that is, it is not enough to observe that the language is written (typed); the electronic medium influences CMD, making some genres similar to written discourse, while others completely different. The features of particular genres are determined by the software used for communication and the context of use. In CMD they are referred to as modes of communication, that is, types of communication that are determined by the system used.

2.1. Features of CMD

Regardless of the modes, CMD analysts have observed some features of CMD that make it an independent new discourse type. CMD exchanges are, by default, faster than written language, but slower than spoken, due to the character of typing (Chafe, 1982:36). CMD allows concurrent communication among multiple users (Herring, 2001:3). This not only means that within a given channel more than

one conversation may take place at the same time, in the manner similar to conversations during a dinner party, where what starts off as a single conversation may break into individual conversations among two to three participants. CMD allows a singular participant to take part in more than one conversation at the same time, in that he or she contributes to, or takes turns in, more than one conversation. This is beyond human abilities in any type of oral conversation. This feature has a significant influence on the characteristics of CMD.

Another feature pointed out by CMD researchers is that while CMD is considered a lean medium (Daft – Lenge, 1984), with only the visual channel active, its users find ways to make it meet their expressive needs. Among the strategies employed by CMD users is the use of non-standard language. Ferrara et al. (1991) have found that in IM exchanges grammatical forms like pronouns (mainly subject pronouns), articles, and finite forms of the copula are often omitted, while abbreviations and symbols are used freely. According to Herring (2001) this allows users to save time while typing, manifest their individuality and creativity, and gives the communication a spoken-like quality (Herring, 2001:5). Du Bartell (1995) observes that this is a deliberate strategy on the part of CMD users, who aim at a type of discourse that is 'written yet informal, spontaneous and conversational' (Du Bartell, 1995:234), and the non-standard structural and orthographic representations serve this purpose.

Another strategy employed to remedy the constraints of a lean medium is representing non-linguistic cues such as prosody or laughter by means of typed text (Herring, 2001:5). Emoticons, also referred to as 'smileys', or 'smiley faces', i.e. key combinations supposed to denote facial expressions (e.g. a colon and a closing bracket denotes a smile :)), all capital letters, referred to by users as 'caps', or repetitive key strokes are among the strategies employed to represent non-linguistic cues (Du Bartell, 1995:233). Excerpt (1) includes non-standard spelling and punctuation, fragmentation, repetitive keystrokes, laughter and capitalised words for stress or loudness. All examples provided in the present paper come from a corpus of IM exchanges created by the author as a part of her PhD project.

(1) *A 2002-03- 19:42 what kind of teaching and the focus of your thesis?*
A 2002-03- 19:42 or what ages?
B 2002-03- 19:43 private highschool; 18-19 y o girls, god help me
A 2002-03- 19:43 ohhhh tough
B 2002-03- 19:43 they're gonna SO love me by the time I've finished with them HAHAHAHA [jb 70-74]

Moreover, unintentional use of all capital letters is always commented on, since IM users perceive it as shouting, as In (2).

(2) *A 2002-03- 23:35 NOT TOO BAD*
U?
CAPS IS STUCK ON
B 2002-03- 23:36 i see, i thought u were shouting at me; my friend does that :)) [Wllm 164-165]

Both non-standard language and text representations of laughter and prosody give CMD a sense of orality (Herring, 2001:6).

This sense of 'orality' is related to yet another paradox observed in CMD, namely its duality, manifested in that while the audience in the interactions is unseen and often unknown, users perceive the contact as direct and often 'private' (King, 1996). The reason for this phenomenon is embedded in the 'oral', or spoken-like character of the language in many modes of CMD. Wilkins (1991) makes an interesting claim that it may be the spoken-like and draft-like quality of the language within CMD that gives the users the impression of intimacy. First of all, she puts forward a hypothesis that participants respond to the conversation-like character of synchronous CMD on an emotional level, in a way associating orality with intimacy and a sense of sharing (Wilkins, 1991:72), which is consistent with Tannen's (1982:2) observations on oral tradition. Secondly, all the disfluencies, repetitions, and the tendency to rewrite rather than edit before sending (Wilkins, 1991: 60; Ferrara et al. 1991:25) allow the audience 'a window into the process of creation', and with this create a sense of self-disclosure and intimacy (Wilkins, 1991:72).

2.2. CMD modes

While the early takes on CMD analysis treated it as a unified phenomenon, there exist many genres and registers within CMD. The most fundamental division is that between synchronous and asynchronous CMD. Synchronous types of CMD are produced online, which means that the users have to be logged on simultaneously, and communication takes place in real time. This places a significant time constraint on the users (Chafe – Danielewicz, 1987:12; Ferrara et al.1991: 14), which in turn influences structural complexity of messages (Herring, 2001:6). Ko (1996) found that the language in synchronous CMD is structurally and lexically less complex than either speaking or writing. The ratio of nouns to verbs and the use of attribute adjectives is lower in CMD than in either of the two. She also found fewer complements, more stranded prepositions and shorter words than in writing (Ko 1996). This is not entirely surprising once one takes into account the amount of effort involved in the production and processing of typed text, with the time constraint being present. Synchronicity implies turn taking, and turn taking in synchronous CMD is another feature that separates synchronous CMD from other discourse types. The adjacency of turns is disrupted, and feedback is limited due to the lack of audio-visual cues (Herring, 2001:7). These apparent differences have misled some researchers to claim that adjacency does not apply to CMD (Garcia – Jacobs, 1999). Discourse produced in synchronous modes is also more ephemeral, in that the text of interactions scrolls up the screen (Herring, 2001:3). Instant messaging or chat are examples of synchronous CMD, while news board or email are examples of asynchronous CMD.

Synchronous CMD can be further categorised into one-way or two-way message transmission systems (Cherny, 1999). In one-way message protocols, or split-screen protocols, messages are displayed character by character, as was typical of early messaging systems such as TALK and ICQ in its early days. Each user has a separate window in which his or her contributions appear, hence the name – split screen protocols. In two-way protocols the interaction takes place message by message, as in IRC or IM protocols, and the sent messages appear consecutively in the common posting box. Another feature that

changes the shape of discourse within CMD is the number of participants. It has been stated earlier that CMD allows multiple participants to take part in multiple interactions simultaneously. Thus, CMD may be a product of one-to-one, one-to-many and many-to-many communication. Among the features that further influence the language of different modes of CMD are limits on message size, and persistence of the text. Protocols such as IRC used to limit the number of characters that could be entered in a single message, however most contemporary tools such as AOL Messenger, Polish GaduGadu or the IM feature of popular Skype, do not. Limiting the size of messages significantly influences the structure of messages – users either have to strive to be concise, or mark that they are sending only a part of their turn. As for the degree of persistence, i.e. how long the users have access to previously written messages, most protocols, keep the log of the ongoing interaction, so that each user may scroll up to see what was sent earlier. In others, messages disappear as soon as they scroll up the screen. Last but not least, as with any discourse type, circumstances, such as purpose and formality influence the structure of CMD discourse. For instance, within a single mode of e-mail, formal e-mails differ in structure from informal e-mails, and work-related emails are different from private e-mails. However, the norms have evolved over time, and even nowadays e-mail users experience problems deciding on the degree of formality required in the e-mails they send.

Features of a mode are determined by the messaging protocol used, as well as the norms of use developed by the community of users, its social and cultural context (Murray, 1988). Nonetheless, it was common for researchers to make claims about CMD as such, while in fact they analysed certain CMD modes, such as email (Du Bartell, 1995), chat, news boards (Davis – Brewer, 1997), or e-messaging (Ferrara et al. 1991).

3. The spoken/written dichotomy

One of the first features to be noticed by both linguists and lay users of computer-mediated communication alike is its perceived duality. On the one hand, the language is written, in the sense that its users have to

type in their message in order for the communication to take place. On the other hand, however, it has the spoken-like quality that strikes lay users and researchers alike (IM users refer to IM exchanges as *convos*, which is a lazy spelling of *conversations*, c.f. e.g. *Point in case,* 2005; *Albino Blacksheep,* 2005; *Geocities,* 2005). In this section the issue of medium and its implications for the character of discourse is addressed.

The popular view on the spoken/written dichotomy among linguists is that the differences between the two types of discourse go beyond the matter of the medium (Chafe, 1982: 35). For example, since writing gives its producer more time to control the form and content (Ochs, 1979:55; Chafe, 1982:37) it has often been argued that written language is more structurally complex than spoken language (Kroll, 1977; Chafe, 1982; Chafe – Danielewicz, 1987). Nonetheless, an overlap of features is possible, since spoken and written discourses, far from being unified phenomena, each exhibit 'multiplicity of styles' (Chafe – Danielewicz, 1987:4). Among the features that may influence the form of a text sample there are the context, the purpose, and the subject matter (Chafe – Danielewicz, 1987:5). As a result, written language may have a distinctive spoken-like quality, while spoken language may seem written-like (Tannen, 1982:4).

Chafe (1982:36) points out two fundamental differences between speaking and writing:

1. speaking is faster than writing.
2. speakers interact with their audiences directly, while writers do not.

Each of these issues is paramount to the analysis of spoken and written language and needs to be discussed separately. Since the first point turns out to have much stronger implications, it is discussed here as second, while the issue of interaction as a source of involvement of speakers, versus the detachment of writers, is discussed first.

The feature that Chafe (1982) singles out as determining the character of spoken and written discourse is the level of interaction. Certainly until the advent of CMC, speakers interacted with their audiences to a much greater extent than writers. This resulted in a high level of involvement on the part of speakers, as opposed to the detachment of writers (Chafe, 1982:45). First person reference (*I*, *we*,

me, *us*), markers of speaker's mental processes (e.g. *I think*), monitoring of information flow (*you know*, *I mean*), emphatic particles (*just*, *really*), fuzziness (*and so on*, *sort of*) and direct quotes, as well as adverbials of time and space are all markers of speaker involvement (Chafe, 1982: 45-48; Chafe – Danielewicz, 1987:23; Biber, 1988:255). Detachment, on the other hand, is manifested in the use of nominalizations and passive voice (Chafe, 1982:45). The involvement/detachment opposition is not, however, the only implication of the issue of interaction. Its other implication is the speed of communication.

Chafe observes that 'handwriting characteristically takes place at slower than one-tenth the speed of speaking', while typing is faster than handwriting, but still slower than speaking (Chafe, 1982:36). This disproportion results in fragmentation of spoken language as opposed to integration of written language. Fragmentation is manifested in 'the stringing together of idea units' without connectives, or by means of coordinating conjunctions, such as *and*, *but*, and *so* (Chafe, 1982:38). Integration is achieved by means of nominalizations, present and past participles, attributive adjectives, conjoined phrases (verb, adjective and noun phrases), series, sequences of prepositional phrases, complement clauses and relative clauses (Chafe, 1982:39-44; Brown and Yule, 1983:15-16). While Chafe's characterization of spoken and written language is based on a study of a corpus of spoken and written discourse, he is often criticized for the lack of sensitivity to register, in that his written sample was a sample of very formal language (academic papers), while his spoken sample was a number of recorded dinner-table conversations (Chafe, 1982). In fact, Beaman, who studied spoken and written narratives, discovered that the language of both her samples was comparably complex (Beaman, 1984). Other studies of spoken and written language (cf. e.g. Brown and Yule, 1983; Johnstone, 2002; Ochs, 1979; Stubbs, 1983; Tannen, 1982, 1984) reveal that it is formality and purpose (Beaman, 1984:46), rather than mode or channel, that determine register (the term *register* is used here in the sense that Biber, 1994 uses it). Some researches (e.g. Ochs, 1979) focus on the contrast between planned and unplanned rather than spoken and written discourse. On the other hand, Chafe and Danielewicz have found vocabulary in written discourse to be consistently richer than vocabulary in spoken discourse, which is manifested in higher

type/token ratio for samples of written discourse types, style notwithstanding (Chafe – Danielewicz, 1987:7).

By far the most methodical and thorough approach to the problem of discourse genres to date is that undertaken by Douglas Biber (1986, 1988, 1992). Using computer-based corpora of several discourse genres, including face-to-face and telephone conversations, prepared and spontaneous speeches, broadcasts, fiction, private and professional letters, as well as humanistic and technical academic papers, he performed a multi-dimensional analysis of a great number of linguistic features including all those studied in the works mentioned in the paragraphs above (For the full list of linguistic features included in the analysis see Biber, 1988:73 ff). By means of statistical techniques, especially factor analysis and cluster analysis, he established six dimensions, along which spoken and written texts may vary. Table 1. is a summary of the dimensions of linguistic variation among English texts (adapted from Biber, 1988, 1992).

Dimension 1:	'Involved vs. informational production';
Dimension 2:	'Narrative vs. non-narrative concerns';
Dimension 3:	'Explicit vs. situation-dependent reference';
Dimension 4:	'Overt expression of persuasion';
Dimension 5:	'Abstract vs. non-abstract style';
Dimension 6:	'On-line informational elaboration'.

Table 1. Dimensions of linguistic variation (adapted from Biber 1988, 1992)

Biber's analysis reveals that there is no absolute divide between spoken and written discourse. Dimensions 1, 3 and 5, i.e. 'Involved vs. informational production', 'Explicit vs. situation-dependent reference' and 'Abstract vs. non-abstract style', seem to capture the distinction between spoken and written discourse. Involvement, situation dependence and non-abstract style are the features of spoken discourse. However, e.g. private letter score high on the scale of involvement, while prepared speeches score low, interviews exhibit explicit reference, while the scores of fiction are relatively low, etc. (Biber, 1988:161). Thus, Biber observes that 'with respect to each dimension, written and spoken texts overlap' (Biber, 1988:160).

The overlap of genres notwithstanding, Biber advocates a division into 'oral' and 'literate' discourse types, where 'oral' discourse exhibits 'involved production, situation-dependent reference, and non-abstract content', and 'literate' discourse is characterised by 'informational production, explicit, elaborated reference, and abstract, technical information' (Biber, 1988:162f.). Moreover, Biber observes that speech seems to be more limited in the range of forms used, which to him suggests a ''cognitive ceiling' for the syntactic and lexical complexity' of speech, that is to say, the constraints of speech processing limit the diversity of forms used in spoken discourse types (Biber, 1988:163).

The emergence of computer-mediated discourse shed new light on the study of spoken and written language. The views on the characteristics of spoken and written discourse typically assumed to be the defining features of those two discourse types had to be revised. Chafe and Danielewicz point out the importance of distinguishing between those differences that are induced by the nature of speaking and writing as physical and mental processes, and those that follow from the difference in the contexts in which speaking and writing are used (Chafe – Danielewicz, 1987:7). For instance, given that speaking is speedier than writing, until the emergence of CMD, discourse analysts had no reason to ask whether the pace of production, and consequently the features of speaking and writing, such as fragmentation vs. integration etc., are the effect of cognitive limitations, or rather of the constraints imposed by the pace of interaction. To illustrate this point a series of quotations is provided regarding the problem from the general discourse-analytic point of view, as well as from the specific CMD-analytic point of view. Chafe and Danielewicz observe that the production in spoken language happens online, in that any attempts at editing are visible to the audience:

> Speaking is done on the fly, while writing is both slow and editable. When we speak we have little time to choose our words, and once we have uttered them, they have been uttered. If we are not satisfied, we may revise what we have said, but too much fumbling is harmful to

> effective communication, and in any case our fumbling is laid bare for all to hear. (Chafe – Danielewicz, 1987:7, emphasis added)

This is paralleled in Wilkins' findings about e-messaging:

> When the writers were online ... they usually did not bother to correct misspellings or make other changes. If they wished to change something, they simply w r o t e i t a g a i n; rewriting was simpler and cheaper, because the editing capacity of the system was fairly slow (Wilkins, 1991:60, emphasis added)

as well as in Ferrara, Brunner and Whittemore's findings about interactive written discourse:

> … users showed a preference for retyping the misspellings they noticed rather than deleting the error and erasing any trace of their mistake' (Ferrara et al. 1991:25).

The above quotations identify the treatment of errors as indicative of the amount of planning and editing on the part of interactants. The series of quotations can be closed by a quotation from Johnstone, once again referring to discourse in general. Note that Johnstone does not refer to spoken or written discourse but rather to real-time and planned discourse:

> Modes of discourse that take place in real time, such as face to face speaking or singing, involve relatively little planning. More planning is possible … in situations in which discourse can be drafted, edited or rehearsed before it enters into interaction. (Johnstone, 2002:182).

It seems that the code of conduct is strikingly similar in spoken interaction and in online modes of CMC, in that what Johnstone observes for spoken interaction is easily applied to online modes of CMC. This implies that some features traditionally associated with spoken language, such as fragmentation, are a consequence of direct interaction between speakers and their audiences, not of the fact that the language is produced orally (c.f. Ferrara et al. 1991:22). By the same token, most written discourse is highly integrated because writers

have a chance to revise and edit. What is crucial, however, is the fact that they are able to do so not because the process of writing itself takes more time, but because they are separated from their audience, and thus are able to take time to edit.

Studies devoted to electronic discourse as such, support the spoken-like character of online discourse:

> Electronic conference discourse is like conversation in that it presents a number of performance features generally characteristic of in process or in situ communicative events and behaviors, such as repetition, direct address, disfluencies, and markers of personal involvement. … Electronic messaging in real time, or very brief synchronous interactive electronic communication, is more like informal speech situation. (Davis – Brewer, 1997:3-5).

The unplanned and unedited character of online real time communication manifests itself also in the misspelled words, punctuation errors and the lack of capital letters (Du Bartell, 1995; Górska, 2007).

Spoken and written language can also be compared on the basis of four criteria: preservability (some researchers, such as Herring 1999 or Voida, Newstetter and Mynatt 2002 refer to this feature as persistence), convenience, participant interaction and feedback (Du Bartell, 1995:231). Du Bartell summarises the feature setup of the discourses in question as follows: spoken language [-preservability] [+convenience] [+interaction] [+feedback], written language [+preservability] [-convenience] [-interaction] [-feedback] (Du Bartell, 1995:231). Instant messaging exhibits features of both written and spoken discourse, as it is preservable (or, to use Herring's term, persistent), in that not only it is typed, but also, within the contemporary IM software, users are able scroll up the screen to see what had been typed earlier. The feature of convenience becomes slightly problematic: according to Du Bartell 'convenience relates to how easy it is to formulate and exchange a message', and spoken language possesses the feature [+convenience] because it 'does not require formal instruction' (Du Bartell, 1995:231-232). While both

writing and typing are skills that require formal instruction, once the typing itself is not a problem, formulating and exchanging messages in IM is considerably easy. Instant messaging is also highly interactive and instant feedback is usually available. Thus, the feature makeup of instant messaging would be [+preservability] [?-convenience] [+interaction] [+feedback]. Thus summarised features of instant messaging as discourse type reveal that in fact it shares more features with spoken discourse than with written one. This might be what led some researchers to refer to interactive written discourse, such as IM, as spoken-like.

In the age of interactive, online, typed, computer-mediated communication, the distinction between spoken and written discourse in terms of features other than the channel, or substance (Du Bartell, 1995: 231), has become obsolete (Ferrara et al. 1991:22) and can be confusing. Rather than use terms such as spoken-like and written-like, which in fact refer to the impression that the discourse participants may have of the communication within a given discourse type, researchers should focus on actual features of the discourse type under investigation.

4. Instant messaging

The term instant messaging refers to the type of communication in which participants interact via the Internet, in real time, by means of typing and sending messages. It is 'a synchronous means of exchanging short messages with others logged on … at the same time' (Herring, 2002:122). To avoid ambiguity, in the present paper the term instant messaging is used to refer to one-to-one communication as opposed to many-to-many communication which is referred to as the internet chat. Instant messaging requires a client program which sets up a connection and thus allows sending messages between two or more computers. It differs from e-mail in that the exchange of messages takes place in real time.

Following Biber's (1994) classification of registers it is possible to characterise instant messaging as one-to-one highly interactive communication where the participants share the time of the interaction but do not share the place. The mode of the interaction is written,

specifically typed, which results in a high level of persistence. Due to the fact that the interaction proceeds online (in the sense that the participants share the time of the communication), the level of planning is relatively low, nonetheless slightly higher that that of oral conversation (Ochs, 1979).

Instant messaging is 'a synchronous means of exchanging short messages with others logged on … at the same time' (Herring, 2002: 122). Thus, it is a synchronous, one-way, one-to-one mode of CMD with a high level of persistence, since the users are able to scroll back to messages that have been sent earlier. It is a lean, text-based medium (Daft – Lengel, 1984), and as such used to be perceived as suitable for workplace, problem-solving context of data transmission. Moreover, it was believed to be low in social presence (Spears – Lea, 1992), which once again supposed to predispose IM for information exchange rather than relational chit-chat. Paradoxically, IM is used by many people as the means of keeping in touch with their friends and relations over geographical distances (Hampton – Wellman, 1999). Instant messaging, whose predecessors were used by scientists and academics, then became the domain of social contact for teenagers, only to recently increase in popularity as a means of communication in the workplace (Dean, 2001). Since IM is a fairly recent phenomenon, and since when it comes to one-to-one, non-workplace exchanges, privacy issues come into play, there has been hardly any research done on private chat (Herring, 2002:123), and most of the available literature on one-to-one synchronous one-way message exchange systems has been done on material obtained in the work environment in the course of experiments (Ferrara et al. 1991; Murray, 1988, 1991; Wilkins, 1991).

The cornerstone for IM studies was probably set in 1991 by Ferrara, Brunner and Whittemore, when they published the article 'Interactive written discourse as an emergent register', in which they investigated a discourse type very similar to contemporary Instant Messaging. They defined Interactive Written Discourse as 'the written language occurring in simultaneous terminal-to-terminal typed dialogues' (Ferrara et al. 1991:9), and observed that what they referred to as e-messaging was 'the least planned and most heavily interactive type of CMC' (Ferrara et al. 1991:14). They also pointed out that the faster rate

of typing, as compared to writing by hand, constrained the users' ability to 'revise or edit' (Ferrara et al. 1991:14). As a result, IWD exhibits features traditionally associated with both spoken and written discourse. Ferrara Brunner and Whittemore proposed IWD to be 'a reduced register', similar to note-taking in the omission of pronouns (especially subject), articles, and finite forms of the copula, and the use of abbreviations and symbols in order to shorten words (Ferrara et al. 1991:18). Coincidentally, they also found IWD to be 'elaborated and expanded', by means of the use of relative clauses, subordination, adverbial clauses and even cataphora (Ferrara et al. 1991:24). On the other hand, they have discovered a number of features pointing to high level of involvement of IWD participants, such as the use of deictics, adverbs of time and direct questions (Ferrara et al.1991:21; also Wilkins, 1991:67-68), as well as general emphatics, such as *just* or *really* (Ferrara et al.1991: 23). They also make note of the use of graphic symbols to represent paralinguistic cues (Ferrara et al.1991: 26; see also Wilkins, 1991: 69-70; Murray, 1988: 11).

It is important to note that even within Instant Messaging more than one mode of communication exists. While the prototypical use of IM applications is certainly on-line, real-time communication, it is possible to use IM software for asynchronous communication that resembles e-mail, as in example (3) below taken from the sample of the present dissertation:

(3) a.

A *2002-02- 13:10 Hi Ola,*

how have u been ... I finally have my computer at home back on line again and I am starting the job of rearranging all the furniture since my house.

The rennovations on the house are now almost finished. Sure am glad to see that part of the project over. Hope to chat to u sometime soon

bye

Don [Dn 196]

b.
A 2002-03- 21:23 Hi Ola
how is everything with you. I am at home now and just about to go to work, but hopefully I may talk to you later from my work computer. bye :)
[Dn 237]

Nonetheless, the object of this paper is IM in its central use, as real-time on-line communication – the typed conversation.

4.1 The origins of instant messaging

Historically, instant messaging has developed from private computer networks to billions of users that are connected to various IM clients all over the world. First used by scientists and academics, it then became a 'plaything of teenagers', only to attract the attention of enterprise about eight years ago (cf. e.g. Kerner, 2005; Shiu – Lenhart, 2004). Below is one of many voices in favour of IM in the workplace that can be found in the forums devoted to IM:

> I'm currently working on a large project with a tight deadline, and the client is based in another city. IM lets me communicate with their designers and developers almost as efficiently as if we were in the same office, which makes discussing ideas and solutions and transferring design mockups a lot more seamless than if we were to use email.
> Sent in: November 17, 2005 ('Is instant messaging good or bad for productivity?' 2005)

Nardi et al. (2000) point out that the main use of IM in the workplace is that for 'quick question and clarifications about ongoing work task' (2000:81). They interviewed professionals using IM for office communication and quote one of them as saying:

> Say I'm working on a project and I want a quick response. [I use IM] rather that waiting for an email or try to contact them by phone and get into the

> process of having a lengthy conversation when you just want a two second response. I do that really often. (Nardi, et al. 2000:81)

Their informants also contended that IM allowed them to omit 'formalities' such as identification, as IM pop-up window is labelled with the nickname of the sender of the message (Nardi et al. 2000:81). This use seems to be very purpose-dependent, since exchanges of more leisurely nature that open with a greeting sequence are far more numerous than those without it (Górska, unpublished PhD dissertation).

In their report of a survey conducted as a part of Pew Internet and American Life Project, Shiu and Lenhart (2004) provide statistical data for the use of IM. According to their survey, just under two thirds of Internet users aged between 18 and 27 use IM, while the use of IM among all other age groups oscillates around one-third of all Internet users within each age group (for details c.f. Table 2, adapted from Shiu – Lenhart, 2004:13).

Age	The percentage of Internet users in each group that are IM users	The proportion of IM population each group makes up
18-27	62	31
28-39	37	28
40-49	33	20
50-58	29	12
59-68	25	7
69+	29	3

Table 2. Statistical data for the use of IM across age groups, adapted from Shiu – Lenhart, 2004: 13 (the percentage in the right column may not add up to 100 per cent due to rounding)

Such proportions falsify the belief that IM use is restricted to teenagers, even though, according to a survey published by America Online Inc. on 24 August 2004, they still constitute the majority group among IM users (AOL Press Center). Both surveys highlight the shift of the use of IM to the workplace; AOL reports 27 percent of IM users

use it in the workplace, and 43 percent of them are reported to use it for communication at work.

Instant messaging developed out of the need to communicate faster than via e-mail and cheaper than via telephone, so one would expect its users to withdraw from this mode of communication once VoIP emerged. VoIP – voice over Internet protocol - enables its users to talk via the Internet, and as long as both users have an Internet connection, communicate between two computers, and own a set of speakers/headphones and a microphone each, such 'telephone' conversation is free of additional charge. Nonetheless, the advent of VoIP has not adversely affected the popularity of IM. Lauryn M. Squires investigated the use of different means of contact among residential college students, and found that they used IM most often to communicate with people with whom they had regular face-to-face contact. She observes: '[r]esults indicate that more often, students use IM in addition to F2F [face-to-face] and phone communication, not because such supposedly 'richer' contact is unavailable' (Squires, 2003: 7). This may seem surprising when one considers the amount of effort required for typing with that required for talking. Perhaps, the key to understanding the popularity of IM is organising parallel processes (Murray, 1991:47).

In late 1980's Denise Murray conducted a study of what she refers to as computer conversation (Murray, 1985, 1988, 1989, 1991). Her subjects were professionals who engaged in goal-oriented exchanges of messages sent via the Internet by means of a communication program. The software used in her study was extremely restrictive when compared with contemporary instant messengers, e.g. the messages could only be one line long, and once they scrolled up the screen, they were lost, which influenced the shape of the interaction to a large extent. Nonetheless, some of her findings are still extremely valuable. In her study, Murray used field notes that she took during meetings, discussions and computer-mediated conversations, as well as a record of all computer-mediated conversations her main subject had with his colleagues over the eight-month period of her study. She also interviewed formally and informally her main subject and his colleagues on the account of the use of computer-mediated conversation. As to the aforementioned parallel processes, she found

that her subjects engaged in more than one activity while in computer conversation with one another. The array of methods that she employed allowed her an insight into the rationale behind this phenomenon:

> Because of the time delays and the lack of need to keep eye contact or provide back-channel cues, these computer conversationalists were able to do other work while engaged in a computer conversation. This 'other work' included telephone conversations, technical work, word processing, face-to-face conversation, and even other computer conversations. (Murray, 1991:47-48).

In the more recent studies the term multitasking is used in place of Murray's parallel processes. Multitasking is a term adapted from Information Technology, and refers to the ability to perform more that one task at the same time. In the surveys quoted above, as well as in sociological research, it is used to describe the tendency of people to do many things at the same time. Obviously, 'at the same time' is not to be taken literally, as users prioritise actions, and the order of urgency of particular actions is quite universal among IM users. Once again, owing to her research method, Murray was able to establish such hierarchy of priorities for her subjects, and this hierarchy seems to apply to IM users at large: 'To be able to parallel processes effectively, conversationalists developed personal (but jointly held) priorities. Face-to-face and telephone conversations took precedence over computer conversations. If one participant was involved in important and urgent technical work or word processing, this too often took precedence' (Murray, 1991:48).

Paradoxically, the fact of IM having relatively low priority can be what makes it so popular among users, since lower priority allows for more multitasking; reading an e-mail while talking on the phone will definitely impair one of the activities; reading an e-mail, doing homework, or listening to the radio while engaging in an instant messaging exchange is very common. Example (4) is an illustration of multitasking at work in the sample of the present dissertation (the

original spelling of the messages in the sample of the present dissertation, including misprints, has been preserved):

(4) *A 2002-03- 23:51 sorry i was doing a dozen things at once* [Elctr 144]

In (5) the user comments on the fact of having more than one computer conversation at a time (note the use of the term conversation with reference to this type of communication):

(5) *A 2002-03- 00:25 sorry im in quite a few conversations and i just started mumbling to everyone* [Elctr 194]

In (6) B's response comes 16 minutes after A's message was sent, showing that work has priority over chatting:

(6) *A 2002-01- 11:36 good; i'm really looking forward to it :)*
B 2002-01- 11:52 Sorry about the wait. I am up to my eyes in work. [Hts 20-21]

And finally (7) and (8) illustrate the point that face-to-face interaction takes precedence over messaging. In (7) a prolonged silence after an adjacency pair first pair part provokes a repair sequence:

(7) *A 2002-01- 01:38 so, whatcha do?*
A 2002-01- 01:41 are u there? did the boss just walk in? :))
B 2002-01- 01:42 Sorry, had a short meeting [Mchl 15-17]

In (8) the exchange is held up for 18 minutes due to the immediate context activity on the part of one of its participants:

(8) *A 2002-01- 00:19 Hang on a second*
B 2002-01- 00:20 ok
A 2002-01- 00:38 Sorry. Someone walked into my office for a short meeting. [Mchl 132-134]

What the above examples illustrate is in fact a strong tendency among IM users. Shiu and Lenhart's survey shows that 32 per cent of IM users engage in some other computer-based activity while instant messaging 'all the time', while 29 per cent report to engage in some other computer-based activity 'some of the time' (2004:16). This confirms Squires' (2003) findings: her subjects, residential college students, 'almost always engaged in more than on IM conversation at a time' (2003:6, emphasis added). Voida et al. also find this to be the case:

> One participant indicated quite resolutely that instant messaging 'gets boring' when waiting for someone's response to be typed in. For this reason, unless she was already engaged elsewhere and could multitask, she refused to maintain only one thread of conversation at once' (2001:190).

> Furthermore, 20 per cent of IM users engage in non-computer-based activity while instant messaging 'all the time' while 30 per cent do it 'some of the time' (Shiu and Lenhart, 2004:16).

There is one more feature of IM that has to be discussed in order to sufficiently characterise IM. This feature is the sense of community shared by the participants of IM exchanges. According to Herring (2003: 4), the primary purpose of IM is social. Wilkins (1991), who studied the use of computer conversation among novice users, quotes a comment made by one of her subjects: 'I know some of these people better than some of my oldest and best friends' (Wilkins, 1991:56). This statement sounds very radical in view of the fact that it was made two months into the experiment, and the subject never met his interlocutors in person. Nonetheless, this sense of intimacy is the common experience of the users of synchronous modes of CMC. Accounts of the shared sense of community of the users of CMC in general, and synchronous modes in particular, are abundant in the literature on the subject (e.g. Du Bartell, 1995; Herring, 1999, 2001, 2003; Liu et al. 2001; Nardi et al. 2000, Paolillo, 1999; Wilkins, 1991, to name but a few).

All the above seems to suggest that instant messaging, despite its apparent deficiency and redundancy, has established itself as

legitimate means of communication among the Internet users. As Nardi et al. put it:

> It is interesting that a lightweight technology consisting of no more than typing text into a window succeeds in providing enough context to make a variety of social exchanges vivid, pleasurable, capable of conveying humor and emotional nuance. (2000:82)

5. Conclusion

It has been stated that IM is a lean medium, low in social presence, yet used mainly for maintaining social contact. This seeming paradox indicates that IM users adapt to the constraints imposed by the medium and find ways to express themselves solely through text. This, in turn, suggests that typed text is not 'in and of itself inherently impoverished' (Herring, 2002:134). The strategies employed by IM users to increase the expressivity of IM have been discussed; among these are non-standard and creative use of language, use of slang and abbreviations, creative use of capitalisation and punctuation, combinations of punctuation marks used to represent facial expressions, etc. Notably, these strategies usually require additional keystrokes, which stands in opposition to the economy of effort principle that otherwise governs linguistic behaviour in IM (Herring 2002: 139). All of the above makes CMC in general, and IM in particular, less expressive that speaking, but more expressive than writing (Herring, 2002:139).

The general conclusion concerning the research into the language of real-time terminal-to-terminal conversations in particular, and CMD in general is that it is a hybrid of spoken and written discourses. However, it seems to be more than that. As early as 1985 Denise Murray observed that the discourse of what she referred to as 'computer conversation', rather than 'occupy a static place in the oral/written continuum' moves 'back and forth between writer style and talker-style, as interactants change voice' (Murray, 1985:224). The premise of the present paper could be summarised by a passage from Wilkins:

> Participants in these conversations can be expected not only to draw on their resources from previous language and social experience … but to adopt and change those resources to meet new demands (Wilkins, 1991: 75).

Although the literature on the language of instant messaging is very limited, the findings of studies of other types of synchronous CMD are partly applicable to IM. The most important factor in studying synchronous CMD types is their synchronicity, as it imposes a time constraint on the users of CMD. This results in the grammatical structure of language in CMD being simpler than both writing and speaking. The time constraint results both in non-standard uses of language and an abundance of grammatical and spelling errors. However, both these features are employed by the users to their advantage. Even though the communication in CMD is of the text-only type, users find ways to express themselves by means of non-standard spelling and grammar, and use typed text to represent paralinguistic cues or laughter, e.g. key-combinations used to represent facial expressions, all-capital spelling to represent stress or raised voice. Moreover, the visibility of disfluencies, repetitions and errors facilitate a sense of intimacy among CMD users.

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SUMMARY

The present paper is devoted to a discussion of Instant Messaging as a genre of human communication. Instant messaging (IM) is a synchronous type of computer-mediated discourse, in which two users, simultaneously logged onto the Internet, exchange short text messages in real time. What is especially interesting about this type of communication is that it is both written and interactive. Instant messaging, and especially the fact that it is a one-to-one type of communication, is the closest to oral conversation among the computer-mediated communication modes.

This paper has been developed from Chapter 2 of the author's unpublished PhD dissertation.

Keywords: computer-mediated communication (CMC), computer-mediated discourse (CMD), Instant Messaging (IM), spoken/written dichotomy, literacy, orality

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Language, consciousness and thinking about thought

1. Introduction

Cognitive functions of language are often analyzed in a context in which our conscious access to our thoughts takes place. We can easily access thoughts which are currently being entertained, we can examine their content, analyze relations among them and determine their effects on our behavior. We take this introspective quality of our thoughts for granted; it is something natural that we are used to do. Thinking about thoughts constitutes a considerable part of our life. We treat the ability to think about thoughts as a marker of our conscious life. Additionally, when we talk about the introspective representation of our thoughts we intuitively know that there is something more than just awareness or a simple awareness of things which take place around us and things which affect our body. Thus, when we talk about thinking about thoughts we mean our ability to correct our thoughts, to track them and reflect on their truth value. The emphasis is transfered from having a thought to its conscious (reflective) tracking. We also realize that our ability to access our own thoughts and thoughts of others creates a new quality on our conscious life. At the level of general intuitions we are inclined to agree with the belief that the introspective ability to think about thoughts is reserved exclusively for humans.

> Although it is hard to prove, most animals appear to be on the level of what Dennett would call 'first-order intentionality', they have states of mind, but not necessarily make inferences about the state of mind of others, or even know that others can have states of mind different from their own. Humans, on the other hand can reach dizzying levels of third – or even higher-order intentionality, being able to say or think things like 'I want X to think that I want him to run up a tree because he is a contrary fellow and if he thinks I want him to run up a tree he won't, which is what I really want"(Bickerton, 2001:15-16).

What, however interests me is not the kind of cognitive function which we call second order cognitive dynamics or an ability to think about thoughts, but the role which natural (public) language plays in forming of this ability. I wish to present a theory which renders second order cognitive abilities - an ability to think about thoughts – language-dependent.

2. General hypothesis

It has been noted in a loose way, although very constructively, that the exemplified description of thoughts „generates a trace in a format which opens up a range of new possibilities"(Clark, 1998:176). Writing down thoughts allows us to verify and control them, to look at them from multiple cognitive angles. Solidification of thoughts in a form of written language makes it possible for us to evaluate or modify them. Analogically, it has been noted that when we talk about introspective grasping thoughts, we are inclined to think that if these thoughts are to be analyzed they have to be put in some kind of stable vehicle. a The linguistic form of embodied thoughts allow us to perform operations on them. We can observe them, concentrate on them and describe their content and relations. This intuition allowed many authors to pointed out that deliberation and analysis of thoughts in our mind often resembles an internal dialog (Wittgenstein, 1972; Carruthers, 1996; Hauser, 1995). At the same time it was suggested that we mostly think

– when our thinking is conscious – by imaging sentences of natural language (Carruthers, 1996:228).

The above mentioned intuitions are considered as a starting point for the hypothesis that „reflexive thoughts can only be possible if the target thoughts have vehicles that allow them to be the objects of further thoughts" (Bermudez, 2003:159) or that thoughts need such a vehicle which would make them accessible to our consciousness and make them acquire in addition to a physical reality the phenomenal reality too (Jackendoff, 1996:198-203)[1]. Keeping in mind the fact that we are focused on reflective thinking about thoughts, about acts on a personal level, on which the subject forms and governs its own activity, many philosophers, psychologists and linguists are asking themselves what can serve as a vehicle that would make a thought with its form and content available to our consciousness. Within the framework of a theory I will present, it has been accepted that this vehicle that keeps a thought in our attention is language that we speak. In this context it is stated that a main constituent of thinking about thoughts; second order thinking; intentional ascent is natural language or that conscious propositional thought cannot possibly be realized without a significant input of a natural language (Clark, 1998, 2006; Bermúdes, 2003; Dennett, 1998; Carruthers, 1996).

Probably the best illustration of this thesis can be found in A. Clark's work *Magic words: how language augments human computation*.

> Perhaps it is public language which is responsible for a complex of rather distinctive features of human thought – *viz*, our ability to display *second-order cognitive dynamics*. By second-order cognitive dynamics I mean a cluster of powerful capacities involving self-evaluation, self-criticism and finely honed remedial responses. Examples would include: recognising a flaw in our own plan of argument, and

[1] Such investigations are obviously more extensive since they deal with mind and consciousness. We will see further that the differentiation between first order thinking and second order thinking correlates with the differentiation between simple consciousness and reflexive consciousness described as a thought of higher order, which in its broader sense, would include consciousness of control and consciousness of accessibility (see Rosenthal, 1986; Jakcendoff, 1987; Block, 1994; Searle, 1999; Judycki, 2004).

> dedicating further cognitive efforts to fixing it; reflecting on the unreliability of our own initial judgements in certain types of situations and proceeding with special caution as a result; coming to see why we reached a particular conclusion by appreciating the logical transitions in our won thought; thinking about the conditions under which we think best and trying to bring them about. The list could be continued, but the pattern should be clear. In all these cases, we are effectively thinking about our own cognitive profiles or about specific thoughts. This 'thinking about thinking', is a good candidate for a distinctively human capacity – one not evidently shared by the other, non-language-using animals who share our planet. As such, it is natural to wonder whether this might be an entire species of thought in which language plays the generative role – a species of thought which is not just reflected in, or extended by, our use of words but is directly dependent upon language for its very existence. Public language and the inner rehearsal of sentences would, on this model, act like the aerial roots of the Mangrove tree – the words would serve as fixed points capable of attracting and positioning additional intellectual matter, creating the islands of second-order thought so characteristic of the cognitive landscape of *Homo sapiens* (Clark, 1998:179).

It seems that anybody who makes claims like those quoted above clearly asserts, that in the emergence of second order cognitive dynamics language is not merely involved as a means to widen the scope and to heighten the efficiency of some thoughts and abilities, but that it plays a role of a generator on which the very existence of those thoughts depends. Thus, at the basis of this view there is an assumption that thoughts can be objects of further thoughts only if they have suitable vehicles, and public language sentences are the only suitable vehicles (Bermúdez, 2003:165). More precisely, this hypothesis can be expressed in two statements.

(a) „the presence of linguistic vehicles, is what makes possible the important phenomenon of thinking about thinking" and

(b) "only creatures who are able to make their thoughts into stable, attenable scrutinizable objects, by explicitly vehicling them in some way, can then turn the apparatus of thinking onto the act of thinking itself (Clark, 2002:681)[2]

When we see the role of natural language in the above way, we start to realize that we are speaking of the enabling function of language, what implies in effect that the existence of thought (or, at least, some types of thoughts) is bound up with the existence of language. This function of language should be distinguished from the shaping function of language and facilitating function of language which ground the claim that language models or supports some of the cognitive processes.

When we realize that the main issue here is not to emphasize that language we use may shape our thoughts and, moreover, that language facilitates our way of thinking, we are able to understand, why in this approach a possibility that we first consider a thought privately and only then we express it in inner speech or record it, is rejected. According to this theory, when a speaker utters a clause the utterance will in fact form the thought (constitute, formulate it) rather than encode and communicate it (Carruthers, 1998). Within the framework of this position, it is also suggested that language is an only stable vehicle making it possible for thoughts to come into existence in

[2] Clark and other authors alike realize that, at first, this theory may be just a different variant of Demett's theory and he attempts to emphasize this feature found in works of Dennett on numerous occasions. Thus, in *Material Symbols*, we read: „The vision of mind-expansion by use of hybrid representational forms remains visibly close to that of Dennett. But Dennett, as mentioned earlier, places most of his bets on the radically transformative power of our encounters with language, and thus ends up with a story that seems more developmental than genuinely hybrid. […] But where Dennett depicts exposure to language as installing a new virtual serial machine via affecting 'myriad microsettings in the plasticity of the brain, on the hybrid model words and sentences remain potent real-world structures encountered and by a basically (though this is obvious to crude) pattern-completing brain"(301-302).

our consciousness and then to be monitored and handled at a personal level. It is often asserted that, as a complement to this view, that the inner language employed by a person to think does not differ from outer language in which he or she speaks. Learning an outer language involves the incorporation of that language into one's refelective thinking about thoughts (Harman, 1970).

3. Examples of second order thinking

When we think of a typical set of examples of second order thinking in which language would play such a great role, first of all we think about situations when we appraise our own thoughts, correct our own plans, monitor relations between our thoughts, and compare information coming from our senses with our beliefs concerning the relevant section of reality. We also mean such situations in which we find ourselves attributing thoughts to other subjects. In order to provide an answer to the question why in these cases natural language should be the most appropriate vehicle we have to give explanations for the way of understanding of second order activity.

We observe, at first, that cognitive dynamics of second order is more often directed to conscious policing of the justification of one's own thoughts and to analyzing them as reasons for our activity. This type of activity goes far beyond the ability to adapt to changing conditions. It is linked to crossing boundaries of an ordinary awareness of the world. In second order dynamics, consciousness monitors thoughts and expectations we have about the world. For instance, a change of plans is not directly caused by what is happening around us but it is a result of our revision or evaluation of our thoughts that are available to us for a specific part or aspect of the world. Via creating and reevaluating thoughts we are adapting to the world. The subject capable of describing their own thoughts acquires an insight into the process of thought formation, their evaluation and revision. Only then does second order dynamics acquire a special value in our lives. We also notice that by moving onto the monitoring level of our thoughts we become subjects in a true rational sense since we achieve the ability to draw conscious conclusions, seek the truth and evaluate our own thoughts.

The key issue to examine, on the side of grasping an aim of the second order dynamics, is the claim that the realization of second order dynamics will be possible only while monitoring thoughts embedded in appropriate vehicles. In other words, our primary object of consideration is the statement that distinctive features we ascribe to the second order dynamics (monitoring thoughts, perceiving thoughts as reasons for actions or as conclusions, adjusting thoughts, forming complex thoughts, evaluating thoughts in terms of alethic values) require a presence of such a stable vehicle which would guarantee a possibility of building thoughts. To achieve this the following issues have to be considered.

First, it was emphasized that in order to examine our thoughts reflexively it is necessary to explicitly analyze formal and logical connections between them. It has been also stressed that it is impossible to comprehend logical relations between thoughts, with the exception of thoughts that have linguistic vehicles (Bermudez, 2003: 170).

Second, it was noted that inference is understood in formal categories; it is an operation on representations (thoughts) because they have structures. At this point, two other issues are also pointed out. The first problem is that we do not have any theory of formal inferential transitions between thoughts deprived of linguistic vehicles. Our models of formal inference are simply based on transitions between sentences of natural languages. The second issue is that a thought has to be structured not only on the level of its content but also on the level of its linguistic vehicles.

Third, forming complex thoughts through truth operators requires us to realize that to understand a complex thought means to understand the way its truth value is defined by the truth value of its building thoughts since truth is a concept first and foremost applicable to thoughts. Besides, complex thoughts comprising of quantifications, as one of their components, assume the presence of capability to ascent intentionally because, in order to master quantification mechanisms, it is necessary to be able to describe structure of thoughts. It was also suggested that the ability to form complex thoughts including modal and temporal features requires special linguistic means.

The basis for these statements – which give a reason for acknowledging a natural language as the only vehicle of thoughts which can guarantee second order cognitive realization – lies in the belief that a thought content is described inferentially. Therefore, the statement that absence of language is the main obstacle while including creatures devoid of language abilities of second order cognition into those subjected to the inference based theory of rationality is not surprising. As a result, the process of thinking based on thought accessibility is self-aware only when the final thought has a vehicle allowing it to have and employ the features which were already discussed. The vehicle we were talking about must allow a thought to have a structure, enable us to form thoughts embedded in one another, then guarantee a hierarchy of thoughts and allow us to form thoughts which logical value depends on the values of features ascribed to them. It is important that this vehicle is transparent to the subject and it has to make a thought available in a way which would would enable the subject to take over a leading and controlling role in relation to these thoughts. The essence of the second order cognitive dynamics has a deeper dimension only when a thought becomes available to the subject in its structure and relations. Only on such a basis the subject is able to revise and expand her of his own thoughts or determine their value on the basis of their relationships.

If we recognize the fact presented above, we see that one cannot determine the function of language by stating that, by the virtue of language, our activities are more effective and we acquire some or most of our thoughts and concepts during communication processes. The claim that language makes our cognitive processes more effective or that the majority of concepts and thoughts are acquired by linguistic communication does not exclude the fact that creatures devoid of linguistic abilities are not capable of performing these tasks, or that natural language cannot be substituted by any other form of vehicles capable of describing thoughts in medias accessible to our senses. Considering these facts, we can observe that referring to natural language is not exclusively related to a discussion about means that physically records thoughts, and which operates and is accessible in the public domain. It is indeed a very important issue but not the only one. The key thing which explains why the postulated language is

natural language, is the need to move to a level that monitors our thoughts. On one hand, it is connected with the way in which we describe inferential relationships of this thought and on the other with the need to evaluate a given thought in terms of its cognitive features – those of truth in particular. One could even state that realization of the second order cognition makes sense only if we can discover inferential relationships of thoughts, describe them (thoughts) in the context of our activities and show its truth value. Yet we have to remember that within the framework of this approach, we assume that there is a significant link between inference – relationships between thoughts – and the internal structure of thought itself.

The best example of second order dynamics is something which we call a revision or a change of our opinions that results from one's realization of existing faults or of the lack of assurance that an activity based on a set of thoughts will lead to expected outcome. A good instance of this would be – as Bermudez claims – doxastic outcome-sensitivity that has to be differentiated from practical outcome-sensitivity which involves a modification of activity and behavior being directly affected by environmental stimuli and subject to categories of success and failure.

> (A) A creature is doxastically outcome-sensitive, on the other hand, when it modifies its behavior as a function of modification in its beliefs, having modified its beliefs in response to evidence of the truth or falsity of those beliefs". In this sense "Reflective doxastic modification concerns itself explicitly with logical and probabilistic relations between evidence and belief. At the reflective level a belief might be rejected or modified in the absence of countervailing evidence or tension with existing beliefs – it might, for example, be rejected simply because the believer recognizes that it is not warranted by evidence"(Bermúdez, 2003:169).

In addition to this kind second order thinking – called explicit intentional ascent – there is implicit intentional ascent. The first type

includes all thoughts connected with *metarepresentation* the second type in turn takes place when thoughts are used to create other thoughts, but more complex ones. The example below illustrates this case:

> (B) Consider the inference from of existential generalization, this is the pattern of inference instantiated by the transition from "Fa" to. VxFx that is to say, from an atomic sentence to the effect that a named individual has a given property to the general proposition that at least one individual has that property. The logical operations involved in this transition are clear enough. The first is breaking down the atomic sentence into two components, a predicative component and a nominative component (or, in Fregean terms, a function and an argument). Once the internal structure of the atomic sentence is manifest, the next operation is to replace the nominative component with a variable. The final operation is to bind that variable with an existential quantifier. This sequence of logical operations gives us an important clue as to what is involved in the subject's being able to understand the existential quantifier in a manner that permits existential generalization. In order to understand how a given sentence can imply an existential generalization, a thinker needs to be able to view it as being composed in such a way that the nominative component can be replaced by an arbitrary name (hence by a variable) (Bermúdez, 2003:181).

This example is meant to show that the ability to perform cognitive operations mentioned above requires a division of the original thought into parts. Only then – it is emphasized – existential quantifier may be employed. This division implies the ability of intentional ascent. It requires thoughts to be in our mind and their structure to be determined in a way that would create a space for a variable defined by existential quantifier. This also applies to, *mutatis mutandis*, thinking including universal quantifier and other types of thoughts. It is pointed out, in this sense, that moving from one thought to another

and assembling thoughts into certain units requires a clear determination of a thought's structure.

In order to express the role of language in more detailed way, another example is often cited. It has been observed that we often go from thinking about one issue to another by a frequent use of predicates which were applied in the first issue. Let us imagine a simple situation when the subject moves from thinking about one area to thinking about two areas, and when, at first, features of one area were only used in reference to objects of that area and none of the objects and features occur in more than one area.

> **(C)** Suppose that a is an object in the first domain, and G a predicate in the second domain. How might such a creature come to be capable of the thought that Ga? Only by forming a conception of what it is for something to be a G that is no longer tied to the subjects in the second domain. That is to say, only by forming a conception of what it is for an arbitrary object to be a G. and it is that the introduction of the relative pronoun makes possible (Bermúdez, 2003).

The line of explanations presented here allows us to capture the main features of the theory that has been discussed here and also presents an overview of arguments that favors the hypothesis that second order thinking is constitutively language dependent.

4. Ascription of thought

Proponents of the thesis that second order cognitive dynamics would not be possible without natural language pay special attention to situations in which we ascribe thoughts to other subjects. Some claim that only within this context we may discover proper presuppositions related to second order thinking and can fully understand how crucial natural language is for this realm of our cognitive undertakings.

> To attribute, for example, a belief or a situation-desire to another creature is essentially the view that creature as

> standing in a particular relation to a thought – the relation of believing the thought to be true or the relation of desiring that the state of affairs characterized in the thought come to pass. Clearly, therefore, the attribution of a belief requires thinking about a thought.

Even more importantly, the proponents of this view proceed to affirm that attributing thoughts to others

> Is a canonical form of intentional ascent that requires being able to "hold a thought in mind". A belief can only be attributed if the thought that is the content of the belief can be represented by the attributer, who requires that it have a vehicle – and, as I have shown, the only candidate vehicles are linguistic (Bermúdez, 2003:172; comp. Segal, 1998, Davidson, 1998).

Therefore, one assumes a hypothesis that attributing thoughts to others is only possible when the attributer possesses developed linguistic abilities at their disposal. This area of problems concerning ability to ascribe thoughts to another and the part language plays in this ascription became the focal point of united efforts of philosophers and psychologists. Many psychologists undertook an effort of testing the general idea that thinking about other subjects' thoughts is conditioned by an acquisition of appropriate formulas of natural language. These efforts centred on the so-called false belief test. In this context many authors believe that the appropriate test of having a "theory of mind" is the ability to understand that another person has a false belief. On the level of general intuition the situation is described as follows:

> The real test that a creature has a "theory of mind" rests on the ability to understand that another person has a *false* belief. In such a case, the person being observed is behaving under a false premise: he is acting in a way that is inconsistent given what the observer perceives to be true of the world. For example, a person is looking

> fruitlessly in the wrong place for something he wants, or he is acting in a way oblivious to a danger the observer can see, or he is acting toward an object in a bizarre way as if it were something else entirely. Instead of writing off such an individual as crazy, or being puzzled and revising our conception of the world as we know it, we might typically say, respectively, "Oh, he doesn't know his wife moved his sandwich", or "Oops, he doesn't realise that chair is broken", or "He mustn't know that it's a candle, not a real apple" (de Villiers, de Villiers 2003:336).

By narrowing the field of research down to attribution of thoughts to other subjects, a surmise tended naturally to appear that the ability to ascribe thoughts to others, given specific circumstances of the situation, is essentially connected with the ability to use language. To prove that language plays a key role in acquiring false beliefs, some attempts have been made to recall general philosophical phenomena. It seems that the idea of a constitutive role of language results from a number of basic, deeply rooted assumptions in philosophy:

a. One of them was the assumption that logical and semantic properties of sentences reporting other persons' mental states provides us with a model for explaining the specificity of thinking about thoughts attributed to other subjects.
b. Further, it was emphasized, that one can ascribe thoughts to someone only provided one has a means of representing thoughts to oneself, which requires that there be an appropriate vehicle to make a representation possible.
c. It was also underlined that we cannot make subtle distinctions between thoughts without language and that the lack of subtle distinctions prevents us from understanding that someone comprehends a state of

affairs as belonging to one way of presentation and not to another.

d. Then, it was pointed out that it would be difficult to make sense of the opacity of propositional attitudes without language. In other words, a being capable of second order representation has to possess means of representing the intensional aspect of component elements of a representational system.

Nevertheless, a number of authors claim that in order to prove the hypothesis recognizing the pivotal role in ascribing thoughts to other subjects and in acquisition of the notion of false belief, one can provide more detailed arguments. Then, the point of interest becomes psychological examinations of the "theory of mind" held by children, and, especially, analyzing experiments with false belief tasks[3]. It has been emphasized that analyses of false belief task might provide us with a criterion for assessment of the value of intuitions concerning conditions of attribution of thoughts to other subjects. What is important, in the investigations concerning false belief tasks, like in philosophical investigations, a special point of interest is the part played by natural language in forming conceptual abilities.

On the basis of these presuppositions it has been noticed that in a certain important aspect research on children's theories of mind and especially analysis of the false belief test may be an important factor in evaluation of expressed intuitions on conditions of attributing thoughts to other subjects. It seems that the concentration of psychological research on the false belief tests was in a certain way correlated with several deeply rooted philosophical presuppositions: The first of them states that attributing thoughts requires a certain intentional ascent, remaining in relation to a thought itself. The second presupposition - going a step further - claims that the ability to possess

[3] Maxi puts the chocolate in a container A, from which it is later, in Maxi's absence, unexpectedly moved to a container B. Children are asked where Maxi will look for the chocolate on his return. Younger children typically answer incorrectly that he will look in a container B (Wimmer, Perner, 1983).

thoughts is based upon the ability to have a concept of thought. The third one claims that attributing ideas requires introducing a distinction between transparent and nontransparent context. The fourth presupposition states that any attribution of a thought assumes openness to situations that it might turn out that an attributed thought is erroneous (false). The fifth one says that when ascribing a thought to someone we usually ascribe something what can be called a reason for the act performed. The relevance of these claims in the context of our investigation is decided by two facts: first, by the fact that within a philosophical debate an intentional ascent was coupled with a semantic ascent, and second – that the ability to have the notion of thought was coupled not only with the ability to classify thoughts as reasons for acting and the openness to classify them as correct and incorrect, but also with the ability to use language, to be an interpreter of it.

In a number of psychological research – in which philosophical apparatus was employed – it was noticed that children, who do not cope well with the false belief test (usually four years old or younger), are not capable of focusing their attention on a thought itself. One also observed that they are not able to make any difference between a thought and an external situation which that thought concerns (Astington, Gopnik, 1998:27). As Gopnik, Meltzoff and Kuhl stress, children who are not able to pass the false belief test manifested a tendency to think that thoughts are attached to reality, and they could not grasp the difference between a real change taking place in the outer world and a change on the side of thoughts concerning the world. Wimmer and Perner observed that children who had problems to cope successfully with the false belief test did not perceive a conflict between two epistemic states in which a subject can be. M. Siegel and K. Beattie stress in turn that problems that children encountered in coping successfully with the false belief task may originate in a failure to notice the difference between a thought and the needs, satisfaction of which depends on the possession of thought. Some researchers claim that children do not realize that a thought can have a logical value different than the one which is ascribed to it by a person who has the thought (de Villiers, 2003:337). Grasping the issue more specifically, Perner stresses that the effective coping with the false

belief test requires something more, namely perceiving the distinction between „representing" (representing something) and "representing as" (representing something as being a certain way) (Perner, 1995: 248). This distinction is interpreted as a distinction between representing in the aspect of referring and representing in the aspect of sense (a way in which something is referring).

The above findings, which describe conditions of ascribing certain thoughts to another subject, conditions of being able to possess a theory of mind, or necessary conditions for successful coping with the false belief test, can be presented as follows:

(1) The ability to focus on a thought: on its content and form;

(2) Capturing the difference between a thought and an object of that thought;

(3) Distinguishing an attitude from a content (one can *think that* p or *wish that* p);

(4) Distinguishing a thought from a desire;

(5) Being aware that a thought can represent a thing in many ways;

(6) Distinguishing representing something in the aspect of referring and representing something in the aspect of sense;

(7) Realizing that thoughts can represent something erroneously;

(8) Realizing that a thought (representation) can have a logical value different than the one ascribed to that thought by a person having it;

(9) Mastering the concept of *thought*.

Determining these cognitive conditions which are necessary to cope well with the false belief test allows us to ask the question about relationship of the cognitive conditions identified above and an acquired language. To be more precise, the crucial point is to find an answer to the question of whether it is possible to acquire the ability to identify a representation as ontically and structurally distinct – together with the ability to classify it as erroneous or false, and additionally as incoherent with life needs – without developed linguistic skills. It should be here remembered that the conditions [(1) to (9)] formulated when analyzing the false belief test are seen as crucial for our ability to perform second order thinking. Thus, those

arguments which show that coping well with the false belief test requires developed linguistic competence are seen as the evidence that our second order thinking (our ability to think about thoughts) is a language-dependent ability, that is that the presence of linguistic vehicles is what makes possible the important phenomenon of thinking about thought.

5. Conclusion

Within the framework of the approach here presented one accepts that there are powerful reasons for the claim that there obtains a strong correlation between an immature theory of mind, judged by failing the false belief tests, and an immature grasp of syntactic structure of attitude reports (Segal, 1998:157). In the strong version of this view it is argued that a child first assimilates language - in particular those sentence forms which we call sentential complements of verbs relative to communication in such constructions as "x said that p", or of psychological verbs in constructions like "x thought that p", in order to use this language in his or her inner discourse (Bloom, 2000). The use of a language, in which the key role is played by sentential complements of main clauses with verbs denoting mental functions, is a means which enables one to carry out the required mental operations. A clear hypothesis here emerges: the cognitive faculty uses the representational resources of language faculty (Segal, 1998:151). This claim is a consequence of affirming that the psychological facility present in attributing thoughts to another subject (or more generally mindreading) makes use of representations provided by language. Many authors accept that the results established in this research area clearly show that target thoughts made to appear in second order cognitive dynamics are linguistic units. On this basis it is claimed that the cognitive abilities described in points (1) to (9) make use of representations provided by the linguistic faculty, and that the syntax of attitude reports is a necessary condition (precursor) of a metarepresentational theory of mind and of thinking about thoughts (de Villiers, de Villiers, 2003:248; Segal, 1998:158).

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SUMMARY

In contemporary debates on the relation between thought, consciousness and language there is a wide-spread conviction that public language is responsible for our ability to display second order cognitive dynamics. In the submitted paper I will consider the strong claim that language is a necessary prerequisite for an acquisition of a meta-representational theory of mind and to display the ability to think about thoughts.

Keywords: language, consciousness, second order thinking, mind

Małgorzata Haładewicz-Grzelak

An overview of syllable structure research

Entia non sunt multiplicanda
praeter necessitatem
Ockham

1. Introduction

The article presents the retrospective overview of syllable structure theory. The basic question underlying the discussion will be whether the syllable is really a viable means for describing linguistic structures. What follows, in discussing the particular syllable structure options, the emphasis will be put on the problems present in syllabic phonological interpretations and the ensuing circularity of involved concepts. I will also present the strategies developed by generativists to 'cope with' the legacy of the syllable theory inherited from the structural line of research.

The abundance of works on the syllable makes it practically impossible to attempt at a holistic presentation of the subject. Pre-generative theories of the syllable were extensively presented by Awedyk (1975), Franch – Blecua (2001) and Dziubalska-Kołaczyk (1995, 2002). Dziubalska- Kołaczyk (1995, 2002) supplies also a critical overview of the syllable in the history of phonology within the most recent approaches. The status of syllable in contemporary phonological theory is a vast topic, meriting an elaboration on its own.

This article will then concentrate only on sample aspects of the subsequent formulations within the generative framework.

1.1. Haugen's structural theory of the syllable

The research on the syllable has been characterized by two main tendencies: the syllable has been viewed as a phonetic unit and as phonological unit (Awedyk, 1975:9). To recall briefly, the phonetic definition of a syllable is framed on its phonetic properties: the center is constituted by open sounds (vowels, less frequently consonants), and the margins are formed by closed sounds (consonants).

However, the prevailing line of research was predominantly grounded on the assumption that the syllable was a phonological unit, giving rise to the structural research. Structural linguists also considered the syllable to be a phonological unit, by what they meant the distribution of phonemes in various positions within the syllable. They pointed out that the rules of syllable-cut are language-specific (e.g. Pike, 1947b). Accordingly, the division of intervocalic clusters is based on language-internal rules (cf. Kuryłowicz, 1948) in accordance with the rule: word-initial = syllable initial, word-final = syllable final. It should be observed, however, that not all 'interludes' are reducible to a sequence onset + coda, which was eventually the cause of rejecting the syllable as a phonological unit (cf. Köhler, 1966).

An influential representative of the structural school was Haugen (1956, as quoted in Awedyk, 1975:43f), although it should be borne in mind that he had not been the first researcher to define the syllable as a phonological unit. Nevertheless, his views could be treated as the 'credo' of the structural syllable theory, hence it might be worthwhile to recall them briefly. The tenets of the structural school as formulated by Haugen were as follows:

- the syllable had to be defined without recurrence to the concept of the 'vowel', 'the accents', 'juncture' or 'the morpheme',
- each syllable had an irreducible minimum (the nucleus) and an optional remainder – the onset or the coda,
- morphemes and syllables rarely coincided,

- the positions for each syllable constituent were established as e.g. $C_1C_2C_3VC_1C_2C_3$ and the list of consonants in each position was called 'membership',
- the basis for the division of the interpeak consonant clusters was the list of onset and coda sequences, obtained by the analysis of the number of each position and its membership. When two or more divisions were acceptable, the parsing had to rely on other factors, for example phonetic (Haugen, 1956, as quoted in Awedyk, 1975:43f).
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Haugen called the syllable "the most convenient framework for describing the distribution of phonemes", the notion being defined as "the smallest unit of recurrent phonemic sequences" (Haugen, 1956, as quoted in Awedyk, 1975:44). Most of these assumptions were later developed by generative approaches.

2. The syllable in standard generative theories

Traditional generative phonology was premised on the idea that phonological representation is constituted by linear strings of segments with no hierarchical build-up other than that supplied by phrase structure rules. Accordingly, the SPE model (Chomsky – Halle 1968) did not recognize the syllable as a phonological unit. It must be noted here that traditional generativists did not defy the notion of the syllable itself – they simply disregarded it. Chomsky – Halle (1968) did include the feature [syllabic] in their representations, although they considered the 'phonological matices' to be lexical and not phonological. Such matices were called "lexical redundancy rules" (cf. "morpheme structure rules", Chomsky – Halle, 1968).

However, resorting to syllabic concepts could not be avoided even within their framework, which could be best seen in the stress assignment rules in the SPE model. Anderson – Jones (1977) re-analyzed Chomsky and Halle's notion of weak syllables or weak clusters, indispensable to the SPE theory of stress assignment.

The starting point in the discussion were those subparts of the Main Stress Rule (henceforth MSR, Chomsky – Halle, 1968) which formulated the placement of stress in nouns and derived adjectives.

The MSR for verbs depended on the observation that "the verbs with penultimate stress end in a non-tense vowel followed by a single consonant, while the verbs with final stress have a tense vowel or a diphthong in the last syllable or they end in two consonants" (Anderson – Jones, 1977:95), as in *astónish*, *eráse*, *torment.*

The stress pattern in nouns and secondary (derived) adjectives is identical to that of verbs "except for the final extra syllable, which (…) consists in each case of a non-tense (lax) vowel followed by zero or more consonants" (Anderson – Jones, 1977:96) as in *cinema -medícinal*, *arena - anecdótal*, *veranda - dialéctal* , *utensil – vigilant.*

Primary adjectives, in turn, pattern like verbs, e.g. *sólid*, *remóte*, *corrúpt*, *vúlgar.*

The crucial points in this formulation with respect to further discussion are the exceptions, i.e. nouns and derived adjectives that do not follow the rule, for example, *álgebra*, *lúdicrous*, *eloquent.* The penultimate syllable terminating in two consonants should bear primary stress but instead, stress is placed on the antepenultimate. Chomsky and Halle, accordingly, extend the notion of the weak cluster (syllable) so as to allow the single final consonant to be optionally followed by /r/ and /w/. This, however, leads to an 'anomaly' in the case of /l/. In the following examples the syllable terminated by /l/ behaves like a strong syllable in attracting stress: *cerebéllar*, *morbíllous*, *medullar.*

The way out of this dilemma was to propose that those clusters were underlyingly geminate, in spite of the absence of the phonetic realization of the posited distinction. The notion of the 'weak syllable' was thus modified to incorporate the new aspects.

However, the modified version still lacked serious structural support – it did not prevent overgenerating other possible sequences. Furthermore, there appeared more counterexamples: *fraternal*, *detergent*, *observant*, in which the penults are also strong. This means that cluster /rC/ is strong, but /Cr/ weak – the explanation for this fact is also lacking. It must be recalled here that the proposed /Cl/ sequence must be also a strong cluster to account for the difference in stress assignment of *céphalous* : *medúllar.* However, as Anderson –

Jones (1977) point out, from some other issues discussed in *SPE* the cluster /Cl/ seems to be a rather weak cluster. The inconsistency is highlighted by the instance of *pentáthlon,* with strong penultimate. Thus, the distinction between 'weak' and 'strong' cluster could not be derived directly from properties of phonological representation. In the SPE rules, it figured as an arbitrary property of English phonology and could not be related to other phonological rules.

3. Anderson and Jones' maximalist syllabification

Anderson – Jones (1977) proposed to amend these shortcomings by means of the syllable structure theory. According to them, weakness correlates with the placement of syllable boundaries.

The starting point for the theory, which is still based upon distinctive features matrices, is the distinction between 'maximalist' versus 'minimalist' views. "On the maximalist view the medial syllable boundaries are assigned in such a way as to make each syllable of the maximal extent compatible with the constraints on initial and final clusters. So with form like *debit*, the first syllable would include both the initial stop and the medial stop and the second would include both the final and the medial stops: so $[_1$d e $[_2$b$]_1$ i t $]_2$. That is, where necessary, the syllable boundaries overlap (..). On the minimalist view, only the initial boundaries are pushed forward as far as possible. The end of each syllable coincides with the beginning of the next. So $[_1$d e$]_1[_2$b i t $]_2$." (Anderson – Jones, 1977: 94).

One more fact has to be borne in mind before placing the brackets. Stress assignment affects the placement of syllable boundaries as evidenced by other phonological correlates of syllabification. For example, as Anderson – Jones (1977) observe, there is a contrast between *cóngress,* which has stress on the first syllable, and *congréssional* with stress on the second, in that only in *congress* the nasal assimilates to the following stop, i.e. [ŋg] in *congress* while there is no assimilation in *congressional*, i.e. [ng]. Similarly, in the words like *petrol* the medial stop is accompanied by glottal reinforcement (as for a final), but /r/ is voiceless, as would be expected after a tautosyllabic voiceless segment. This seems to support the claim that only stressed syllables are maximalist and with respect to their finals, unstressed

syllables are minimalist: [con[g]ress]~[con][gre[ss]ional], [pe[t]rol]. What follows, the introduction of the syllable overlap has to be done after stress assignment.

Such attitude explains the inconsistencies in the SPE MSR: if the boundaries are placed in accordance with the constraints on initial and final clusters, in the instances involving weak penultimates with nouns and derived adjectives the final syllable begins immediately after a lax vowel: arse[nal, alge[bra. The case of *pentathlon* is explained on the basis of constraints on initial and final clusters: since /θl/ is not a permissible initial cluster in English, hence pentath[lon. The difference between *cephalous* and *medullar* is also clear : cepha[lous : medul[lar.

A syllable is then weak if the syllabic element is followed immediately by the onset of the following syllable, with the geminate analysis of long vowels and the reservation (boundary element #) allowed for the cases like *edit,* which has a weak final syllable. The overlap bracketing is as follows:

$[_1$m e $[_2$d$]_1$ i $[_3$ c$]_2$ i $[_4$ n$]_3$ a l$]_4$, $[_1$a l $[_2$ g$]_1$ e$[_3$ b$]_2$ r a$]_3$, $[_1$d e$[_2$ p$]_1$ e n$[_3$ d$]_2$ e n t$]_3$, $[_1$f r a$[_2$ t$]_1$e r$[_3$ n$]_2$a l $]_3$

In *algebra* /br/ belongs to syllable $_3$ but only the /b/ to syllable $_2$ because /br/ cannot be a syllable final cluster. Similarly, /nd/ in *dependent* and /rn/ in *fraternal* belong to syllable $_2$ since such clusters can be final in a monosyllable. However, only /d/ and /n/ can belong to syllable $_3$ because /nd/ and /rn/ cannot occur syllable-initially. It should also be stressed that certain morphological boundaries favour non-overlap. For example, *longer* (with overlap) could be contrasted with *longing* without the overlap. Here, however, Anderson – Jones fail to account for such preferences.

Anderson and Jones' theory ameliorates Hooper's (1972) or Vennemann's (1972) specifications of the syllable structure, on which it is partially based, in providing intrinsic motivation for syllable boundary placement (henceforth SBP). The main function of the rules for SBP is to expand the syllable boundaries associated with each syllabic as far as it is compatible with constraints on well-formed syllables.

As can be seen, the syllabic structure in their interpretation relies on the generative concept of a 'syllabic', which is the only obligatory

element and the pivot for determining syllable structure. It might be worthwhile to recall that in terms of Chomskyan framework any vowel ([+voc, -con]) is marked as syllabic, as is any liquid ([+voc,+con]) when not adjacent to a vowel. Since the co-existence of [vocalic] and [syllabic] is rather tenuous, Chomsky – Halle (1968) propose rejecting [voc] in favour of [syll]. However, taking into account prominence and acoustic judgments, the precise characterization of the phonetic realization of [syllabic] is obscure. Anderson – Jones (1977) suggest accordingly that syllabicity is easier to define in terms of combinatorial rather than inherent phonetic properties. Rejecting [vocalic] as a contrastive feature also complicates the Syllabic Segment Selection (henceforth SSS). Following such an assumption, /w/ and /j/ will differ from vowels in being [-syllabic] but like them [+sonorant, -consonantal]. Accordingly, the status of diphthongs will become ambiguous.

The final aspect of Anderson – Jones' contribution to be mentioned is dependency interpretation of syllabicity and stress. Recapitulating from the above presentation, the feature 'syllabic' seems to be the element which is obligatory and serves to characterize the syllable. The tenets of dependency phonology (Anderson –Jones, 1977; Anderson, 1987) provide guidelines for describing such syntagms. Namely, the concept of dependency is pertinent when a syntagm contains an obligatory and characteristic terminal element. This element, in this case the syllabic, is designated the governor of the syntagm; other constituents are its dependents (Anderson – Jones, 1977:119).

The graph – theoretic interpretation of such dependency relation was interpreted as binary and nonsymmetrical. According to such specification, each individual syllable is represented by a tree which has as a centre (root) the governing element and direction imposed by the dependency relation. The form of the graphic representation changes when taking into account sequences of syllables rather than individual syllables. In congruence with the overlap principle, whereby adjacent syllables in a morpheme show overlap, there is an element dependent on two syllabics:

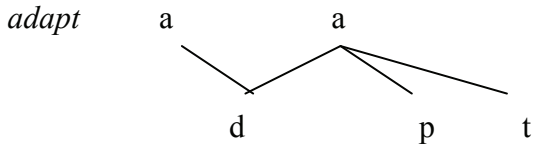


Fig. 1. The graphical interpretation of dependency relationship (adapted from Anderson – Jones, 1977:117)

It is equivalent to [a [d]a pt] where bold type is interpreted as marking the governor. Accordingly, the role of the SSS is to impose dependency relations on the component segments of a morpheme.

The second step was the claim that it is the function of the stress to select the centre among the set of syllabic governors. "Thus, the effect of stress rules is to subjoin one of a number of governors to a new governor for the whole sequence under consideration, a governor which is a replica of the subjoined element" (Anderson **–** Jones, 1977: 120). The precedence was subject to dependency: the distance from the syllabic correlated with greater subordination.

The main advantage of Anderson and Jones' model is providing a breakthrough from the contrastive features. They managed to capture some important generalizations without having recourse to arbitrary notions, like 'a weak cluster'. Strong theoretical motivation for the derivations was also provided. However, even taking a perfunctory look at the tenets it becomes evident that the theory is far from being lucid and holistic – for example, the phonetic difference between *a longer* (noun) and *longer* (adj.) cannot be accounted for. Furthermore, the theory still made use of the feature [syllabic] which cannot be an intrinsic characteristic of segments. Finally, the SSS procedure was extremely complicated: rendering an exemplary derivation for one word could take as much as a page.

4. Kahn's hierarchical theory of the syllable

The next stage in the development of the generative theory of the syllable was recognizing the syllable as a hierarchical unit in phonological representations, which was, in fact, returning to the structural pre-generative thought. The 'causa causans' thesis was introduced by Kahn (1976 as quoted in Clements – Keyser, 1983). He proposed a new tier of phonological representation involving strings of the symbol S ('syllable').

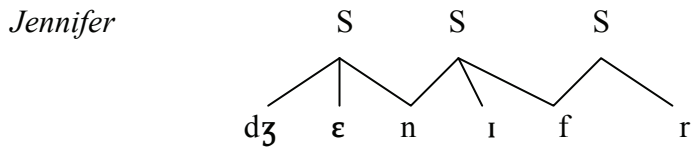


Fig. 2. The hierarchical representation for the word *Jennifer* as suggested by Kahn (1976, adapted from Clements – Keyser 1983:3)

As can be seen from the graph, each maximal sequence of segments dominated by a single node S constitutes a syllable, which involves overlap. Kahn did not, however, provide a characterization for his notions 'possible initial cluster' or 'possible final cluster'. Neither did he specify the point in phonological derivations where the syllable structure rules first apply. Moreover, such a hierarchical mode of representation did not distinguish syllable peaks from marginal elements. The syllables thus constructed could not be rebuilt, following the operation of such rules as, for example, vowel deletion or epenthesis. To amend for those shortcomings, Kahn made use of the notion [syllabic], where he stumbled upon problems similar to that of Anderson and Jones.

5. Binary branching structures

The next important step in the development of the syllable structure was the theory that syllable trees were binary-branching. It implied that there was no limit on the number of levels intervening between the

segment and the root node. Instead, the depth of branching was determined by the number of terminal elements in the syllable. One vital drawback of that type of structure was implicated in the so-called Catalan series effect (Clements – Keyser, 1983:5). Namely, with the simple CV form, there is only possible grapheme representation but if the string contains four segments, for example CVCC, the number of possible representations increases to five. With a string of six segments, e.g. in the Polish monosyllabic *drgnąć* 'to jerk' we would come up with 42 possible representations, a string of seven will yield 132.

The final drawback of the binary-branching theory is that in describing the structures of heavy syllables as for example, [pa:p] and [pamp], although the tree captures the structural equivalence of the terminal substrings, the same terminal sequence is treated as possessing two distinct structures, depending upon whether or not it is final in the syllable. S and W stand for 'strong' and 'weak' correspondingly.

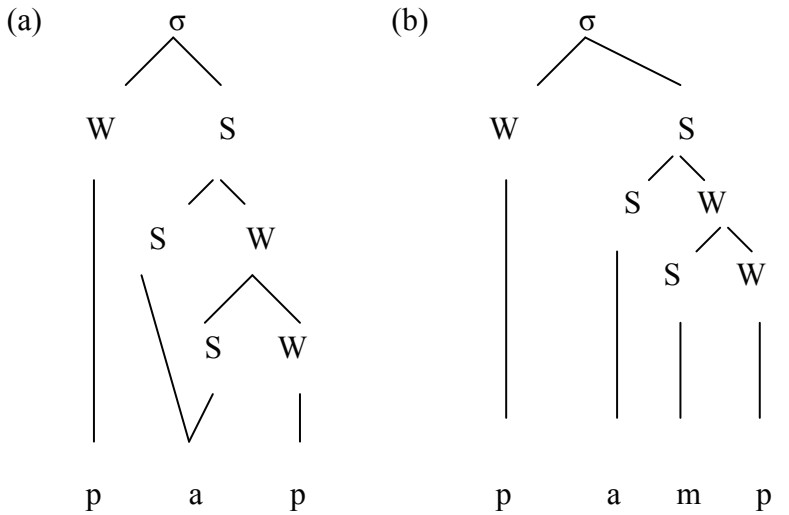


Fig. 3. The representation of the structure of heavy syllables in binary-branching theory of syllable structure (adapted from Clements – Keyser, 1983:7)

Such structuring would imply that the vowel in (a) and the vowel in (b) should display phonologically different behaviour by virtue of their phonological structure. Such a distinction has not been corroborated in the phonological research, which suggest that a phonological theory should provide a uniform characterization of the concepts ' heavy' and 'weak' syllable.

6. CV generative theory of the syllable

Clements – Keyser (1983) extended the research done by Kahn, introducing a third tier in syllable representation, apart from the syllable tier and the segmental tier. In this approach the word *Jennifer* was represented as follows:

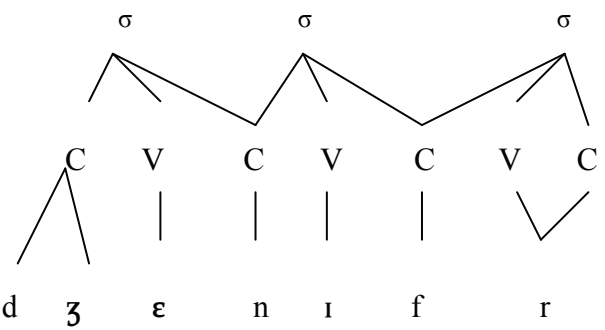


Fig. 4. The three-tiered representation of the word *Jennifer* proposed by Clements – Keyser (1983). Adapted from Clements –Keyser (1983: 8)

With such a representation, the feature [+ syllabic] could be dispensed with. The structure provides evidence for the view that the CV tier is a component of syllable representation regardless of its functioning in the word formation component. As evidenced by the Figure 4, the elements of the CV-tier also serve the function of defining the primitive units of timing at the sub-syllabic level of phonological representation. For example, the affricate /dʒ/ is treated as a bimoric sequence CC, corresponding to two units of the CV-tier (a double timing unit) and forming an example of one-to many correspondence.

Syllabic /r/, on the other hand, exemplifies the relation of one- to-many relationship. Heavy and light syllables, problematic for the binary branching theory, receive a uniform mapping:

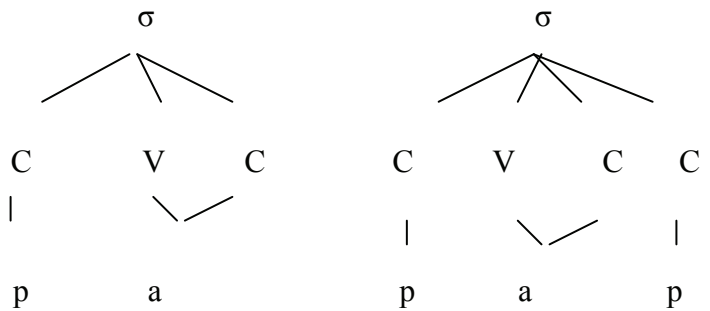


Fig. 5. The representation of heavy syllables in CV generative theory of syllable (adapted from Clements – Keyser, 1983:19)

Noteworthy is the fact that the complex nucleus in this model is represented as VC, regardless whether it denotes a long vowel, a diphthong, a syllabic consonant or a sequence VC. In other words, the structures /a͡i/, /a:/, /r̩/ and /at/ are given the same representation as VC (Clements – Keyser, 1983:13). It could be a problem for example in representing Spanish structures as in /we/ where, in traditional terms, the first segment is [-syllabic].

Further tenets of the CV theory include the concepts of extrasyllabicity (latent consonants), core syllables, positive and negative syllable structure conditions (constraints) and ambisyllabicity. Latent phonemes are those demanding certain conditions to become realized. Clements – Keyser state their status more explicitly: "[w]e are dealing with an element of the underlying representation of a word which may be 'phonetically realized' only if it can be assigned to a syllable, failing which it simply does not appear" (Clements – Keyser, 1983:101). A tentative application of this concept in CV theory might be exemplified in the opposition of English structure of *damn* versus *damnation*. (The phenomenon is also called Stray Erasure).

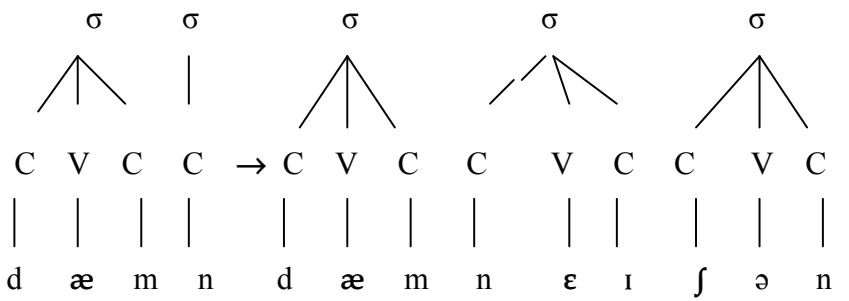


Fig. 6. The representation of extrasyllabic consonants (Stray Erasure)

The problem with such interpretation is that the derivations of the type *damn* → *damning*, *to long* → *longing*, where the latent consonant fails to surface, cannot be accounted for.

The distribution of extrasyllabic elements was given the following generalizations:

only obstruents and /r/ may be extrasyllabic,
noun and verb stems (roots plus derivational endings) never terminate in extrasyllabic consonants,
otherwise, word-final consonants may or may not be extrasyllabic (Clements – Keyser, 1983:103).

The notion of extrasyllabicity found its application also in explaining /str-/clusters. /str-/ as in *stray* is not, according to the SSP, a particularly 'happy' cluster, since /s/ is more sonorous than /t/. Assuming /s/ to be extrasyllabic solves this incongruence.

The reverse strategy of accommodating stray consonants can be exemplified by the English word *rhythm** /rɪðm/. Since /ðm/ is not a permissible English final cluster, the /m/ would be left stranded. Hence, a dummy syllable is created and resyllabification occurs. The word is then realized as either [rɪðm̩] or /rɪðəm/. Such /ə/ epenthesis is called *anaptyxis* and the resulting phonetic shape is in both cases dissyllabic. The issue of resyllabification was further developed by Borowsky (1986 as quoted in Blevis 1995) and others, whereby the rule of resyllabification was given the following representation:

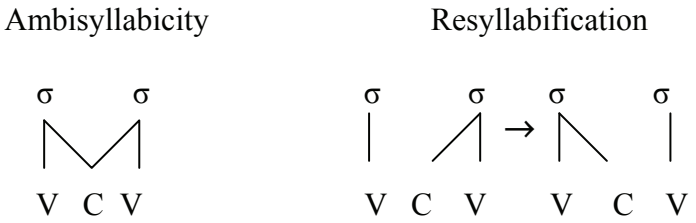


Fig. 7. Ambisyllabicity vs. resyllabification (adapted from Blevins, 1995:232)

As far as derivation is concerned, the strong claim of the CV-tier theory is that syllable structure is assigned at a single level, uniquely specifiable for all languages. It implies that syllable trees are not build up during phonological derivations, but are already present in the lexical representations that constitute the input to the phonological component. Such a claim presupposes the existence of a set of core syllables, which is specified as follows: CV, V, CVC, VC within the scale of increased markedness. Each language was then defined in terms of its maximal syllable type, stated as a single expansion of the general schema C (*)V(*)(C(*)), where any occurrence of * can be replaced by an integer greater than 1.

With respect to the constraints on co-occurrence within the syllable, it could be pointed out that they are represented by positive and negative syllable structure conditions, which generate the allowed syllable cores for each language: "The positive syllable structure conditions (PSSCs) state the general canonic form of well-formed consonant or vowel clusters in terms of sequences of natural classes. (…) In case there are no constraints on clusters (a situation unknown to us in the case of consonant clusters, but not uncommon in the case of vowel sequences) no PSSC need be stated. The negative syllable structure conditions (NSSCs), applying to the output of the PSSCs, specify certain subsequences within the syllable as ill-formed, thus performing a filtering operation" (Clements and Keyser, 1983:31). The exemplary negative and positive structure conditions are presented in Figure 8 (adapted from Clements – Keyser, 1983:45f).

(a) positive structure condition for English, admitting s-clusters, is as follows

(b) negative syllable structure condition excluding /bw, pw, fw/

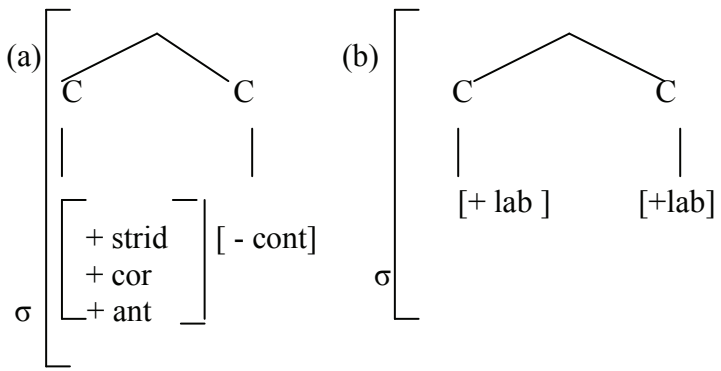


Fig. 8. The representation of PSSC (a) and NSSC (b) for English (adapted from Clements – Keyser 1983: 45f)

It must be taken into account, though, that onsets excluded by PSSCs differ from those excluded by NSSCs. For example, by virtue of PSSC clusters of the type / #lp-/ are disallowed, while NSSC eliminate /#bw/.

To summarize, Clements – Keyser's (1983) theory provided influential insights into the syllable structure. It supplied the explanation of phonological processes for example, in Polish *czy* /tʃɪ/ 'if' versus *trzy* /tʃɪ/ 'three', i.e. affricate versus cluster respectively: "We now have a natural way of distinguishing such minimal pairs as Polish *czy* 'whether' and *trzy* 'three', in which the affricate [tʃ] of the first example is acoustically and perceptually distinct from the otherwise identical stop-fricative sequence [tʃ] of the second (..)" (Clements – Keyser 1983: 34). In practice it means that *czy* is represented as a countour segment (both /t/ and /ʃ/ are linked to one C slot) and in *trzy* the respective components are linked separately to the syllable node.

Moreover, the syllable structure could be given a simple and uniform description due to the concept of extrasyllabicity, since long clusters need not have to be completely parsable into syllables. However, although the researchers admitted the existence of further levels of hierarchical structure, like onsets, nuclei and codas, such levels were not crucial for the processes in question. Further research could not omit that aspect and subsequent amendments took into account the tripartite syllable structure. Finally, the filters as specified in Figure 8 seem to be imperfect: the positive filter for example blocks the generation of licit English onset clusters as /sf- / (*sfere*) or /s**θ**-/ (e.g. *sthenic*).

7. Prosodic templates

The important stage in establishing the independence of a skeletal (timing) tier was McCarthy's (1984) analysis of Arabic (for the overview of literature see Broselow, 1995; McCarthy, 1984). In his analysis consonantal roots as well as vowel melodies and skeletal templates have the status of separate morphemes. The mechanisms for mapping between tiers were argued to be equal to those employed in tonal mappings. The skeletal template acts as a core establishing the linear order of segments on discrete planes, the unmarked case being left-to-right-association: "Specifically, this new theory provides minimally that utterances are represented on two (and possibly more) isochronous formal levels, called *tiers*: a skeleton or template characterizing canonical pattern in terms of the units C (consonant and a glide) and V (vowel), and a melody of segmental types, describing point of and manner of articulation. Morphology is organized on at least two levels, and sometimes more" (McCarthy, 1984:299). The exemplary templatic structure could be represented as follows:

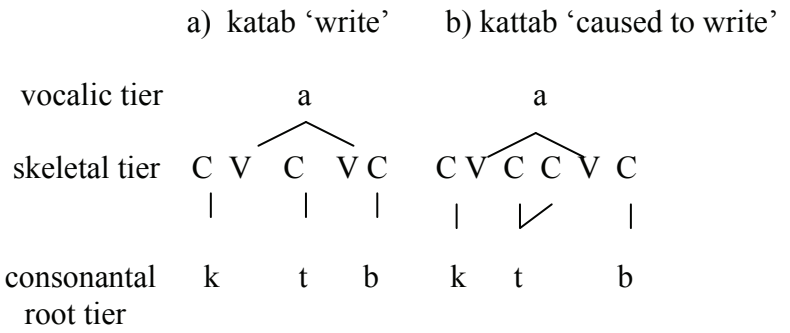


Fig. 9. The template for the analysis of Arabic (adapted from McCarthy, 1984; 1986, as quoted in Broselow, 1995: 180)

The model was very influential in establishing the independence of a skeletal tier. It supported McCarthy's claim that in Semitic languages roots and morphological patterns system could be best described as mapping the consonantal roots to skeletal templates. The fact that the most recent works by McCarthy (1998, 2003) analyse the same phenomenon from the OT perspective, which practically means rejecting the templatic approach, weakens the proposed templatic structures.

8. Moraic approach

The templatic approach implies that the length of a phoneme, as well as its tonal properties, are represented on a tier different from that showing phonetic properties – properties termed *integrity* and *inalternability*. In other words, rules that scan the skeletal tier will see long segments as two units, while rules that influence exclusively the gestural tiers (melodic, segmental, featural or articulatory in other terminology) will see them as single elements. This in turn leads us to the notion of weight in the syllable structure, introduced by moraic approaches. Moraic framework is particularly suitable for studying stress phenomena. The algorithm for the syllable in a moraic approach as proposed by Blevins (1995) is as follows:

$$\sigma \quad \rightarrow \quad C_o \, \mu \, (\mu) \, C_o$$

Fig. 10. The algorithm for a syllable (adapted from Blevins, 1995:212)

In phonology the mora has been used both to supplant syllable and as a subsyllabic constituent. Exemplary structures where the use of mora denies the existence of the syllable are presented by Gąsiorowski (1997). In his study of the Old English metrical structure the proposed representation looks as follows:

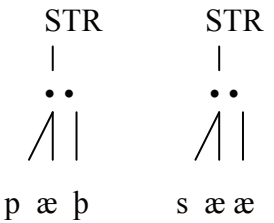


Fig. 11. The representation of OE metrical structure by means of morae (adapted from Gąsiorowski, 1997:66)

The representation of a minimal string of the basic prosodic unit capable of carrying the obligatory stress contour is in such perspective not a syllable but a foot, called by the author *the Old English stress foot*:

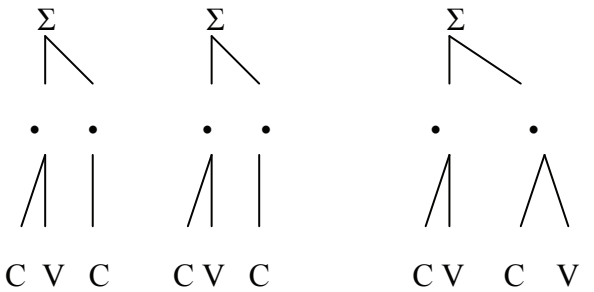


Fig. 12. The foot as a basic prosodic unit in OE (adapted from Gąsiorowski 1997:67)

Apart from the suprasegmental features, standard generative grammar distinguishes between heavy and light syllables for various processes and constraints. In the moraic approach (for an extensive overview of literature see Broselow 1995) the mora is a basic prosodic unit, organizing the phonemes in a particular way. Traditionally, it is defined as a unit of syllable weight. It is represented as an additional tier, intervening between [σ] and the phonemic string. Various canons of heavy syllables are thus unified by their common bimoraic structure, the difference being in how the second mora relates to the phonemic tier. The canonical syllables [ta], [taa], [tapta], [tappa] and [stap] would accordingly receive the representations, whereby a simple vowel is assigned one mora, a long vowel two morae, consonant in the rhyme position also one mora and an intervocalic geminate one mora.

According to such a perspective onsets are assumed to be void of moraic value, since they do not contribute to syllable weight. Such structure presupposes the division of a syllable into an onset and a rhyme. An alternative solution was proposed by Selkirk (1984, as quoted in Broselow 1995), whereby each segment is dominated by a mora and the Universal Onset Creation Rule removes the mora from a prevocalic consonant, associating it with to the following mora. This yields the following structures:

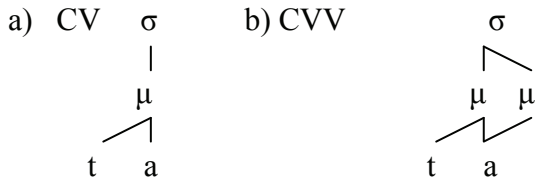


Fig. 13. Moraic representations of weak and heavy syllables (adapted from Broselow 1995: 191)

The evidence for such representation is scarce. The most widespread interpretation is that vowels are underlyingly associated with moras – one mora for a short vowel and two for a long one. Consonants, on the other hand, assume their moraic value by language

specific rules. For example in English, where CVC and CVV syllables are equal in weight, a rule called *Weight-by-position* assigns each coda consonant a mora. The rule is language-specific since, for example, Mongolian, which recognizes only CVV types as heavy, treats CV and CVC syllables equally. Its status could be best described by a quotation from Broselow: "The non-universality of Weight-by-Position provides an important part of the justification for a moraic representation, since if the set of mora bearing segments were identical with the set of syllable rhyme segments in all languages, moraic structure would simply be derivable from syllabic structure" (Broselow 1995: 190). To represent heterosyllabic long consonants McCarthy (1986, as quoted in Broselow 1995) proposed mapping a set of consonantal features to two prosodic positions: the mora for the coda and the syllable node for the onset. The contrast between geminates and single consonants would consist in that only the geminates are associated to a mora underlyingly. Such underlyingly moraic consonants in prevocalic positions will then become linked to two prosodic positions:

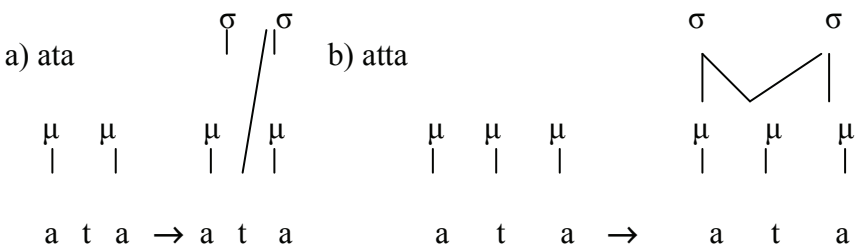


Fig. 14. Consonantal morae (adapted from Broselow, 1995:192)

9. Hierarchical internal structures

As presented in Section 6, CV syllable theory did not recognize the necessity to represent syllable structure hierarchically. Subsequent research returned to the pre-SPE (Pike 1947; Kuryłowicz 1948, as quoted in Dziubalska-Kołaczyk 1995) notion of presenting the relationships among the constituents within a syllable. There were the following possibilities of representing binary branching (for the extensive overview of literature see Dziubalska-Kołaczyk 1995, 2002):

σ → Body Coda; Body→ Onset Nucleus

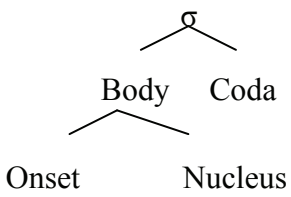


Fig. 15. The representation of a structure with a binary branching onset (adapted from Dziubalska-Kołaczyk, 1995: 23)

The combination of a traditional onset-rhyme split with a body split yields a rise-fall structure as proposed by Donegan and Stampe (1978 as quoted in Dziubalska-Kołaczyk, 1995)

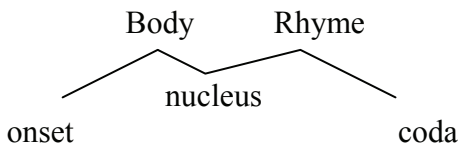


Fig. 16. The representation of a rise-fall structure as proposed by Donegan and Stampe 1978 (as quoted in Dziubalska –Kołaczyk, 1995: 24)

Ternary branching theories were propounded among others by Haugen (1956), Saporta – Contreras (1962):

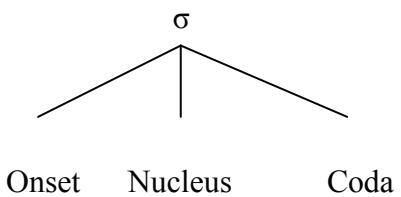


Fig. 17. The ternary branching syllable structure

The syllable structure reached the most developed stage of its constituency in the form of binary branching with rhyme: " the nucleus plus coda form a tighter bond than the onset plus nucleus" (Kenstowicz, 1994:252). The exemplary syllable-internal structure for the word *dream* as adapted from Blevins (1995: 213) looks as follows:

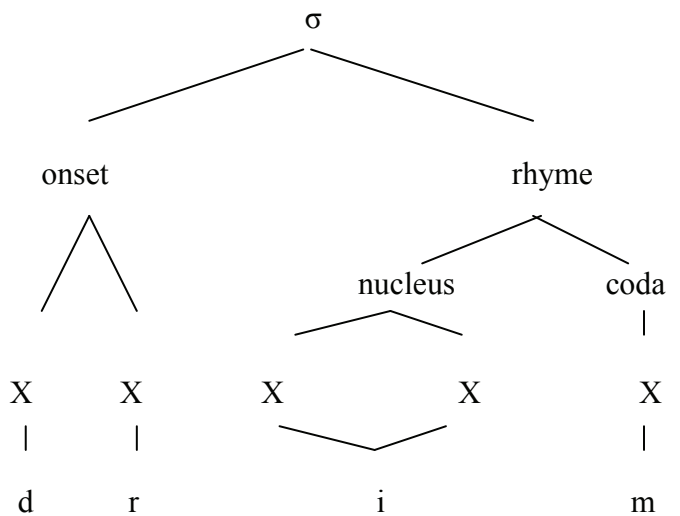


Fig. 18. A binary branching syllable structure with rhyme (adapted from Blevins, 1995:213)

The above structure was further refined by Blevins (1995), bearing in mind the stipulation that arguments for the onset and coda are hard to come by. "Other than the fact that sonority sequencing constraints can be shown to hold within this domain, there are few indications that the onset is anything but what is left when the rhyme is taken away" (Blevis, 1995:216). The structure was given the following representation:

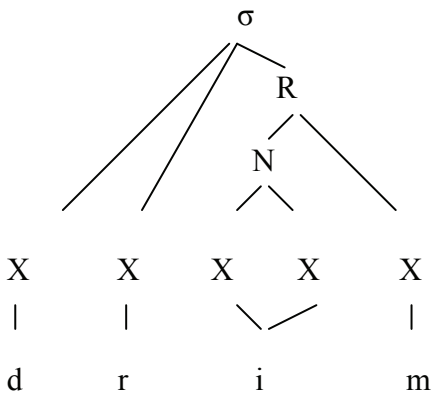


Fig. 19. The representation of the syllable structure proposed by Blevins (1995:216)

Such syllabic representation seems to be compliant with the theory of the syllable regarded as a projection of the single category 'nucleus' represented by N:

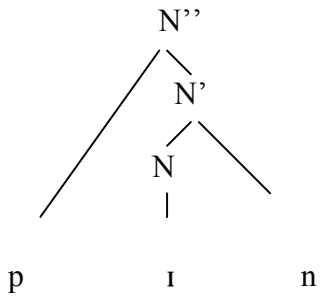


Fig. 20. The 'nucleus projection' syllable structure (adapted from Kenstowicz, 1994:253)

The coda in such a structure could be defined as the complement, or 'right sister' of the nucleus. It is dominated by the first projection N'. The onset could be defined as the specifier of the syllable, or 'left sister' of the syllable, governed by the second-level projection N''. As can be seen from the graph, the rhyme is the first projection N'.

Such a perspective leads us to the notion of Universal Grammar:

> These syllable-building rules are very similar from one language to another and so can be viewed as the contribution of UG. Since the nucleus is the basis of the syllable, it is not surprising that the syllable is constructed outwards from this core. In most languages, syllabic nuclei are coextensive with the set of vocalic segments. We thus have the rule which assigns a vowel to the nucleus. The second rule assigns a prevocalic consonant to onset position (Kenstowicz, 1994:253).

The representation of the above formulated rules looks as follows:

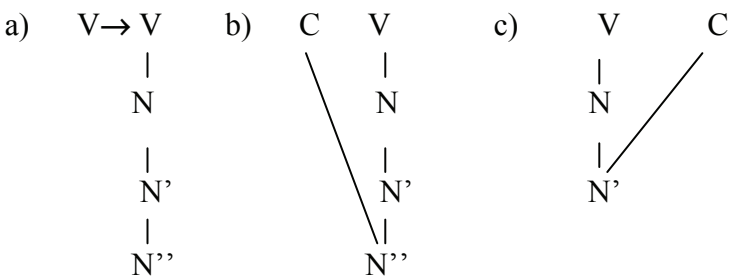
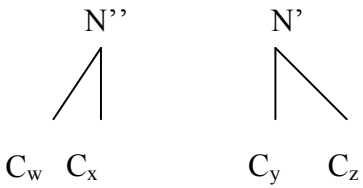


Fig. 21. Universal syllable-building rules (adapted from Kenstowicz 1994: 254)

All languages possess rules (a) and (b) to which language specific rules add (c). All three rules apply in the indicated order, the outcome of which is the preferred syllabification of the string VCV as V.CV, the intervocalic consonant opening the second syllable rather than closing the first. All exceptions to this universal pattern arise from language-specific rules. The most elementary syllable inventory is limited to the stock of {V, CV, VC, CVC}. In languages possessing only such an elemental stock of canonical patterns, for example Spanish, #CC, CCC, CC# clusters normally evoke rules of epenthesis or simplification of the cluster. In languages such as English or Polish, more complex syllable inventories can be found. They arise from selecting the option to include additional consonantal material into the onset or the coda and the creation of such complex structures is severely constrained.

The most widely accepted guidance for studying canonical complex clusters is the Sonority Sequencing Principle (henceforth the SSP), which requires onsets to rise in sonority toward the nucleus and codas to fall in sonority from the nucleus. In combination with the syllable-building rules a), b), c), SSP generates the stock of core syllables:



(where C_z is less sonorous than C_y**,** C_w is less sonorous than C_x).

Fig. 22. The representation of the operating of the SSP (adapted from Kenstowicz, 1994:255)

With such a specification it must be borne in mind that although vowels are the optimal nuclei, some languages also allow sonorants and obstruents to fill the nuclear slot.

One more aspect of syllabicity research remains to be mentioned at this point. The issue of extrasyllabicity re-appeared, among others, in the work of Rubach (1997). In his discussion of extrasyllabic consonants in Polish he introduces the structure, wherein extrasyllabic consonants are licensed directly by phonological word :

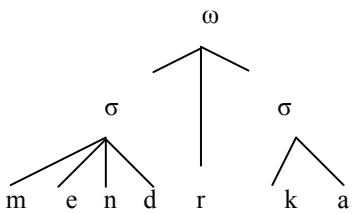


Fig. 23. The representation of the word Pol. *mędrka* 'a wise man', gen.sing. (adapted from Rubach, 1997)

10. Standard Government Phonology

This phonological model, just as the above presented syllable research, will be reviewed here only in the scope pertinent to the topic of the paper. For an introduction to Government Phonology the reader is referred to e.g. Kaye et el. 1990; Gussmann, 2007. The general assumptions of Standard Government Phonology (GP henceforth) are as follows:

- all speech sounds are phonological expressions, each expression being defined as an ordered pair : Phonological Expression = (O,H) such that
  - i. O · E (O possibly empty)
  - ii H ·E (possibly the identity element)
  - iii. H · O (Kaye, 2000)

The first member of the ordered pair is called the operator and the second is the head. Expressions which are headed by the identity operator are called 'headless'. All other expressions are 'headed'. The head of an expression licenses its set of operators. Licensing constraints are defined at L-Structure (lexically). They could be defined as language specific laws on phonological expression.

What follows is that all phonological constituents are headed and they are subject to a binary-branching limit. A phonological string partially consists of a series of positions, which can be indicated by 'x' and which are indexed from left to right. Given the string $x_1x_2….x_n…x_z$, x_n is adjacent to the positions x_{n-1} (n-1>0) and x_{n+1} (n+1 · z) (Kaye 2000: 5). The series of available positions is called the skeleton and each position is a skeletal point. Phonological processes are expressed by means of the principles of licensing and government. Government is defined as "a binary asymmetric relation holding between two skeletal positions" (KLV 1990:198).

The syllable and the coda have no status in the theory since:

- there is no evidence for the syllable behaving as a constituent,
- syllables exceed binarity in their maximal structure,
- syllables do not display distributional relations associated with the governing relation (KLV 1990:200).

However, the theory presupposes the existence of three syllabic constituents: the Onset (O), the Nucleus (N) and the Rhyme; the Rhyme being the maximal projection of the Nucleus. The resulting licit structures are as follows:

a) non-branching: b) branching

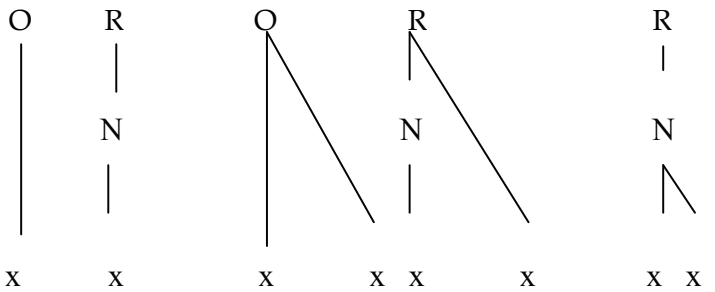


Fig. 24. The licit representations of sound chains in GP (adapted from Kaye 2000: 7-9).

The SSP has no theoretical status, either, since its effects are derivable from the melodic properties of segments. Namely, in the earlier version of GP there were three values for charm property: σ^{+}, σ^{-}, σ^{o}. Segments may be positively or negatively charmed or they may be neutral. Obstruents and non- sibilant fricatives are considered negatively charmed. All other consonantal segments are neutral. Charmed segments may govern, charmless segments may be governed. Positively charmed segments may not occur in non-nuclear positions. Negatively charmed segments may not occur in nuclear positions (KLV 1990: 202). The charm theory, however, has been replaced by 'licensing constraints', which were originally conceived as language specific constraints on the combinatorial possibilities of the elements A, I and U.

With respect to syllable structure GP assumes that "all syllabification is due to governing relations contracted between consonants at the lexical level. The nature of the underlying representation is such that it may receive interpretation without resorting to derivation to a surface form" (Cyran, 2001: 4). Therefore, the language-specific syllable types are due to the licensing properties

of the nuclei and not to parameters or constraints (Cyran, 2001:5). Conversely, parameters in phonology should not be encoded by restrictions on syllable structure.

Four different nuclear categories have been identified (cf. Scheer 2004): full vowels, schwas (vowels which alternate with zero), FEN (final empty nuclei) and internal empty nuclei. According to Scheer (2004) internal empty nuclei are laterally disabled in all languages, while "the lateral activity of the two intermediate categories, schwas and FEN, is subject to language-specific parametrization" (Scheer 2004: 1) What follows, as in "all other syllable-based generalizations, codahood is defined in lateral terms: a consonant 'belongs to a Coda' iff it occurs before a governed empty Nucleus. Hence, the Coda status of a consonant depends on whether the following Nucleus is governed or not" (Scheer, 2004:1). According to the syllable structure markedness scale (cf. Cyran, 2001:3), the markedness index was suggested, such that the onset parameter $C_1 \ldots C_n$ corresponds to the rhyme parameter $VC_1 \ldots C_{n-1}$ (cf. Cyran, 2001:3) for a given structure.

11. Syllabification algorithms

Since in generative research syllable structure is assumed to be absent in underlying representations, a number of syllabification algorithms have been proposed, which fall into two main categories (for the overview of literature see Kenstowicz, 1994).

1) rule-based approaches
   whereby the syllabification is performed by a set of rules applied at a single point in the derivation. For example, Steriade (1982) posits an ordered set of structure-building rules which apply cyclically. These rules have the status similar to other phonological rules and they do not require the syllable structure to be maximized .
2) template-based approaches
   whereby a rudimentary organization into syllables holds at all levels of phonological representation, in other words, there is no point where syllabification originates or ceases. For example, Itô (1986) develops the concept of the template-matching algorithms. They scan the segmental string in a fixed, language-particular

direction, either left to right or right to left. Successive segments are accordingly assigned a position in a syllable- template. According to such view, judging by loan words accommodation, Spanish is said to be motivated for right-to-left syllabification: Sp. *es·pleen* E 'spleen' in contrast with for example Japanese, where Jap. *su·rippa* is the katakana realization of E *slippers* or *ste·ritu* of E *street.*

GP assumes that licensing constraints are derived lexically. This yields the following assumptions:

- syllable structure is anchored in the lexicon (rather than being a function of syllabification algorithm),
- structure preservation (no resyllabification applies),
- lateral relations among segments are the true vectors of "on line" phonological activity (Scheer, 2004:1).

12. Sonority Sequencing Principle as a canon

What remains to be discussed at this point is the viability of the Sonority Sequencing Principle itself. The most vital objection to be raised here is that it seems unscientific. Specifically, the scale itself is not unscientific, but the assumption of judging the correctness and universality of syllable structure by applying a rigid meter of sonority sequencing is. "Marshall, who, like Sigurd, uses clustering behavior to determine strength, states that nasals are stronger than liquids because they do not follow obstruents to form clusters: *trigo, prado, flor,* but no words begin with *tn, pm, fn,* etc. (1984:74). She explains that nasals are too close in strength to obstruents to form clusters with them" (Marshall 1984:74 as quoted in Guffey, 2002:5). From the context it could be gathered that the claim is not meant to be language-specific, but universal. Clearly, any Polish native speaker immediately feels obliged to object: in that language practically any clusters disallowed by the SSP occur quite frequently: *gmina* 'borough', *tnąc* 'cutting', *pnącze* 'creeper', *wiatr* 'wind', *rtęć* 'mercury' etc. Some clusters in Khmer could be quoted as well, as for example Khmer /tŋay/ 'the sun' The quotation could then serve as an epitome of general tendency driven by the application of the SSP. Namely, the SSP imposes some

sort of a **canon** on phonotactics (c.f. a recurring phrase "canonical syllable structures") in a prescriptive sense.

The ideal, strength or sonority based scale, is used to prescribe a syllable structure. "Fundamental to all studies is an understanding of the nature of the syllable. Various theories – chest pulse, movement, degree of openness – have been posited, but one has in recent years come to the forefront and is gaining ground: the theory that relative sonority determines the makeup of a syllable" (Guffey, 2002:2). It should be noticed in passing that sonority as a determining factor of syllable structure hardly can be called "a recent theory": such criterion was put forth already by Jespersen (1904, as quoted in Awedyk, 1975).

Yet, the concept of 'sonority' is quite elusive itself. Various criteria have been posited to define it. If we try to trace the research on the defining criteria for the syllable it becomes evident that the two concepts: 'syllable' and 'sonority' keep defining one another. In general, the definition of the sonority reflected the disagreement ensuing in defining the syllable itself. Ladefoged (1982) suggested defining sonority in terms of the sound's loudness relative to the loudness of other sounds uttered with the same length, stress and pitch. Accoring to this definition, loudness depends on a sound's acoustic intenstity (Ladefoged, 1982:221). That would be then the acoustic criterion, an it might be in order to notice here that the concept of acoustic relativity with respect to other sounds is very close to the criteria used by B&BP (to be discussed in detail in Chapter 4). However, it practically implies that sonority is defined in terms of acoustic criteria, hence saying that sonority is winning over acoustic criteria in defining syllable seems tautological.

Hankamer and Aissen (1974:137, as quoted in Guffey, 2002:3) forward the articulatory explanation, suggesting the relative constriction as the best indicator of sonority. Vowels, implying no constriction in the oral cavity place at one end of the scale while stops – at the opposite. Let us point out here the ensuing circularity of definitions. Recalling the quotation from Guffey (2002:2) let us remember again that the sonority criteria is winning as the defining factor for the syllable over articulatory and acoustic criteria. Yet, clearly, the notion of sonority itself is not based on anything but on acoustic or articulatory criteria.

There is also an alternative to sonority namely, the theory of relative consonantal strength. The theory was proposed by Venneman's student [Bybee] Hooper (1976) and could be treated as the refinement of Vennemann's earlier research (1972, 1982). The strength scales can be based on a number of factors. Hooper bases her scale on the position of the sound within the syllable. The circularity comes to the fore once more: Hooper explains the syllable structure by means of the syllable structure of the language she conducted her studies on. In other words, strength is based on the position of a sound in a syllable and then the strength criterion is adopted as a defining criterion for a syllable structure: "the strongest consonant is the least vowel-like and the pivotal principle of syllable structure is the contrast of successive features within the syllable" (Hooper, 1976:198).

The rank of consonants is then based on their similarity to vowels and the location within the syllable: the weakest segment of the syllable (a vowel usually) constitutes a nucleus, the weakest consonants are those found closer to the nucleus and the strongest on the edges. It should be pointed out that Hooper's theory of strength is not an absolute canon with respect to the universality of CV syllables. She formulates it in a way allowing for occurring divergences: "[r]ather, she presents a scale of relative strength and states that strong consonants are preferred over weak consonants in syllable-initial position and the weak consonants are preferred over strong in syllable-final position, which she, like Malmberg, Macpherson and Alonso, calls the weaker of the two positions" (Guffey, 2002:40).

Such reasoning leads to another issue here, pertinent to Spanish syllable studies: that within the syllable the strong consonants tend to be placed in syllable initial position and weaker – in syllable final positions: "[Méndez Dosuna] argues that any syllable-final consonant must be weaker than a following syllable-initial consonant. In any case where the reverse is true, the syllable final consonant will eventually undergo a process that will result in the ideal status of weak syllable-final consonant + stronger syllable-initial consonant" (Méndez Dosuna, 1987:16, as quoted in Guffey, 2002:42). To support his thesis we might quote the realization of Sp. *actor* as [aɣtor]. Yet, the fricativization (lenition) of Spanish syllable initial /b, g, d/ like in

abogado [aβoɣaðo] 'attorney' or the flapping of /t/ in AE *butter* would be in turn the counterexamples.

At the beginning of the discussion of sonority scale it was suggested that the concept of 'sonority sequencing principle' is unscientific. It is only a canon introduced for the ease of descriptions. Canons, or standards, have always been idealizations with external pretense for scientific objectiveness. They imply some sort of an authority that decides: those clusters are all right, and those are not, so let us cast them out, they are extrasyllabic, or let us call them accidental. The SSP does not explain why from a 'well-behaved' French syllable as in Fr. *pauvre* /povrə/ 'poor' developed not so well- behaved /povr/ or from Pol. *tręć* the form *rtęć* 'mercury' resulted. The explanation given by Hooper (1976) is as follows: "(…) when syllables that violate the principles of syllable structure arise, they are historical by-products of some other process that had distinct motivation" (Hooper 1976:229). The statement was commented by Guffey as follows: "[s]he claims that the motivation that resulted in these syllables ([povrə→povr]) was the elimination of unstressed vowels and regularization of stress placement (1976:229). In essence, the effect that this process had on syllable structure was accidental" (Guffey, 2002:42). Such a statement also lacks objectivity: if non conforming syllables arise, the process is accidental, if conforming – the process is vital, with respect to the adopted canon.

Definition of sonority itself seems thus to be the reduplication of the earlier defining criteria for the syllable. There is a proliferation of syllable structure types within the structural and generative approaches and the adopted representation depends mainly on the particular linguistic aspect to be investigated. It seems that a given syllabic structure is invented in order to account for a particular linguistic phenomenon.

This is particularly evident in defining stress assignment in English basing on syllable (see e.g. Gąsiorowski, 1997 for the justification of using morae rather than syllables). Traditional generativists had to recourse to the notion of a 'weak' versus 'strong' syllable even though they denied the existence of syllable *per se* (Chomsky – Halle, 1968). Féry – Van de Vijver (2003) claim that syllable shape determines which syllables are likely to receive stress in many languages: "At higher

prosodic levels, syllable shape determines which syllables are more likely to be stressed in many languages: heavy syllables are more prone to be stressed than the light ones" (Féry – Van de Vijver, 2003: 4). On the other hand, stress assignment makes use of the notion 'syllable', e.g. tonic syllables are defined as those which receive the primary stress. It practically means that the two notions: 'stress assignment' and 'syllable' continue defining each other. The same goes on with respect to the concepts of 'sonority' versus 'syllable'. Sonority is defined in terms of placement within the syllable structure and the syllable structure is defined in terms of the rising / declining sonority. Clearly, one of the notions is superfluous. Considering all these drawbacks, the need to explore string-based syllable-less phonotactic models as a viable alternative could be justified.

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SUMMARY

The article presents the retrospective overview of syllable structure theory, starting from Haugen's structural theory of the syllable to the post-generative hierarchical structures. The basic question underlying the discussion will be whether the syllable is really a viable means for describing linguistic structures. What follows, in discussing particular syllable structure options, the emphasis will be put on the problems present in syllabic phonological interpretations and the ensuing circularity of involved concepts. I will also present the strategies developed by generativists to 'cope with' the legacy of the syllable theory inherited from the structural line of research.

Keywords: syllable, branching structures, sonority, syllabification algorithm, morae

Henryk Kardela

Cognitive grammar as a parametrized continuum of linguistic units

1. Introduction

One of most important theoretical claims made by cognitive grammar[1] is that morphology and syntax form a continuum of symbolic units. The continuum, which consists of three types of linguistic units: semantic units (S), phonological units (P) and linking the two — symbolic units — can be presented diagrammatically as follows (cf. Langacker, 1995:12):

[1] Cognitive grammar is a linguistic theory proposed and developed by Ronald Langacker (cf. Langacker, 1987, 1988a, 1988b, 1990, 1991a, 1991b, 2000a, 2000b, 2005, 2008) in the general paradigm of cognitive sciences. Other linguistic models of this paradigm include Adele Goldberg's construction grammar (Adele Goldberg, 1995; 2006); theory of conceptual metaphor (Lakoff and Johnson, 1980; Johnson, 1987, Lakoff, 1987, Lakoff and Johnson, 1999), theory of mental spaces and conceptual blending (cf. Fauconnier, 1991; Fauconnier, 1997; Fauconnier and Turner, 2002). Cognitive in spirit is also Ray Jackendoff's model of grammar, developed in the main stream linguistics paradigm (cf, Jackendoff, 1983, 1987, 1990, 2002).

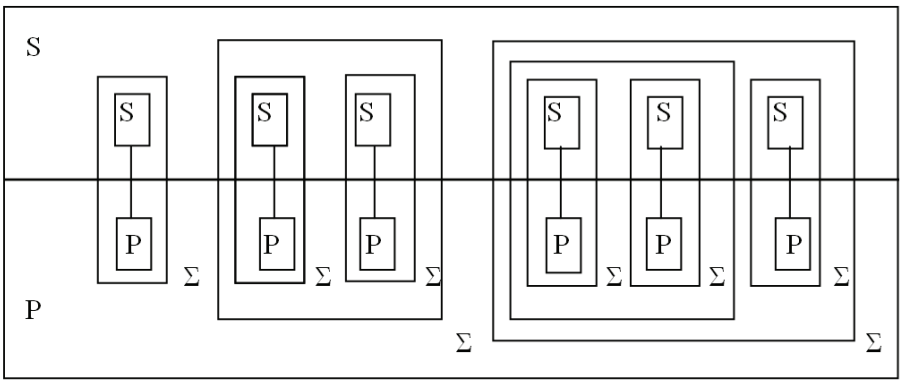


Fig. 1. The continuum of linguistic units

The continuum of linguistic units emerges from actual usage; indeed, as Langacker (2008:457) notes, "a language resides in conventional patterns of usage," which are "learned from countless instances of use in discourse contexts [and are] are subsequently applied in producing and understanding further discourse." For Langacker, a discourse contains a series of so-called usage events, defined by him as "instances of language use in all their complexity and specificity." (ibid)) A usage event, Langacker further observes (pp. 457-457),

> has no particular size; depending on our analytical purpose, we can segment a discourse into words, clauses, sentences, intonation groups, conversational turns, and so on. An event is bipolar, consisting in both conceptualisation and means of expression. On the expressive side, it includes the full phonetic detail of an utterance, as well as any other kinds of signals, such as gestures and body language. […] Conceptually, a usage event includes the expression's full contextual understanding—not only what is said explicitly but also what is inferred, as well as everything evoked as the basis for its apprehension.

Only part of "full contextual understanding," mentioned in this passage, is "linguistic meaning", and this is precisely the part that we have been referring to as "the continuum of bipolar linguistic units." This part comprises all areas of interest traditionally dealt with by linguistic pragmatics, which includes the study of performative verbs,

direct and indirect speech acts, deixis, entailment, the principle of politeness and others. It is when engaged in what we would like to call the context-dependent discoursive interaction that the speaker and the hearer establish "what the other knows and intends" — the common basis for interpretation of what is being said. This common "interpretational basis" for the speaker and the hearer is called by Langacker the current discourse space (CDS). The CDS, which is part of the overall context in which an utterance is produced, can be presented as follows (based on Langacker, 2008: 466; see also Langacker, 2005).

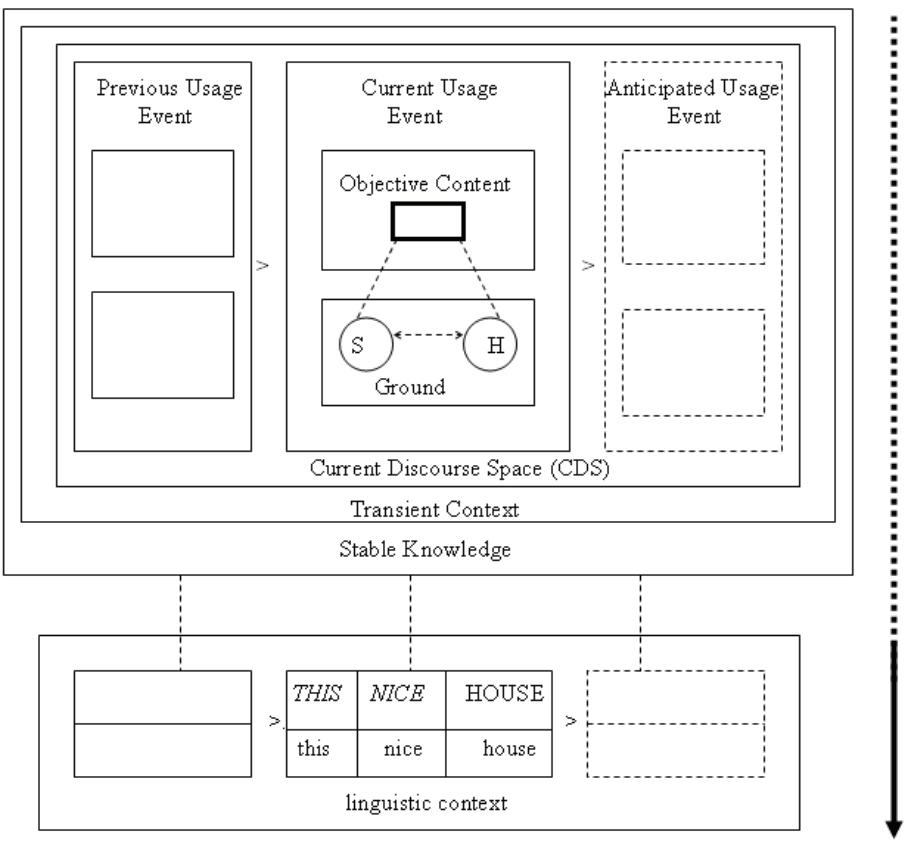


Fig. 2. Overall Context, Current Discourse Space and linguistic units abstracted from usage events

The figure shows the relations holding between a linguistic expression (here: *this nice house*), and the overall context including the Current Discourse Space from which this expression is abstracted. The CDS, comprises, to use Langacker's formulation, "everything presumed to be shared by the speaker and the hearer as the basis for communication at a given moment" (p. 466). The CDS consists of three basic elements: the current usage event, the previous usage event and a usage event which can be anticipated. This arrangement holds at all "levels" of conceptual organization, including all linguistic "levels". Thus, for instance, expressions such as *thus*, *therefore*, *this being the case*, etc. point to the presence of a previous usage event, whereas expressions such as, say, *if*, *when*, etc.— because they induce expectations, they should be taken to signal the existence of anticipated usage events. In Fig. 2, the linguistic "level" is represented by the lower box, which pictures the linguistic expression *this nice house*, which emerges (or is abstracted) from the CDS.

The current usage event consists of so-called objective content (OC), i.e. of the situation or a thing conceptualised which is communicated between the speaker (S) and the hearer (H). S and H form what is called the ground, i.e. persons and circumstances accompanying the production and understanding of utterances (here: the expression *this nice house*). In the case at hand, the use of the demonstrative pronoun *this* signals that the expression is grounded, i.e. that the speaker establishes mental contact between himself and the thing called "this nice house." The CDS itself emerges from so-called transient knowledge, i.e. knowledge evoked for the purpose of conceptualisation and communication. Transient knowledge, in turn, is part of stable knowledge. The arrow symbolizes the "linguistic continuum", which is abstracted from the CDS. The arrow's broken section means that the scope of the context, or world knowledge from which the linguistic unit *this nice house* is abstracted, is in fact unlimited, since an expression's meaning can be defined relative to a practically unlimited number of domains structuring the relevant overall context for this expression.

If an expression's meaning is indeed abstracted from the continuous CDS, then the obvious question to ask is how the CDS-determined

continuum of linguistic units is organized? The answer we would like suggest in this paper is that the continuum of linguistic units assumes the form of gestalts structured along "parametrized dimensions".

2. Continuity and parameters in grammar

Let us start with a parameter — call it the *intensity of grounding parameter*, the IGP, for short — which pertains to linguistic phenomena traditionally labelled as "pragmatic". We have just noted that the current usage event, as shown in Fig. 2, consists of the objective content, that is, the situation or a thing to be described and communicated and the ground, which is the relation between S and H.

Suppose now that — as the examples presented below appear to suggest — the strength of the grounding relationship between S-H and the objective content to be communicated is subject to certain variation:

1. *I am just saying that John painted the house yesterday.*
2. *I wish you were right*!
3. *I warn you — there is a bull in the meadow*.
4. *There is a bull in the meadow*.

In (1), the event of painting, described by the sentence *John painted the house yesterday* is firmly grounded by the speaker's explicit use of the personal pronoun "I" in the utterance directed at the hearer: *I am saying this* (to you). Additionally, the event of painting is grounded by the past tense suffix *–ed*, which prototypically grounds the event described by the verb *paint* in so-called known reality (see Langacker 1991b: 242-244, for discussion of different kinds of reality). This "firm" grounding stands in contrast with the event described in (2), in which the event of 'being right', expressed by the conditional, is located by this conditional in so-called irreality. The conditional in (2) represents a less prototypical use of the past tense, i.e. the so-called "arbitrary instance of the process type described by the verb, conjured up for very specific local purposes" (cf. Achard, 1998:255). This "local purpose", is, in Achard's words, provided to "characterize the desires or emotional states of a given conceptualizer" (p. 254). This being the case, the "intensity" of grounding the event of "being right" should be

judged to be much weaker than the intensity of the event described by the verb *paint* in (1). Turning to (3) and (4), notice that although the illocutionary force of these two utterances is the same — it is the illocutionary force of warning — the strength of the illocution in these two examples is different. In (3), which contains the performative verb *warn* and the deictic pronoun *you* (which signals that the hearer is on-stage), the degree of grounding is more "intensive" than the degree of grounding found in (4), which represents an indirect speech act.

Suppose now that the degree of intensity of grounding of the objective content could be parametrized in the form of the following scale:

(5) The Intensity of Grounding Parameter (IGP)
S—H > MOD/ SPATDX/ TMPDX[KNOWN REAL > IRREAL]

The IGP states that the OC is grounded to the greatest extent when the speaker and hearer are on-stage, i.e. when they are explicitly mentioned in the utterance; the OC is grounded to a lesser extent in the presence of (i) modals such as *may* or *must*, (ii) spatial deictics such as *here*, *there* and (iii) temporal deictics such as tense markers. The least grounded cases of the OC are events anchored in irreality; these are events expressed, among others, by conditionals or subjunctives.

Let us turn now to a province of grammar which has traditionally been viewed as having nothing in common with pragmatics — namely to the inflectional morphology of case endings. Before we take a closer look at the so-called ethical dative though, which is claimed by cognitivists to be governed by pragmatic considerations, we have to address the notion of so-called personal sphere, one of the cognitive principles held to structure the meanings of morphological cases in general and the dative senses in particular.

The notion of personal sphere can be defined as a mental sphere which consists of persons, objects, localisations and facts so closely connected with a given person, who is called the target person, that "any change which these objects, facts and persons undergo will directly or indirectly affect the target person" (cf. Dąbrowska, 1997: 17). Generally, as argued by Ewa Dąbrowska, the use of the dative signals that one's own sphere, be it the private sphere, sphere of

influence or sphere of potency, has been infringed. We can present, following Dąbrowska, the personal sphere thus:

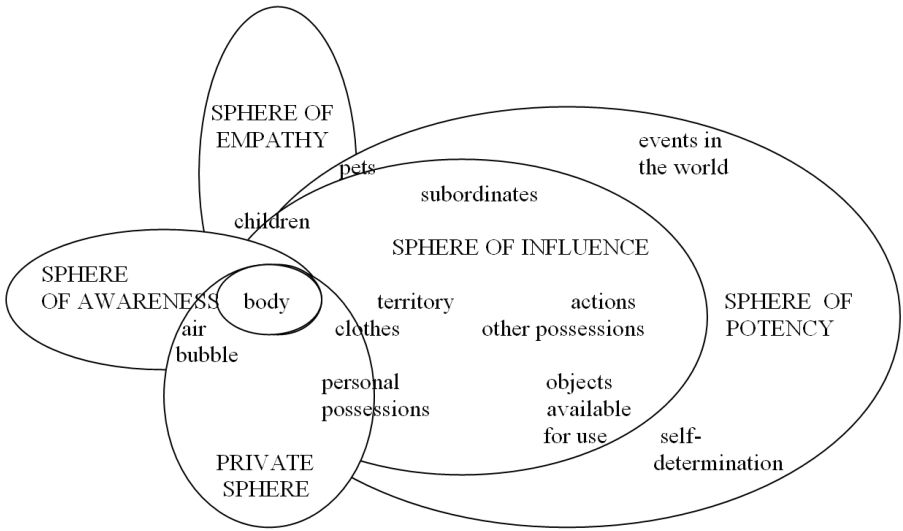


Fig. 3. A map of the personal sphere (Dąbrowska, 1997:65)

The importance of personal sphere as a theoretical construct can best be illustrated with the following examples involving the Polish dative (source: Dąbrowska, 1997: chapter 2):

(6) *Piotr*-NOM *rozbił samochód Roberta*-GEN / *Piotr rozbił samochód Robertowi*-DAT.
'Peter crashed Robert's car'.
(7) *Ola umyła Robertowi*-DAT *głowę.*
'Ola washed Robert's hair (lit. head).'
(8) *Piotr zgasił Oli*-DAT *światło.*
'Peter switched the light off on Ola/for Ola.'
(9) *Piotr włamał się Kasi*-DAT *do biura.*
'Peter broke into Kasia's office.'
(10) *Matka zajrzała Jasiow*i-DAT *do szuflady* / ?? *Matka zajrzała Jasiowi do gazety*.

Mother looked into Johny's drawer / Mother looked into Johny's newspaper.

(11) *Głos mu*-DAT *się łamał* (sphere of potency; lack of control over one's actions).

'He faltered (lit. His voice was breaking).'

(12) *Towarzyszyła mu*-DAT *bardzo atrakcyjna brunetka* (private sphere).

'He was accompanied by a very attractive brunette.'

(13) *Tylko mi*-DAT *nie choruj* (ethic dative and sphere of empathy).

'[Now be a good girl and] don't get ill.'

The message conveyed in (6) is that Piotr crashed Robert's car; however there is a slight difference in meaning between the two utterances: the utterance in which the NP Robert is expressed in the dative stresses the fact that Robert was affected by the crash somehow, that, for example, he will not be able to use it for some time. The difference between the example in (7) on the one hand and (8) and (9) on the other is that in (7) the degree of affectedness of the target person is more intensive than that in the remaining examples: washing Robert's hair affects Robert to a greater extent than the activities of switching off the light and burglarizing the office affect Ola and Kasia in (8) and (9) respectively. In (10) the inappropriateness of the example stems from the fact that looking into somebody's newspaper, unlike looking into somebody's drawer, has no effect on the target person at all. (11) illustrates the lack of control over one's action. As noted by Dąbrowska (p. 37), "the loss of control [here] counts as an infringement of the sphere of potency, thus opening the way for a dative construal. The dative case thus replaces the nominative when the most prominent participant is unable to act." The example in (12) reports the breach of the target person's privacy, hence the use of the dative form *mu* 'to him'.

Finally, we have (13), which illustrates the use of the ethical dative. For Janda (1993), the use of the ethical dative is determined by discourse. Thus Janda (1993:88) writes

> The use of the ethical dative is largely subjective (pragmatic); it is a device employed by the speaker to capture the hearer's attention. The speaker

> maps the case relationship [by the above schema] onto the speech act domain, using the dative sphere to claim the existence of a relationship between the hearer and the narrated event. The interlocutor typically has no relationship between the hearer and the narrated event or its participants [...]. Yet the speaker projects this sort of a dative relationship onto his interlocutor in order to involve him in his narration.

The meaning of the ethical dative is diagrammatically presented by Janda as follows

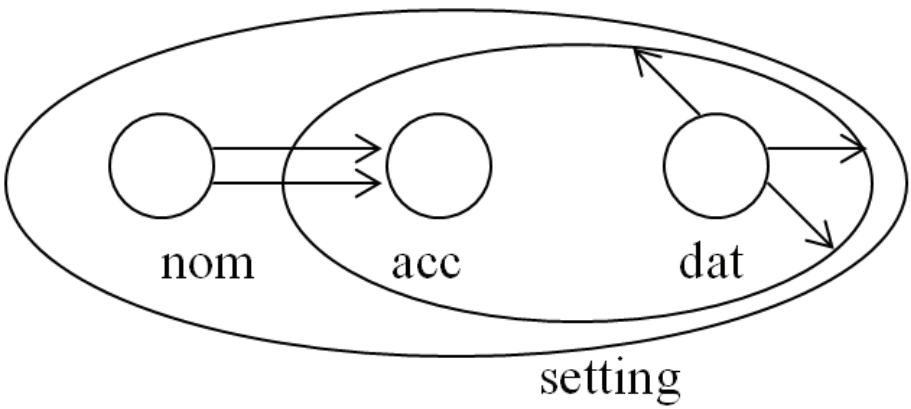
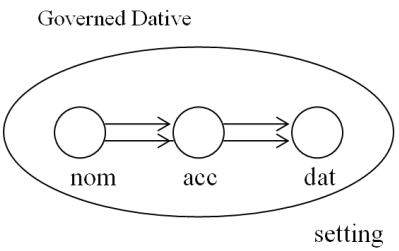


Fig. 4. The cognitive structure/meaning of the ethical dative

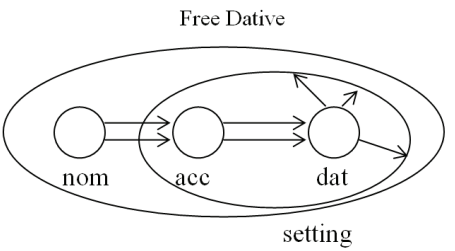
In this configuration, the nominative acts on the accusative, which is the sphere of influence of the dative. Returning to (13), notice that the speaker "ja—I", expressed in the nominative, acts on the hearer "ty-you", i.e. asks the hearer (who appears in the accusative) not to fall ill (on the speaker's account)). The hearer is in the sphere of influence of the speaker, which is marked by the dative case. The overall meaning of (13) is this: whatever happens to the person — here: to the hearer (most probably to the child) — is bound to have an influence on the speaker (most probably, the child's mother).

Let us note at this juncture that according to Janda, the ethical dative is one of the variants of the whole network of senses displayed

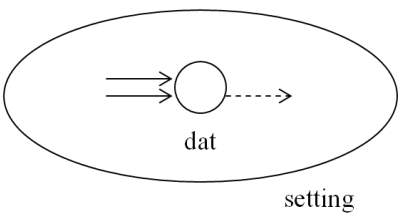
by the dative. The network of senses for the dative, involving some meanings of the dative can be presented as follows.



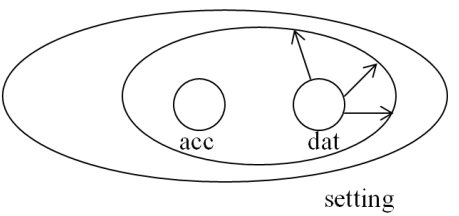
The nominative acts on the accusative linking it with the dative
(*Podarowała książki bibliotece*-DAT 'She gave the books to the library')



The nominative acts on the accusative in the sphere of influence of the dative
(*Pokojówka umyła jej*-DAT okna-ACC 'The room maid cleaned her the windows')



impersonal dative:
the activity is directed at the dative in a setting
(*Piotrowi jest zimno* 'Peter is cold'; lit "It is cold to Peter").



formulaic expression:
the nominative is in the sphere of control of the dative
(*Chwała zwycięzcom* 'Glory to the winners')

Fig. 5. The dative as a grammatical category: prototype and its variants (Janda 1993: 83-89)

With this in mind we can now propose the Personal Sphere Parameter (PSP)

(14) The Personal Sphere Parameter (PSP)

The closer to the target person objects, persons, localisations and facts connected with that person are, the stronger the target person will be affected by any change that will happen to the objects, persons, facts and localizations.

The PSP thus establishes the hierarchy of "affectedness" of the target person, which can be presented as follows:

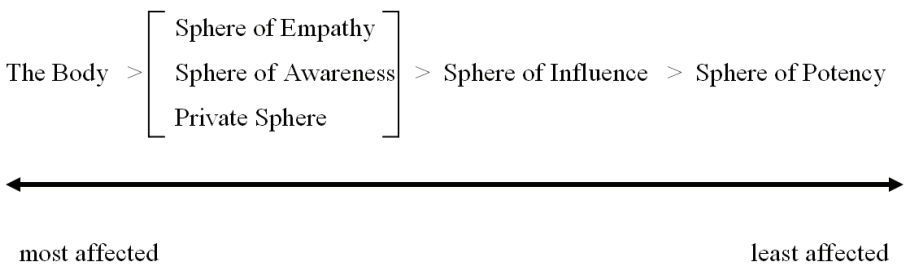


Fig. 6. The PSP and the hierarchy of the target person's affectedness

Given that the ethical dative is, as Dąbrowska notes, closely connected with the sphere of empathy (which is "close" to the target person's body; cf. Fig. 3), it follows that the degree of "affectedness" of the target person in this case will be relatively stronger than in the case, say, when the dative evokes the sphere of potency, as shown in (11), for instance. Dąbrowska writes (p. 60)

> The empathic use of the dative pronoun is possible only when the relationship between the nominative and the dative participant is so close that the dative participant shares all the emotions of the nominative participant. The archetype of this kind of relationship is that between a mother and her young child.; the relationship between lovers would also be a good example. The close emotional link motivates the use of the

dative case, since the dative participant is seen as affected by anything that happens to the nominative participant.: the latter is in the former's sphere of empathy, another subregion of the personal sphere. The main difference between this use of the dative case and lexically governed and non-pronominal free datives is that in this case, information about inclusion in the personal sphere is not stated explicitly in the sentence, but must be deduced from the context.

Now, if the dative case and, generally — all other cases, including the nominative, genitive, etc. — form networks of interrelated senses, then we have to revise entirely the whole idea of morphology as: (i) case endings can no longer be viewed as functional (inflectional) morphemes devoid of any meanings and hence completely different from meaningful affixes of derivational morphology and (ii) a continuum of linguistic units has to be posited between derivational morphology and inflectional morphology. In fact, such a continuum will have to go beyond morphology as such to include syntactic phrases as well. The existence of so-called governed cases in many languages speaks eloquently in favour of such continuum. Consider, for example, the Polish phrase *piłka pod stołem* 'the ball under the table', in which the preposition pod 'under' governs the Instrumental case of the noun *stół* 'table-Inst'.

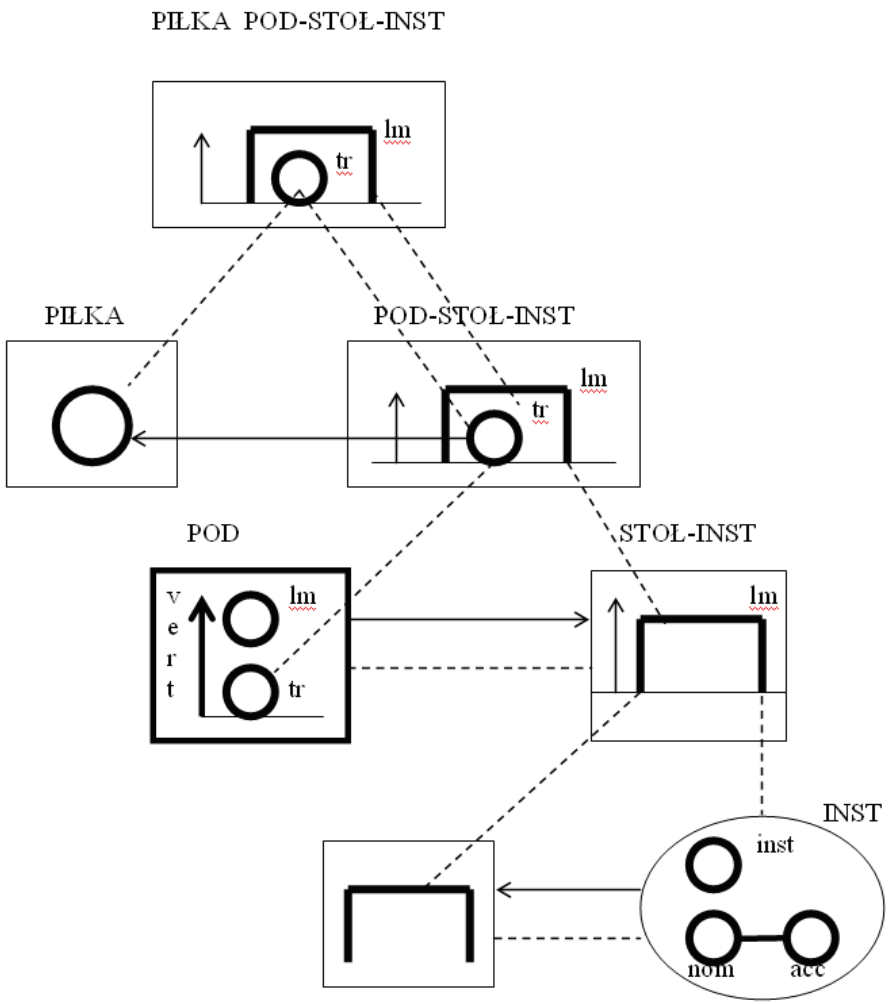


Fig. 7. The morphology-syntax continuum (cf. Kardela, 2000:16)

The diagram shows the conceptual structure of the expression *piłka pod stołem* from the point of view of so-called elaborative relations holding between the component structures at different levels of conceptual integration. The dotted lines are correspondences; the lines and all figures in bold are profiles, and the symbols *tr* and *lm* are salient substructures within so-called relational profiles. Solid arrows

symbolize elaborations of more schematic structures by less schematic structures. Thus at the lowest level of conceptual organization the component structure [STÓŁ] elaborates the maximally schematic structure of the [INST] case.[2] At a higher level of conceptual integration, the composite structure [STOŁ-EM-INST] elaborates the structure of [POD]; the "highest order structure" [PIŁKA-POD-STOŁ-EM] is a direct result of the elaboration by [POD-STOŁ-EM] of the structure [PIŁKA].

3. Prototypes in morphology

We can take a look now at parameters associated with the prototypical organization of the "morphological level" of linguistic units. Consider the following prototypicality hierarchy of affixes.

more prototypical	less prototypical
-er (*work-er*)	*-ful* (*beauti-ful*)
-ing (*work-ing*)	*-bound* (*north-bound*)
-(u)ous (*contin-uous*)	*-wise* (*clock-wise*)
-(a)tion (*cooper-ation*)	*-ism* (*all those „isms"*)
-al (*fundament-al*)	*super-* (*She is super.*)
-ism (*commun-ism*)	
etc.	etc.

Fig. 8. The prototypicality hierarchy of selected English affixes

In accordance with this hierarchy, the most prototypical affixes are those units which appear on the left hand of the scale as they are

(i) the most schematic elements in a word's structure in the sense of being practically devoid of semantic content", and

[2] The preposition-governed instrumental case expressing Location which appears in phrases such as *piłka pod stołem* is a variant of the Instrumental case, the latter being defined by Janda (1993:181) as a case in the cognitive structure of which "an instrumental acts on an accusative in a setting."

(ii) "function words" which are involved in the formation of different types of derivatives, e.g. the suffix *-er* derives agentive and instrumental formations, *-al* derives deadjectival nouns, and the suffix *–tion* forms so-called action nominalizations.

In contrast, the affixes which appear on the right hand side of the scale are considered non-prototypical, since

(i) they are less schematic in the sense of having transparent meanings; the suffix *-ful,* for example, is a grammaticalized form of the adjective *full* and *-wise* is an archaic adverbial form of *-wise* 'manner', and

(ii) some of them, such as, for instance, the affixes *-ism* or *super-* behave, in some contexts, as "free morphemes" which can "stand alone", e.g. *I have heard today enough of those "isms"* (i.e. of political doctrines), or *That is super*!

We have to establish now how to measure the degree of the prototypicality of the affixes in question. In order to do so, we have to introduce the notion of elaboration site (or e-site) and closely linked with it, the principle of so-called A/D asymmetry.

Following Tuggy (1992:238), we can account for stem-affix distinctions in grammar by defining the degree of departure from the so-called *prototypical stem-affix combinability* scale. In so doing we can adopt Ronald Langacker's theory of A/D asymmetry, based on the notions of *dependence* and the *Dependence/Autonomy Parameter*:

(15) Dependence (Langacker 1987: 300)

> One structure, D, is dependent on the other, A, to the extent that A constitutes an elaboration of a salient substructure within D.

(16) The dependence/Autonomy Parameter (Tuggy, 1992:242)

> The dependence vs. autonomy parameter can be understood as the extent to which one structure can be conceived of independently of its syntagmatically linked partner. An autonomous structure does not need its partner in order to be a complete concept, whereas a dependent structure is incomplete, and its partner supplies what is lacking to

complete it. Put another way, dependent structures have holes, and their autonomous partners are spikes that fill the holes.

According to Tuggy (p. 289. fn. 13; also Lakoff, (1987)), highly schematic concepts are not, as a rule, highly salient and, equally so, salient concepts do not tend to be highly schematic. This claim has an important consequence for the stem-affix distinction. Because, it is held, stems are "heavy forms" in the sense that they contain rich semantic specification, they, in contrast to "light" forms such as suffixes (which are highly schematic), have to be considered "salient entities". Now, because they tend to be relatively small, the e-sites of "heavy" forms should, on balance, be considered less salient than the e-sites of light forms like suffixes. This follows from the fact that, to use Tuggy's formulation, "[G]iven two structures with e-sites of equal salience in absolute terms, the one with the greater number of other salient specifications (i.e. with greater semantic weight) will be less dependent: the e-sight will tend to get lost in the crowd, so to speak." (p. 256; also quoted in Kardela, 2000:17) In other words: the suffix's e-site is bound to be more prominent than the e-site of a heavy form, because in contrast to the latter, the suffix's e-site will not be "downgraded" by the (far fewer number of) suffix's specifications.

We can formulate now the following parameter, call it the e-site parameter:[3]

(17) The e-site parameter
The more schematic e-site a given component structure has, the more dependent this structure is on the form with which it forms a composite structure.

The relationship between the dependence and the autonomy of constituents combined to form composite forms can now be presented graphically as follows:

[3] This parameter is based on the e-site generalization as defined in Kardela (2000: 18).

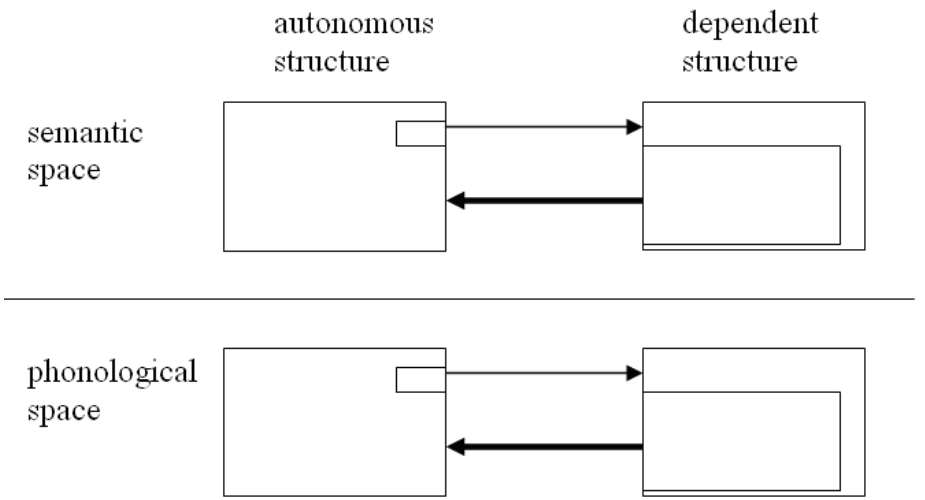


Fig. 9. A/D asymmetry in morphology (Kardela, 2000)

Fig. 9. graphically represents affix-stem combinability: the stem, which is an autonomous structure, elaborates the affix's e-site and vice versa: the affix elaborates the e-site of the stem. The correlation between the size of the e-site and the stem-affix distinctions can be explained as follows: the bigger the e-site of an affix, the lighter this unit is and hence it should count as a more prototypical affix that an affix with a smaller e-site.

But how to measure the size of an e-site? In Kardela (2000) it was suggested that the size of the e-site should be correlated with the constraints on the stem affix combinability. Take for example the affix *–ing*. Because this affix can be attached to practically any verbal stem, it can be said to be subject to virtually no constraints. Thus the affix *–ing*, for instance, can be said to have a relatively large e-site, undiminished by any information concerning the constraints about the stem-affix combinability. In contrast, because morphemes such as *bound* or *wise* are heavily constrained in the sense of entering into combination with a handful of stems only such as *north-*, *south-*, *clock-*, etc., their e-sites should be judged to be relatively small, being

"squeezed" (and thus "downgraded") by the information about their combinability with the respective partner-morphemes.

The e-site parameter can be shown to play an important role in accounting for the stem-affix combinability in the case so-called lexical nests (Pol. "gniazdo słowotwórcze"), a complex derivative which can be defined as "a network of word sequences having the common root, linked with each other by motivating paradigmatic and syntagmatic relations." (See Jadacka, 1995; Nagórko, 1998; particularly Zych (1999:12-18), for discussion.) Suppose then, following the common Slavic morphological practice, that the distance of a given derivative from its root base could be measured in terms of nest bars (for short: N-bars; Pol. takt). Thus consider the Polish affix *–nik* appearing in derivatives such as *ręcznik* 'towel' and *rękawicznik* 'glove-maker', involved in (part of) the lexical nest of *ręka* 'hand' (cf. Kardela, 2004).

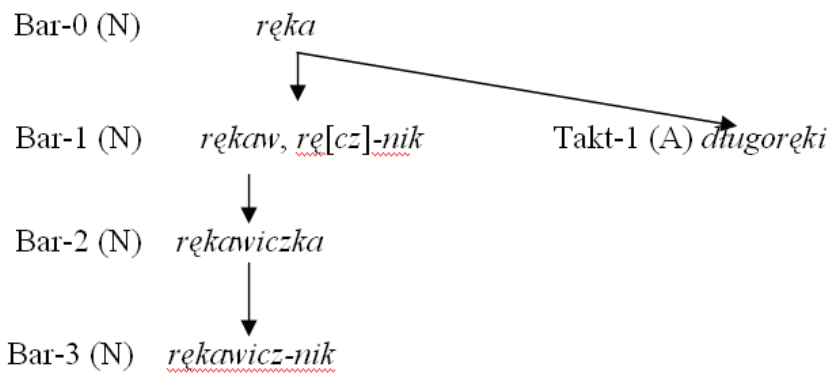


Fig. 10. (Part of) the lexical nest *hand*

In the light of the e-site parameter, the rank of *-nik* in *ręcznik* and *rękawicznik* is unequal: *-nik* in *rękawicznik* combines with the stem which is located at a higher bar level of the lexical nest *ręka* than it does so in the derivative *ręcznik*. This means that the derivative *rękawicznik* evokes a "longer derivative path" which must be taken into account when *–nik* combines with the stem *rękawicz-*. This is so because the

longer the derivational process is, the greater the number of combinatorial restrictions a given stem + affix combination displays. Given that all these restrictions on *–nik* have to be stated in the affix's e-site, *-nik* in *rękawicznik* must be judged to be less schematic than *-nik* in *ręcznik*; *-nik* in the w derivative *ręcznik* is lighter, hence more prototypical than the affix *-nik* in *rękawicznik*.

4. Anaphoric relations

Let us now turn to the domain of so-called anaphoric relations involving reflexive pronouns. In Langacker's theory reflexive pronouns are treated as linguistic units establishing so-called reference-point relations, i.e. relations in which the conceptualizer (C), gains, through the reference point (R), access to the range of targets (T) of a linguistic unit. The targets, which are potential antecedents for the given linguistic unit — in this case: the reflexive — are located in the so-called Dominium (D). The reference point relation involving the reflexive-anaphor configuration can be diagrammatically presented as follows:

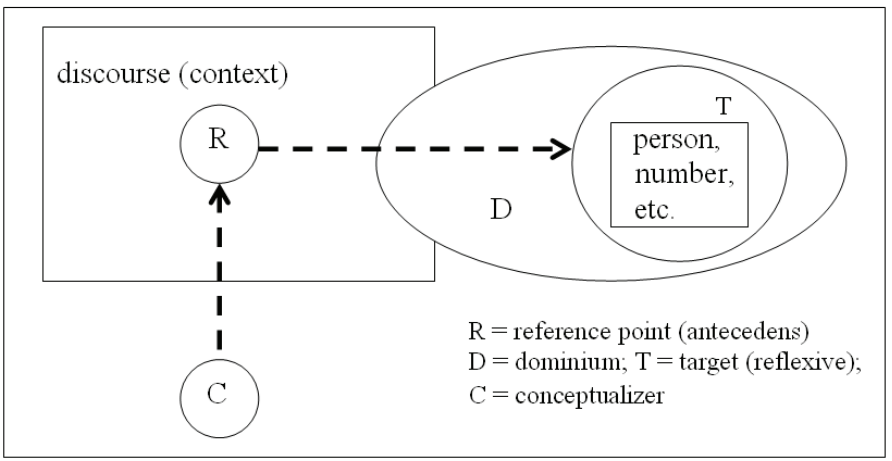


Fig. 11. Reflexive pronouns in the *reference point* relationship configuration (Langacker, 2000a: 238; adapted)

In Fig. 11, the conceptualizer, C, establishes mental contact with the target, T, the pronoun, following the mental path C→ T. Whereas a pronoun is "immediately accessible" to C in the current discourse context, a full nominal (antecedent) is not, as practically every nominal is potentially treated as a reference point. Whether a given nominal will successfully establish itself as a reference point (antecedent) will depend now on a number of context-related factors including the salience of the prospective reference point and the nature of the conceptual connections with other elements. The analysis crucially rests on the assumption that the decreasing accessibility of reference points (antecedents) to the targets (pronouns) is an indication of the extent to which a given reference point arrangement should be judged to depart from the prototypical antecedent-reflexive configuration.

The reference point relationship established for reflexives, shown in Fig. 11 is expected to account for examples such as

(18) *John saw himself in the mirror*.
(19) *John talked to Peter about himself*.
(20) a. *John talked to Mary about herself.*
b. **John talked about Mary with herself*.
(21) *A picture of himself hanging in John's office appears to frighten Tom's brother.*
(22) *Jan obiecał Marysi* [-- *kupić sobie płaszcz*].
'John promised Mary to buy himself a coat.'
(23) *Jan kazał Marysi* [-- *kupić sobie płaszcz*].
'John asked Mary to buy himself/herself a coat.'

(18) is unproblematic: the first encountered NP, *John* in the reference point relationship conforms to the specification of person and number required for the reflexive; the sentence is judged to be well-formed. In (19) the situation is more complicated as there are two potential reference points for the target: *John* and *Peter*, although the choice of John as the antecedent for *himself* is perhaps a bit more favoured. The sentences in (20) display an interesting contrast: of the two possible candidates for antecedents in (20a) it is either *Peter* or *Mary* that is eligible for the reference point; this is not so in the (b) sentence, where no mental path can be established between *Mary* and *herself*. In (21) the

reference point relationship between the target and the reference point is very complex: the reflexive is not only situated to the left of the potential antecedent, but also the potential antecedents, *John* and *Tom*, enter in the reference point relationships with *office* and *brother* respectively.[4] Still, *himself* is associated with *Tom's brother*, not with *John* or *Tom*. Certainly, this sentence is not easy to process; it definitely departs from the prototypical reference point relationship for the reflexives as shown in Fig. 11. (22) is unproblematic: the reflexive *sobie* in this sentence can only refer to the subject *John* as the verb promise is a "subject-oriented" verb; (23), however, does pose a problem as the reflexive *sobie* here can either refer to the subject or to the object despite the fact that *kazać* 'order' is an object-oriented verb (hence *sobie* should refer to object of the main clause, that is to *Marysia*.[5]

The question now is how to account for the departure of examples such as (18)-(23) from the prototypical reference point relationship established for reflexives. In order to do so, we can formulate a parameter — call it the Accessibility of Reference Points Parameter (ARPP) — whose role will be to signal the varying degree to which a given reference point relationship should be judged to depart from the prototypical configuration as presented in Fig. 11. Further, we have to assume that the ARPP operates on the prototypicality scale for the reference point relationship which itself is based on the notion of a *chain of command principle* in the sense of Kuno (1987: 96; also quoted in Deanne, 1992:206). This being so, the prototypicality scale involving the ARPP for the Polish reflexives might look as follows:

(24) The ARPP and the prototypicality scale for the Polish reflexives
  (i) The *Syntactic Scale*: The accessibility of the subject of a verb for a reflexive varies in strength according to the syntactic role of the anaphor and is

[4] In Langacker's theory possessive constructions are analyzed in terms of the reference point relationship.
[5] An English equivalent of this sentence would *be John asked Mary to buy him a coat* and not **John asked Mary to buy himself a coat*.

a. *strongest* in the case of the verb's direct object anaphor: *Jan umył się* 'John washed himself';
b. *middle* in the case of the object of a complement clause: *Jan Kazał Marysi* [SUB *kupić* sobie *płaszcz*] 'J. Asked Mary to buy him/her a coat';
c. *weakest* (unpredictable) in the case of *się* in prefixed inchoative verbs: *Jan za-siedział si*ę-refl 'Jan stayed-Perf. too long' vs.**Jan nie u-siedział*-Perf. się-refl' vs. *Jan nie usiedział* 'J. did not hold out staying in one place'.

(ii) The *semantic scale*: The accessibility of the subject of a verb for a reflexive varies in strength according to the semantic/discourse nature of the reflexive and is

a. *strongest in the case of* definite animate NP: *Jan umył się* 'John washed himself';
b. *middle* in the case of definite inanimate NP: *Gałąź się złamała* 'The branch broke refl-się';
c. *weakest* in the case of impersonal constructions *–no, -to* pragmatically governed: *Nie odrobiło się lekcji, co*? 'One/you did not do you classes, did you' (reproach)

This brings us to reflexives which are involved in the so-called absolute construal of events in Polish.

5. Absolute construal of events involving Polish reflexives

We can look at the configuration in Fig. 11. from yet another perspective — from the point of view of a parameter which we would like to call the Event Dynamicisation Parameter (EDP). This requires a comment.

In Ronald Langacker's model of cognitive grammar, an event can be viewed from two perspectives: from the energetic chain perspective (or force dynamics perspective) and from the absolute (or zero construal) standpoint. Under the force dynamics construal, an event is seen as involving the flow of energy which is transmitted from one participant to another (Langacker, 1991b:283):

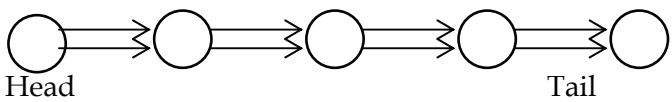


Fig. 12. The force dynamic construal of events (Langacker, 1991:283)

The initial element of the chain, which is called the *head* of the chain, imparts energy to the second element in the chain, the second element relays this energy to the third until the last element of the chain, the *tail*, is reached. The energetic chain, presented in Fig. 12 gives rise to the so-called *canonical event model*, which underlies the prototypical transitive construction and which, as Langacker (1991b:285; 286) puts it, represents "the normal observation of a prototypical action:"

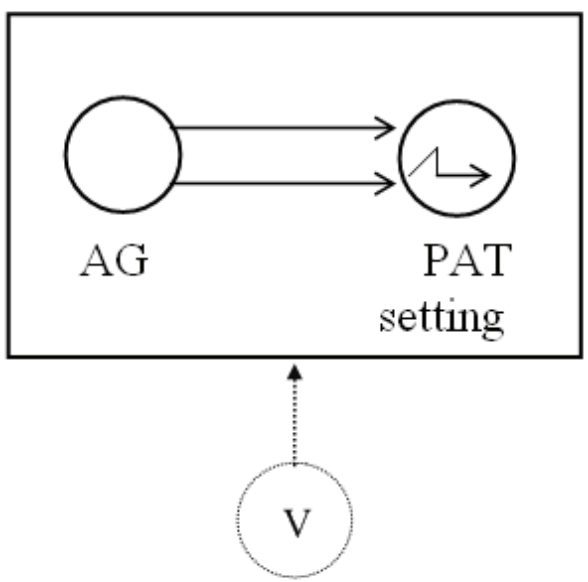


Fig. 13. The Canonical Event Model (Langacker, 1991: 285, 286)

The canonical event model includes elements which provide specifications for semantic roles such as *agent*, *patient*, *instrument*,

experiencer, etc. In contradistinction to traditional approaches, however, these roles, called by Langacker "role archetypes", are treated by cognitive grammar not as linguistic roles but rather as pre-linguistic conceptualisations. The *archetypal agent* is thus a person who volitionally "initiates physical activity" as a result of physical the transfer of energy takes place to an external object. The *archetypal patient* "absorbs" the energy and undergoes a change of state (represented as a wavy arrow in Fig. 13). The *instrument* (absent in Fig. 13)) is a physical object which is manipulated by the agent and serves as the "intermediary" in the transmission of energy. The *experiencer* (not present) is a person who is engaged in mental activity, and the *mover* (or *theme*) is an entity which changes its location.

Note that Fig. 13 represents the prototypical transitive construction: the participant who is typically an agent initiates the energy which is transmitted onto the patient. However, there exist constructions which depart from their transitive prototype in that they form a hierarchical organization in which each instance of such departure represents a "less transitive" type. The departures from the prototype form a cline, represented by the transitivity hierarchy (Maldonado, 1992:63):

(25) the transitivity hierarchy
transitive > reflexive > oblique intransitive > middle > intransitive absolute

The hierarchy in (25) can be exemplified by the following examples from Polish (see also Maldonado's 1992:63 analysis of Spanish data):

(26) *Marysia zapamiętała słowa Piotra.* (transitive)
'Mary remembered Peter's words.'

(27) (*Ja*) *zapamiętałem siebie jako małego chłopca skorego do bójki*. (reflexive)
'I remembered himself as a boy ready to fight.'

(28) *Piotr długo zastanawiał się nad problemem przeludnienia*. (oblique intransitive)
'Peter reflected on the problem of overpopulation for a long time.'

(29) (*Ja*) *pamiętałem o jego słowach*. (middle)
'I remembered (of) his words.'

(30) *Długo myślałem zanim napisałem pierwsze zdanie*. (absolute)
'I reflected a lot before writing the first sentence.'

According to (25), the most prototypical transitive construction is (26), since the energy flows from the agent, which is coded as a subject *Marysia*, to the patient, coded as the direct object *Piotra słowa* 'Peter's words'. A less prototypical construction is (27), in which one participant is coded by both the subject, *ja* 'I', and the reflexive *siebie* 'myself'. The least prototypical is (29), in which only one participant appears. The absolute construal construction in (30) ends the hierarchy; it codes the scene in the "most neutral terms" and constitutes a point of departure for the alternative way of viewing an event, namely, through the prism of the absolute construal of events. Thus consider now the following examples:

(31) a. *Kiedy leje* (*deszcz*) *dzieci bawią się w domu*.
'When it pours with rain, the children play indoors.'

b. *Kiedy się rozleje (deszcz) dzieci będą bawić się w domu.

(32) *Mleko się rozlało po kuchence*.
'The milk spilled all over the cooker.'

(31a) exemplifies the absolute construal of events: the scene of raining is construed as a normal weather phenomenon, with no reference as to whether the rainfall was expected or not; (31a) thus can be seen as providing the most "neutral" description of the event of raining. The ungrammaticality of (31b) stems precisely from the fact that, contrary to expectations, natural static forces of nature such as rainfall are portrayed as gathering "dynamicity". In contrast, it is perfectly natural to view (32) as involving an element of dynamicity, since the event of the milk spilling creates a sense of unexpectedness. What signals the dynamicity here is the reflexive *się*. Consider:

(33) *a. *Nagle padało-Imperf.*
'Suddenly it rained.'

b. *Nagle się rozpadało-Perf.*
'Suddenly it (started to) rain(d).'

(33a) is an equivalent of (31a), whose ungrammaticality stems from the fact that the absolute construal is "unnaturally dynamicised" by the presence of the adverb *nagle* 'suddenly". In contrast, the adverb *nagle* is perfectly legitimate in sentence (33b) as it portrays the suddenness of the rainfall.

The question now arises as to how to account for the dynamicity in these examples. In order to answer this question we have to address the problem of the so-called upstream flow of energy and the A/D functional layering.

First note that whereas in the energetic chain as shown in Fig. in 13, the energy flows "down-stream", from the agent to the patient, the energy in the absolute construal flows "up-stream". This is so because the causer which "dynamicises" the event comes "from the outside". One way of accounting for this process is to assume that the causation involved in the process is determined by the A/D functional layering in the sense of Langacker (1991b). Because A/D layering involves what Langacker calls role archetypes, a brief digression on the notion of role archetype is in order here.

In Langacker (1991a, 1991b) a distinction is drawn between thematic relations and thematic relationships. Whereas the former term is used to cover any semantic role such as agent, patient, instrument, etc., the latter refers to conceptually autonomous event components and thematic roles which instantiate these relationships, excluding the roles of agent or instrument. The thematic roles which enter into thematic relationships can be represented as follows (Langacker, 1991b:288):

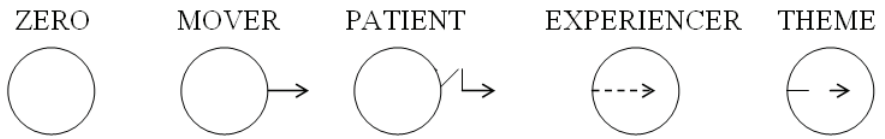


Fig. 14. Role archetypes

Given the distinction between thematic relations on the one hand and thematic relationships (and thematic roles) on the other, an event can, as already mentioned, be looked upon from two perspectives: the force-dynamic construal, represented by the flow-of-energy chain (cf. Fig. 12 and Fig. 13), and from the point of development of the action itself, involving the absolute construal. In the latter case one starts with the theme itself, the "minimal" action structure, and by functionally elaborating the successive layers of such a relationship (by making reference to causation and energy flow), one can arrive at the full thematic relationship. Specifically, starting with the autonomous core of action and adding a conceptually dependent layer of causation involving a participant which supplies energy, we can expand in this way the description of the event, from the absolute autonomous construal to a fully fledged force-dynamics dependent structure. The A/D asymmetry based on the functional layering so defined can be represented by the following formula (Langacker, 1991b:292):

(34) Absolute construal: the functional layering of up-stream energy flow

(T) > (E1(T)) > (E2(E1(T))) > (E3(E2(E1(T)))) > (E4(E3(E2(E1(T))))))

T represents a thematic relationship, i.e. a role such as theme (which can be represented by the thematic role of zero, mover, patient, experiencer, and E which stands for the energy responsible for the process. The A/D asymmetry involved in this layering can best be captured by quoting from Langacker (1991b:292):

> Thus, if T represents a thematic relationship, and E the input of energy responsible for the occurrence of a process, the progressive assembly of the

complex event conception in (a) The ice cracked; (b) A rock cracked the ice; (c) A waiter cracked the ice with a rock; (d) The manager made a waiter crack the ice with a rock; (e) The owner had the manager make a waiter crack the ice with a rock can be represented as follows: (T) > (E1(T)) > (E2(E1(T))) > E3(E2(E1(T)))) > (E4(E3(E2(E1(T))))). The parentheses indicate A/D organization, but if one ignores them and reads each formula linearly, it is equivalent to an action chain (the initial formula, T, represents the degenerate case of an action chain with a tail but no head.

Consider now the following dynamicity hierarchy for Polish middles involving the functional layering of the up-stream energy flow (cf. Kardela, 2000:195)

(35) *The dynamicity hierarchy for Polish middles*
(i) no energy input (or: zero) > (ii) no energy control > (iii) energy control > (iv) counter-to expectation energy impact

(36) (i) *Jan drzemał* 'John was taking a nap' > (ii) *Jan zdrzemnął się* 'John dozed off'; *Jan poślizgnął się na mokrej podłodze i upadł* 'John slipped on the wet floor and fell down' > (iii) *Jan przeszedł się po Starym Mieście wstępując do wspaniałych kościołów* 'John took a walk round the Old Town visiting the superb churches (Lit. "going into the superb churches); *Jan wślizgnął się do pokoju* 'John sneaked into the room' > (iv) *Wczoraj Jan przeszedł samego siebie* 'Yesterday John surpassed himself' [lit. "John went beyond himself"].

(36i) represents cases of an absolute construal, with no energy input. The activity of John's taking a nap is described without taking into account all the circumstances accompanying this activity. In (36ii) John does not have control over his activities: he is dozing off or slipping on the wet floor regardless of his will. (36iii) involves construals which suggest some energy control: John wilfully takes a walk round the city, visiting the churches. Finally, in (36iv), which involves the sequence of the emphatic *sam* and the heavy reflexive *siebie*, the activity depicted leads to a counter-to-expectation change: (36v) could, for instance, be said of a person (here John) who, even to his own surprise, performed very well at the concert, playing the violin.

We are in a position now to formulate the Event Dynamicisation Parameter for Polish reflexives as follows:

(36) The Event Dynamicisation Parameter (EDP) for Polish reflexives

> *The pronominal forms się/siebie/sam mark the dynamicisation process involved in the so-called Absolute Construal of events, whereby the greater the number of up-stream layers of energy flow is evoked, the more dynamic and thus less autonomous the portrayed event should be judged to be.*

Seen through the prism of (36), the examples in (36) mark the increasing presence of the external participant which adds a "conceptually dependent layer of causation, in which an additional participant is portrayed as inducing the previously characterized event by supplying either a physical or an abstract force" (cf. Langacker, 1991b:292).

6. Conclusion

If, as Langacker claims, grammar and lexicon form a continuum of lexical units, then the obvious question to ask is how this continuum is organized. One way of approaching the problem is to set parameters on various dimensions of continuum, including the dimensions of grounding, personal sphere, reference point relationship, absolute construal and many others. In this paper an attempt was made to formulate some such parameters.

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SUMMARY

The paper seeks to formulate parameters which structure the continuum of linguistic units as envisaged in Langacker's theory of cognitive grammar. Assuming as cognitivists do, that grammar and lexicon form a continuum of linguistic units organized around prototypes, the principal problem any cognitive model of grammar faces is to account, in a principled way, for the structure of such continuum. The solution offered in this paper is that the continuum of linguistic units is subject to parametrization. Among the parameters discussed in the paper are: (i) the *intensity of grounding parameter* (the IGP), which is the organizing principle of the grounding dimension, (ii) the Personal Sphere Parameter (PSP), associated with Personal Sphere which governs the use of the dative case, (iii) the Accessibility of Reference Points Parameter (ARPP), linked with the reference point relationship dimension involving reflexives, and (iv) the Event Dynamicisation Parameter (EDP), which sets the values for the dimension of absolute construal of events.

Keywords: cognitive grammar, discourse, prototypes,
parametrized continuum of linguistic units

Stanisław Puppel

Remarks on the sustainability of natural languages in the cultural-institutional perspective

1. Introduction

Language as a cultural phenomenon may be regarded as an institution. As such it may be defined as an interplay of the following salient parameters: militancy, trade-offs, utility, and displays. Those features are assumed to properly characterize the ontology and dynamics of any institution, including natural languages. The currently existing natural languages may, in addition, be regarded as co-existing in the global language space defined here as the natural language global arena (hence NaLGA; see Puppel, 2009), where they all as institutions compete for the best possible and strongest status *vis-à-vis* other natural languages. This is done through various Language-to-Language (L2L) local competitions. That is also why any natural language should, as an institution, be regarded as having the potential of becoming 'imperial', or as tending to assume an 'autocratic' (i.e. expansionist and aggressive) position under appropriate conditions. These conditions may include an interplay of a number of factors (or 'attributes') all of which are social-psychological in nature and which help in defining a language's overall competitive position in the NaLGA. This general situation may be schematized by means of the following diagram, referred to here as the Imperial Tetragon of Institutions (ITI):

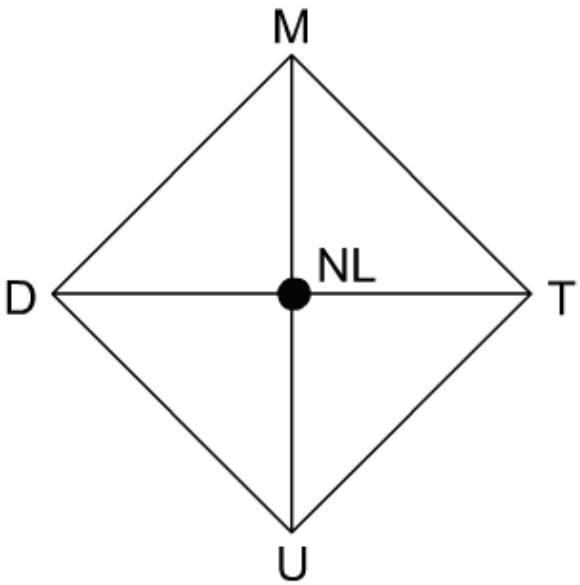

Fig. 1

Where:
M – Militancy
T – Trade-offs
U – Utility
D – Displays
NL – Natural Language

and where the interplay of the set of attributes: Militancy, Trade-offs, Utility, and Displays, is assumed to exhaustively define the shape and life of any natural language as a cultural institution as well as define its competitive position in the NaLGA. Furthermore, the above features are assumed to be present in the life of a language in constantly changing proportions such that at any point of its existence, a natural language may be characterized as either Militancy-dominant, Trade-offs-dominant, Utility-dominant, or Displays-dominant, since no purest version of the language institution with the strictly balanced

contribution of the attributes may be envisaged. Rather, we may expect a more natural and therefore more asymmetrical access to the afore mentioned attributes by different natural languages. It is assumed that the attributes contribute to the overall ecology of the institution of language by forming the 'militancy ecology', 'trade-offs ecology', 'utility ecology', and 'display ecology', respectively. They jointly characterize the 'ecology of institutions'. Below the set of attributes constituting the ITI are briefly characterized.

2. Attributes of language as an institution

Militancy:
Any institution belongs to 'militancy ecology', that is, it will always demonstrate a certain degree of militancy directed outwards. A language may also be regarded as militant in relation to other languages when its supply in the public sphere, especially in the graphospehere (i.e. printed matter) and the multimedia sphere, exceeds both its natural ethnic borders and the demand for it proper for the ethnic (or national) community. Thus, a language may be supplied overgenerously and dynamically both in an undirected and directed way (cf. Puppel, 2007a) by various institutional agencies and temporary social alliances (such as groups of foreign language teachers, scientists, cultural officers, politicians and diplomats, economists, military and technological staff, journalists, publishers, textbook writers, etc., see Puppel, 2009). The result of such a joint and often prolonged action is an establishment of a privileged and hegemonic and expansionist (i.e. superstratal, see Puppel and Puppel, 2005) position of a language which has received such a highly privileged treatment in the NaLGA. Such a language may be termed Militancy-dominant. A language which is characterized as Militancy-dominant may be schematically represented in the following way:

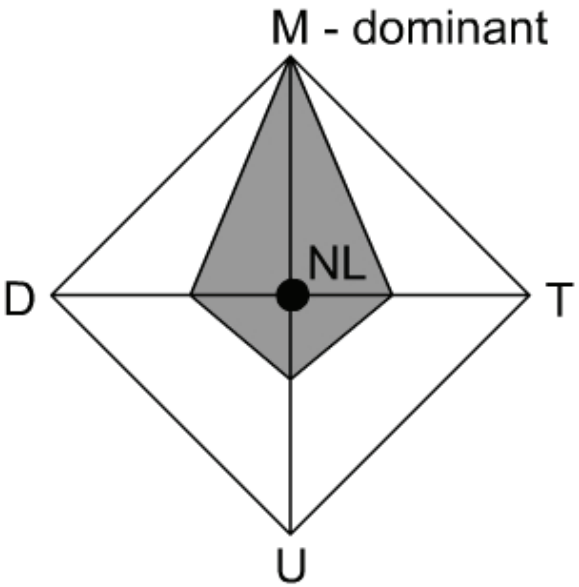

Fig. 2

Trade-offs:
Any natural language belongs to 'trade-offs ecology', that is, at any time of its existence it is assumed to be involved in various trade-offs. That is, while sustaining its operational status in the Universal Communication Space (see Puppel, 2004), a language (and more precisely, its users) makes a number of operational routine compromises (see Da Silveira and Slack, 2001) as a result of its sensitivity to other languages while trying to sustain its operational-communicative fitness. In other words, while remaining in continuous contact with other languages, a particular language demonstrates sensitivity to other languages which is expressed as the degree of change within its structure that is caused to one element of the trade-off when changes are made to the other element(s). The said sensitivity may also be understood as the readiness of a natural language to absorb new elements from other contacting languages on all levels of its structure. Subsequently, a language which shows a high degree of

sensitivity to other languages in the sense described above and which is predominantly focused on making operational compromises may be regarded as Trade-offs-dominant. It may be schematically represented in the following way:

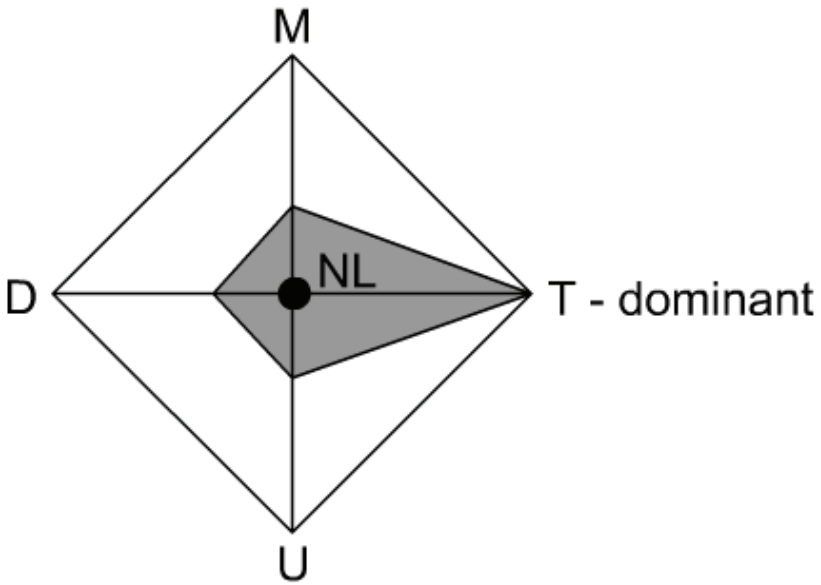

Fig. 3

Utility:
Any institution belongs to the 'utility ecology', that is, it may be regarded as always demonstrating a certain degree of utility. Thus utility may be assumed to constitute both an objective attribute of an institution, a subjective preference measured as both the level of satisfaction that a particular consumer receives from the use of any resource (i.e. benefits) and the degree of socially and individually determined motivation (cf. McClintock, 1972), or it may refer to interpersonal relationships (see Simons, 1993) that may be formed. However, utility may best be regarded as an economically oriented

concept connected with present or future use of the institution and its overall potential thus allowing to approach any institution, including any natural language, as expressed by such notions as 'goods', 'services' and 'economic advantages', proposed by Max Weber (1978). As formulated by Weber (1978:68), utility may be approached in the following way: "*the specific and concrete, real or imagined, advantages of opportunities for present or future use as they are estimated and made an object of specific provision by one or more economically acting individuals*". In this framework, Weberian 'goods', defined as "the sources of potential utilities of whatever sort" (Weber, 1978:68), may be analyzed as 'linguistic resources', that is, as some kind of material possession providing an individual human communicating agent (hence HCA) with concrete quantities of linguistic resources secured by an individual HCA in the course of his/her lifelong accretion of linguistic resources. In turn, the notion of 'services', defined by Weber as "derived from a human source, so far as this source consists in active conduct" (Weber, 1978:68), may be analyzed as 'linguistic-communicative services', that is, as allowing a HCA to get involved in appropriate linguistic-communicative conduct. Finally, an important aspect of the concept of utility named 'economic advantages' and defined by Weber as "the opportunities of economic advantage, which are made available by custom, by the constellation of interest, or by a conventional or legal order for the purposes of an economic unit" (Weber, 1978:68), may be analyzed as allowing any HCA to navigate through the individually controlled and individually valued linguistic resources (see e.g. Sheng, 1989; Grin, 2001, 2003) with the intention of being their successful users, that is, as involved in weighing both benefits and costs of the use of linguistic resources in various acts of communication. Subsequently, a language which shows a high degree of sensitivity to utility in the sense described above and which is predominantly focused on utility may be regarded as Utility-dominant. It may be schematically represented in the following way:

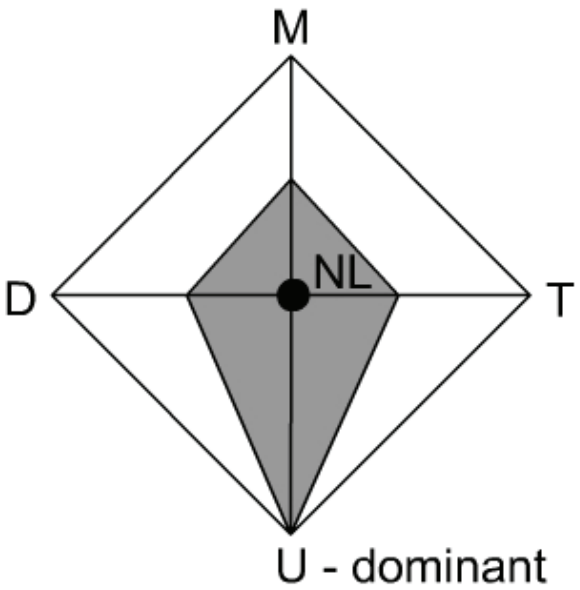

Fig. 4

Displays:
Any institution also belongs to 'display ecology', that is, it will always demonstrate a certain more or less well developed degree of display potential against other institutions functioning in a multi-display environment. In doing so, the institution is able to signal its integrity and efficiency potential, its overall attractiveness, as well as its readiness to interact. Display characteristics may be biological, psychological, social, and cultural at the same time (cf. Hauser, 1996; Huang et al., 2006), and may decide about the species' and every individual organism's success in the Universal Communication Space. Any natural language is assumed to be characterized by its display potential expressed in the intensity of the display and via diversified display technologies available to a given linguistic community. Thus, one may distinguish between the following types of natural language display: audio-vocal displays, graphic displays, and multimodal-multimedia displays. The exact nature of the ubiquitous phenomenon

of the displays used by institutions, including natural languages, is perhaps best accounted for if one takes into consideration the dual sender-receiver perspective. Firstly, within the sender's perspective, the display ought to be both expressive and effective. As stated convincingly and precisely by Krebs and Davies (1997:156): "*a display is a means of manipulation. It serves to influence the receiver's behaviour in a way that benefits the signaller. Selection favours individuals whose displays are more effective at eliciting beneficial responses. At the same time, however, signaling is likely to be costly*". And they further add that: "*the signals we see in nature should be those that strike the optimum balance between these two conflicting pressures for greater effectiveness and lower fitness cost, i.e. those that are most efficient*". On the other hand, within the receiver's perspective, any display ought to lead to a higher rate of absorption of elements which constitute parts of the linguistic resources such that a language is properly sustained in the NaLGA. The phenomenon of maintenance of so-called natural language 'robustness' through displays, either intralinguistically and intergenerationally (i.e. in first language acquisition) or inter/translinguistically (i.e. via language contact), may also be referred to as the 'leaf display syndrome' (cf. Pickett and White, 1985; Puppel, 2007b) whereby language display, like leaf display, allows for a higher uptake and constant growth of linguistic resources and thus contributes to the overall natural language efficiency in verbal communication. Subsequently, a language which shows a high degree of sensitivity to display characteristics (e.g. intensity and diversification of display technologies) and which is predominantly focused on displays may be regarded as Displays-dominant. It may be schematically represented in the following way:

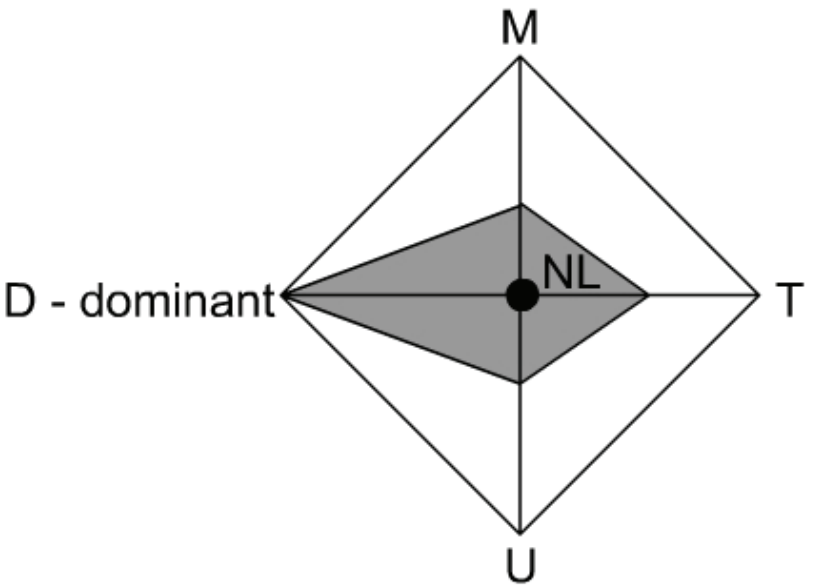

Fig. 5

3. Conclusions

In the present paper, natural language has been regarded as a cultural institution. As such, it was defined as resulting from a constantly changing (i.e. dynamic) interplay of the following set of attributes: Militancy, Trade-offs, Utility, and Displays. The said attributes have been assumed to define a universal device, the Imperial Tetragon of Institutions, which generates the institution's profile and by means of which a given institution's current status in the ecology of institutions may be characterized. Since no language is able to demonstrate well-balanced proportions among the attributes, four basic types of languages have been identified, that is, Militancy-dominant, Trade-offs-dominant, Utility-dominant, and Displays-dominant.

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SUMMARY

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'autocratic' (i.e. expansionist and aggressive) position under appropriate conditions. These conditions may include an interplay of a number of factors (or 'attributes') all of which are social-psychological in nature and which help in defining a language's overall competitive position.

Keywords: natural languages, language as an institution, militancy, trade-offs, utility, displays

Magdalena Rybarczyk

Finally: implicit expression of an attitude. A cognitive grammar analysis

1. Introduction

The English word *finally* is used, both in writing and conversation, very frequently, in various styles and registers, diverse contexts and constructions. The aim of the present paper is to single out distinct senses of *finally* and to focus on the one which in combination with other elements brings about the implication of the speaker's attitude towards the hearer and his actions. In section 2, I will take a closer look at the semantic contribution and the grammatical and semantic behaviour of the form *finally* in some sample contexts. In section 3, I will focus on functions of *finally* in the implicit communication of the speaker's attitudes and judgements in a speech event. At the most general level, the present paper, which advocates the Cognitive Grammar approach to language, is an attempt at revealing an indeterminate nature of lexical items. It analyzes a word which by itself does not need to carry any negative charges, but which may combine in a way that gives rise to hostile implications between the interlocutors. In this way, a seemingly neutral word may become an indicator of 'hidden' attitudes between the speaker and the hearer, and thus it may represent a potential resource for interpersonal manipulation. As such, the present paper adds on to a discussion on the role of words in the online meaning-construction (see Evans, 2006).

More specifically, it focuses on a word whose usage in a particular type of context evokes an interpretation pertaining to the interlocutors' assessment of one another.

The semantic contribution and the function of *finally* which will be of main interest here is exemplified in the piece of discourse in (1), which was recorded as part of a naturally-occurring conversation.

(1) A: *You **finally** understand?*
B: *What do you mean **'finally'**?*
A: *It fucken took you forever!*

In (1) the relevant interpretation of *finally* is explicitly formulated by the speaker A in his second utterance. However, even before being spelled out, it is intuitively understood in the context at hand. It is not the case that the addressee (B) did not grasp the implication of *finally*. On the contrary, having sensed the negative attitude on the part of the speaker, B challenges his interlocutor to express this attitude in a more direct fashion. In an attempt to determine whether the communicative import of *finally* as used in (1) constitutes a separate, well-established "sense", or whether it is emergent from the interplay of contextual factors, let me refer to a theory of word meaning developed by Evans and Tyler and coined "principled polysemy" (Evans, 2004:79).[1]

2. Principled polysemy and the senses of *finally*

The Principled Polysemy model postulates the distributed nature of word meaning, wherein the same word can acquire novel interpretations as a consequence of its application in diverse contexts (see Evans 2004: 82-83). In the Theory of Lexical Concepts and Cognitive Models (LCCM theory), Evans makes a distinction between "lexical concepts" i.e. stored linguistic knowledge units, and their semantic potential – "cognitive models" defined as "conceptual

[1] The present analysis relies on the principled polysemy model as described and applied by Evans (2004) and later incorporated into the Theory of Lexical Concepts and Cognitive Models (see Evans, 2006). The approach, however, was originally developed by Tyler and Evans (see e.g. 2003).

knowledge structures (…) that lexical concepts provide access to" (Evans, 2006:496).[2] This goes in line with a well-founded in Cognitive Grammar view of "encyclopaedic linguistics", according to which linguistic expressions get their meanings from highlighting certain portions of conceptual structures that incorporate both linguistic and extra-linguistic knowledge (see Taylor, 1995:81-85; see also Langacker 1991:63).[3] A particular context may call for the activation of a particular facet of knowledge activated by a lexical form (perhaps one that has not been activated in the previous uses). In other words, "utterance meaning is the result of the integration of word senses [i.e. lexical concepts associated with forms – M.R.] in a way which is coherent and contingent upon real-world knowledge" (Evans, 2004:83). The principled polysemy model (and the LCCM theory) is drawing from Langacker's usage-based model (see Langacker, 2000; and also 1988). In the usage-based model, each linguistic unit (be it a simple lexical item or a complex discourse sequence) is derived from actual instances of language use, i.e. "usage events", through the process of entrenchment and schematization. Repeated occurrence of a linguistic expression in a sufficient number of similar usage events results in the extraction of contextual commonalities into a "schema" which characterizes this expression. Thus, the "structured inventory of conventional linguistic units" is being constantly updated (Langacker, 1991:63), as is, necessarily, "the inventory of word-senses [i.e. lexical concepts – M.R.] conventionally associated with a lexical item" (Evans, 2004:83). What is original in the Evans and Tyler's theory of word meaning is the methodology developed to identify distinct senses and distinguish the central sense. The methodology of the principled polysemy approach will be applied in the present analysis of an adverb *finally*. In what follows, I will, first, take a look at the different semantic contributions of *finally* exemplified by the examples listed in two dictionaries (*The Oxford English Dictionary* and *Macmillan Dictionary*) and, secondly, I will apply the criteria formulated by Evans for determining whether these

[2] The term "lexical concept" is equivalent to the term "sense" used in earlier work (see Evans, 2004).

[3] Thus, the traditional distinction between linguistic and non-linguistic knowledge becomes redundant in the Cognitive Grammar approach to language.

meanings (i.e. conceptualizations), especially one that most closely reflects the interpretation in (1), constitute distinct senses of the word (i.e. autonomous lexical concepts).

2.1. Semantic contributions of *finally*

The 1970 edition of *The Oxford English Dictionary* formulates three basic predications of the word *finally*, two of which are very closely related (they are listed under the same entry, one as a subsection of the other):

(2) M1. in the end, lastly, ultimately (1374)[4]
b. indicating the last point or conclusion of a discourse, treatise, etc. (1526)
M2. so as to make a complete end; in a manner not to be reversed or altered; once for all, decisively, conclusively (1400)

What is common to all three of these circumlocutions is the notion of 'end' involved, and some sort of movement towards it. If we treat the 'end' as a 'boundary', then the meaning M1 is coming very close, stepping onto or crossing the boundary, and the meaning M2 indicates the state in which the boundary has been crossed without the possibility of return. In and of itself, thus, the word *finally* is not emotionally charged. However, if the boundary which *finally* hints on runs between something 'good' and 'bad', then we should expect that the mention of approaching it, let alone crossing, may evoke certain emotional connotations. But before further pursuing this line of reasoning, let us consult a more recent dictionary. The senses of *finally* listed in the *Macmillan Dictionary* are quoted in (3):

(3) m1. after a long time, process, or a series of events
m2. as the last thing that you want to say
m3. (formal) if something is decided or agreed finally, it is decided in a way that cannot be changed

[4] The year provided in the brackets refers to the first noted occurrence of the word with the meaning indicated.

The meanings m3 and M2 are certainly equivalent. Also the meaning m2 corresponds to M1b but it now has a separate entry. Note, however, that the meaning m1 in (3) is formulated somewhat differently than M1 in (2). In an attempt to find a valid explanation to those observations, I will analyse each meaning following Evans in his method of distinguishing separate senses.

In order to differentiate what constitutes a distinct sense, Evans (2004: 93-94) introduces three criteria: (i) the Meaning Criterion, (ii) the Concept Elaboration Criterion and (iii) the Grammatical Criterion. The Meaning Criterion is fulfilled when a particular usage of a word suggests more, or communicates something slightly different, than other usages of the same word. In the LCCM theory, Evans explains that "a single form can be conventionally associated with a (…) number of distinct lexical concepts which are related to degrees" (Evans, 2006:503). Each lexical concept associated with a word carries a particular semantic value. The Concept Elaboration Criterion concerns the word's selectional or collocational restrictions, i.e. the patterns of its modification by other lexical items. Finally, the Grammatical Criterion pertains to some unique grammatical behavior that may be characteristic of a certain sense. According to Evans, the Meaning Criterion and at least one other must be satisfied, in order to secure meaning distinctiveness (see Evans, 2004:94). In Evans's revised terminology, to talk about distinct senses of a lexical form means to identify distinct lexical concepts that this form evokes (see Evans, 2006: 503-6). One of the properties of any lexical concept is that it has a unique "lexical profile" i.e. it behaves in a specific way semantically and/or grammatically. "Determining whether a particular usage of a form relates to one lexical concept rather than another is a matter of examining the *selectional tendencies*" (Evans, 2006:503). Semantic selectional tendencies correspond to the Concept Elaboration Criterion, whereas grammatical selectional tendencies are equivalent to the Grammatical Criterion. I will now move on to the application of the criteria presented above in an analysis of *finally*.

2.2. Different senses of *finally*

Let me start with what seems to be the most straightforward case, i.e. meaning M2 in (2), which is equivalent to m3 in (3). As was already mentioned M2/m3 is used to indicate that something has ended once and for all. Thus, we might gloss this semantic value of *finally* as [IRREVERSIBLY]. The sentences in (4) are quoted in dictionaries as illustrations of the [IRREVERSIBLY] meaning of *finally*. Sentences (4a) and (b) come from *The Oxford English Dictionary*, whereas (4c) is quoted from the entry for *finally* in the *Macmillan Dictionary*.

(4) a. *Many men are **finally** lost.* (OED)
b. *The arrangement would **finally** and effectually deal with a national question.* (OED)
c. *The exact amount has not been **finally** decided.* (MD)

Indeed, in all the sentences in (4), *finally* designates not only completion but also 'irreversibility' of the actions it elaborates. We could highlight this meaning component by adding the following continuations to the sentences in (4):

(5) a. *Many men are **finally** lost. And nothing will bring them back to life.*
b. *The arrangement would **finally** and effectually deal with a national question. Its decisions would be indisputable.*
c. *The exact amount has not been **finally** decided. We can still negotiate.*

On the other hand, *finally* does not have similar implication in a sentence like (6).

(6) *He **finally** proposed to me.*

Here, *finally* does not imply that the decision to marry someone is irreversible. And even though the bride-to-be may not enjoy the news, it would sound natural to add *But he changed his mind the next day* (unlike for example in sentence (4a) where adding *But we will bring*

them back to life would be pragmatically inconsistent).[5] Since the meaning of *finally* in (4) exhibits a component not apparent in other usages (i.e. irreversibility), we can conclude that the Meaning Criterion is satisfied in this case. Structurally the adverb *finally* as [IRREVERSIBLY] is grammatically tied to the verb – in all the sentences in (4) *finally* modifies the verb. It is also possible to use *finally* as a sentence element in its own right. The sentences in (4) remain well-formed when *finally* is moved to the beginning of the sentence. However, if we compare (7a) and (b), we will see that the meaning of *finally* is not the same in the two sentences.

(7) a. *Many men are **finally** lost.* [IRREVERSIBLY]
b. ***Finally**, many men are lost.* [LASTLY]

As a sentential adverb, *finally* in (7b) means something similar to 'lastly', perhaps indicating the conclusion of a list of losses suffered in a battle. It is concluded that since *finally* as [IRREVERSIBLY] appears only as a verb-modifying adverb, it satisfies the grammatical criterion. Hence, as both the Meaning and the Grammatical Criteria are met, *finally* as [IRREVERSIBLY] constitutes a distinct lexical concept.

What would be interesting to know is how the meaning M1 – 'in the end, lastly, ultimately' – (encompassing also M1b i.e. 'indicating the last point or conclusion of a discourse etc.') came to function as two separate meanings, and whether those two meanings are truly distinct senses of the word *finally*. I will analyze this change as a change in the structuring of M1.

In the cognitive framework meaning amounts to conceptualization. A linguistic expression evokes a situation and, at the same time, structures it in a particular way. Thus, the meaning of a lexical item comprises both the cognitive "content" and the "construal" imposed on that content (see e.g. Langacker, 1995:156). Cognitive linguists

[5] Of course the sentence *But we will bring them back to life* is only inconsistent if we interpret it literary. Metaphorically, it does make sense to utter something similar. Consider a sentence like: *We will bring them back to life with our memories of their brave existence*, where REMEMBERING someone is REVIVING them. This, however, does not change the objective reality of men being irreversibly lost.

believe that the same cognitive content can be construed in different ways by means of highlighting (i.e."profiling" in Langacker's terminology) its different areas. This has obvious implications for language change. The shift in 'meaning' of a particular word may be effected by the shift in what this word profiles within the conceptual frame evoked for its interpretation (see e.g. Lee, 2002:116). I noted earlier that all semantic contributions of *finally* involve the conception of moving towards some 'end', and that the meaning M1 captures (profiles) the act of approaching or reaching this end. The understanding of the word, however, extends beyond its profile. In the LCCM theory, a word is associated with one or more lexical concepts which serve as access points to conceptual structures, i.e. cognitive models (see Evans, 2006:502). A cognitive model relates to a coherent body of knowledge and it provides a base for an interpretation of specific utterances.

An adverb modifies or tells us something about the verb or the clause (which necessarily involves a verb). Given that a verb profiles a process and, schematically, it is characterized in terms of our conceptual ability: of sequentially tracking a relationship in its evolution through time (see Langacker, 2008:111), adverbs basically tell us something about a process or a part of it. A good understanding of a lexical form which highlights one aspect of a process requires evoking, if only schematically, the whole of this process. In order to talk about 'coming to an end', we need to have some idea of a process, its initiation and dynamicity. Consider the sentences in (8) citied from *The Oxford English Dictionary*.

(8) a. *Evil prevailing **finally** over good.* (M1)
b. ***Finally**, after having beaten him at everything else, he beat him at his own game.* (M1)

It seems that in the sentences in (8), *finally* designates the end or the last stage of a process. But reading or hearing those sentences we are – if only subconsciously – aware of the whole event that occurred, not only its ending. Let us compare those sentences with an example used to illustrate m1 ("after a long time, process, or a series of events"):

(9) *We **finally** arrived home at midnight.*

In sentence (9) *finally* is elaborated by a time expression *at midnight*. There is a new dimension to the meaning of *finally* in (9) – while still referring to the 'end' of a process, it also comments on the 'prolonged duration' of this process. We interpret (9) as meaning 'it took us a long time to arrive home'. Such interpretation is definitely the import of *finally* since the sentence *We arrived home at midnight* does not trigger similar connotations. Thus, in (9) the semantic contribution of *finally* might be glossed as [PROLONGED DURATION]. Is the interpretation of *finally* in (9) context-driven (perhaps the time expression shifts the focus of *finally* to the 'duration' of the process), or is it a distinct sense which developed from M1 – [IN THE END]? Another sample sentence from a dictionary, quoted under (10), supports the claim that *finally* indeed has a [PROLONGED DURATION] reading, even in the absence of a time expression.

(10) *My father **finally** agreed to let me go on the trip.*

Sentence (10) implies that it took a long time to persuade the father to grant the permission. Recall also that a similar implication is apparent in the piece of discourse in (1), repeated here under (11).

(11) A: *You **finally** understand?*
B: *What do you mean **'finally'**?*
A: *It fucken took you forever!*

On the other hand, the sentences in (8) do not automatically imply that an event took more time than we would normally expect. As follows from the above, the [PROLONGED DURATION] reading is not contextually dependent and it is more specific than the [IN THE END] reading (and, at the same time different from *finally* as [LASTLY] i.e. m2/M1b). Thus, the Evans's Meaning Criterion is satisfied. As for one other criterion required in order to distinguish a distinct sense, I have already noted that *finally* understood as [PROLONGED DURATION] can be elaborated by a time expression. The time expression can appear in a sentence between *finally* and the verb it modifies (see (12a)). Neither

finally as [LASTLY] nor *finally* as [IRREVERSIBLY] can be immediately followed by a time expression without a change in meanings, as is illustrated by the examples (12b) and (c).

(12) a. *My father **finally** on Friday evening agreed to let me go on the trip.*
b. ?***Finally** after 20 minutes, let us all fear God.*
c. ?*The arrangement would **finally** in July deal with a national question.*

Since the [PROLONGED DURATION] reading, but not the [LASTLY] or [IRREVERSIBLY] readings, allows a semantic elaboration by a time expression, it may be concluded that the Concept Elaboration Criterion is satisfied (along with the Meaning Criterion). This means that [PROLONGED DURATION] is indeed a distinct lexical concept (i.e. sense) associated with *finally* and exhibiting a unique lexical profile. It should already be inferable that [LASTLY] is also a distinct sense since both [PROLONGED DURATION] and [IRREVERSIBLY] lexical concepts diverge from it in terms of their selectional tendencies. For the sake of clarity, however, I will briefly summarize some characteristics which confirm that [LASTLY] is indeed a distinct sense of *finally*. First of all, *finally* as [LASTLY] does not involve the element of 'irreversibility' or 'prolonged duration'. It merely suggests that we are approaching the last stage of a discourse. Neither does it comment on the length of this discourse (it could have been a long paper, or just a ten minutes speech), nor implies that the discourse was conclusive in whatever matter. As such the [LASTLY] reading constitutes a unique semantic contribution of *finally*, which could be paraphrased as 'lastly'. As a part of speech, *finally* as [LASTLY] is a 'conjunctive adverb', i.e. one that can join two clauses together. It canonically appears at the beginning of a sentence and is followed by a comma. This is exemplified by (13).

(13) *I will go on to presenting the dictionary meanings of the word. **Finally**, I will make an attempt at distinguishing its distinct senses.*

We saw in (7b) that *finally* in the sense of [IRREVERSIBLY] cannot serve as a conjunct. Neither can *finally* as [PROLONGED DURATION]. Compare

(14) with the sentence (9) above to observe the change in the meaning of *finally* (from [PROLONGED DURATION] to [LASTLY]).

(14) ***Finally**, we arrived home at midnight.*

As the Meaning Criterion and the Grammatical Criterion are satisfied, we can conclude that [LASTLY] constitutes a distinct sense of *finally* (i.e. since it possesses a unique lexical profile, it is a distinct lexical concept).

2.3. The emergence of a new sense

Having established that [PROLONGED DURATION] and [LASTLY] are indeed distinct lexical concepts associated with *finally*, let us now go back to tracing the evolution of [IN THE END] into those two subsenses. I have already observed that in order to comprehend the meaning of *finally*, in whichever of its senses, we need to conceptualize a schematic process: its beginning, evolution through time, and ending. Secondly, as was also mentioned above, we have to realise that the [IN THE END] reading (including the [LASTLY] interpretation) focuses on the 'end' of a process, whereas the [PROLONGED DURATION] reading pertains to both the 'end' and the 'duration' of a process.

Assuming that "meaning extension is principled and motivated" (Evans 2004: 97), and given that it is determined by language use in the course of our interaction with the environment, we can treat the change from [IN THE END] to [PROLONGED DURATION] as gradual highlighting of the time dimension as we are approaching or reaching the completion of a certain process. One element of the encyclopaedic information evoked in apprehending a particular process is the time that this process is likely to take i.e. a "norm" for its completion.[6] Naturally, the more a process that we are experiencing or witnessing exceeds its norm (its expected duration), the more we think about the end of this process. In other words, when events take up an amount of time normally associated with them we do not tend to focus on their

[6] The notion of "norm" is applied to the present analysis of *finally* in the way analogous to Taylor's application of this notion in his analysis of *old* (see 1992:10-20).

duration as much as we do when an event is prolonged. Prolonged duration is especially apparent to us when we are anticipating the ending or the result of something. Such tendency seems to have been the motivation for the extension of *finally* as [IN THE END], which focuses on the 'end' of an event, into *finally* as [PROLONGED DURATION], which additionally comments on the slow motion of an event's progress. Thus, the emergence of this new sense presumably follows from the real life experience of anticipating the ending of unnaturally long events. *Finally* in the sense of [PROLONGED DURATION] denotes that the process which the adverb modifies has been enduring for a period of time in excess of some norm. It is not always easy to determine how much time a certain event should take. The norm is construed as a region and thus, especially with processes whose duration is not predetermined, it gives rise to different evaluations (see Taylor, 1992:22). For example, in an educational system in which a lesson consists of a forty-five-minute unit, the norm for conducting a lesson is limited by an external schedule. Therefore, if, after sixty minutes, the speaker states that *The lesson has finally finished,* the hearer can hardly argue with the prolonged duration suggested by *finally*. However, if a similar statement is uttered after forty seven minutes, the hearer may judge it an exaggeration as he may consider this amount of time to be "within" the region of the norm for a lesson. The discrepancy of judgements is most likely to occur in the case of processes whose duration is not established by external schedules (e.g. the process of understanding). Here in particular, what for the speaker is "beyond" the norm, for the hearer may well be "below" it or still "within" it. That is why, in many cases *finally* as [PROLONGED DURATION] is used by the speaker to express his subjective judgement about some situation. This leads us to the usages of *finally* analogous to the example in (1) (the sentence including *finally* is repeated for the reader's convenience under (15)).

(15) *You **finally** understand?*

3. A 'hidden' attitude

In order to take a closer look at the piece of discourse in (1), let me first introduce the elements of a speech event. Langacker in his model of the "current discourse space" distinguishes the following elements of a speech event diagrammed in Figure 1: the viewing frame and the focus of attention, the ground (which includes the speaker, the hearer and their immediate circumstances), the context of a speech event and a body of shared knowledge (2001:144-145). In a particular speech event, the speaker and the hearer engage in the coordinated viewing of conceptualisations inherent in linguistic expressions. The interlocutors are apprehensive of one another (as indicated by the dashed arrows), and their exchange involves interpreting the meanings of linguistic expressions and, ideally, arriving at the same conceptualizations.

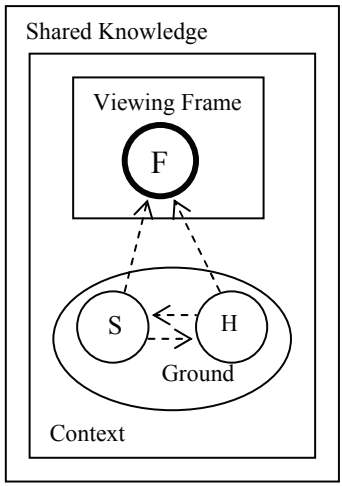

Fig. 1. *Usage Event* (see Langacker, 2001:144)

When *finally* as [PROLONGED DURATION] is used in discourse to elaborate an abstract verb like *understand*, it captures the speaker's judgement of a particular situation. Basing on life experience, both the speaker and the hearer realise that the process of understanding may take up very diverse amounts of time – depending on many factors

e.g. what is being understood, what the circumstances are, etc, the norm is ascribed different values.[7] This experience is part of the interlocutors' shared knowledge. In a speech event, the speaker and the hearer focus attention on a particular instance of the act of understanding embedded in a unique context of the exchange. Diverse contextual factors may influence the interlocutors' judgements of prolonged duration of a process, or lack of it. Many of us have certainly in our lives engaged in a negotiation of such judgements, perhaps one similar to that in (16). Here, the speaker A insists that the process of understanding was much extended beyond the norm. The speaker B, on the other hand, points to some unique contextual factors which provide an excuse for such extension. B believes that if we take into account that it was a complicated matter, and that the speaker's mental abilities were momentarily limited due to stress, then, we could refrain from the judgement of 'prolonged duration'.

(16) A: *She **finally** understood.*
B: *I don't think it was all that easy to understand.*
A: *But come on, it **took her ages** to figure that out!*
B: *Well, I guess she was a bit stressed out.*

The clashing judgements and contradictory opinions may always provoke a change in the interpersonal relations between the interlocutors, but it is perhaps the most likely when the speech participants make judgements and express opinions about one another.[8] In such cases, the hearer is often coded as an on-stage participant in the relation, and the speaker remains implicit, i.e. subjectively construed, which emphasizes his role as the primary conceptualizer of the expressed proposition.[9] When an irritated mother utters the sentence as in (17) to her naughty child, she signals her

[7] See also Taylor (1992:13) for the norm in the semantic structure of scalar adjectives.

[8] The effects of disagreeing with someone or criticizing someone are certainly different across the cultures. Thus, they may, but do not have to, influence the interpersonal relations between the interlocutors, or the influence might be of different nature.

[9] The notion of 'subjectivity' is used here in the sense of Langacker (see e.g. 1985). For the discussion of the dual role of the speech participants see Langacker (2007).

growing impatience and her readiness to cease being polite and friendly with her child.

(17) *Will you **finally** wash your hands?*

The sentence in (17) is different from (15) in that it comments on the objectively observed event. We are perfectly able to visualise the action of washing hands and we can judge its standard duration with a far greater precision than a duration of an abstract action like 'understanding'. What is more, as children or as grown ups, we hardly ever take a sentence like (17) personally – as a criticism of who we are. If we did not wash our hands quickly (i.e. we took our time to cross the boundary from the shameful state of having dirty hands to a desirable state of having washed them), perhaps we had something more interesting to do, or maybe we were not in a hurry. The situation is different with (15), where the action modified by *finally* pertains to our mental abilities. Suggesting to someone that it took him an unnaturally long time to understand something, may as well be indicating that we think the person is stupid, or at least slow. The inference, however, is far-fetched. For one thing, *finally* suggests the [PROLONGED DURATION] reading, but it does not explicitly spell it out. I would assume, therefore, that *finally* as [PROLONGED DURATION] provides means of subjectively construing an attitude. The word hints at a particular judgement or opinion on the part of the speaker, but this judgement or opinion remains implicit (i.e. subjectively construed). The function of *finally* is to show an attitude but not its strength. It is, thus, the hearer's interpretation that estimates the strength of this attitude. The hearer could respond to (15) in a number of ways. Some of them are listed under (18).

(18) a. *Yes, I see your point now.*
b. *Are you saying I'm stupid?*
c. *Yes, you've **finally** made yourself clear.*

The sentences (18a) and (b) illustrate the extremes of the '*finally*-attitude'. In (18a), the implication seems to be ignored altogether, or at least not responded to verbally. In (18b), *finally* triggers the

connections: I finally understood → it took me a long time to understand → it does not normally take such a long time → I was slow → I am stupid. The conclusion that we arrive at is that we were accused of being stupid. The speaker in (18b) wants to confirm his inference by asking a direct question. His interlocutor can easily deny it, even though it might have been exactly what he had in mind. The difficulty with what I will call "subjectivized attitudes" is that they can never be captured for what they really are. As such, they create a great tool for manipulation. One way to handle such manipulation is to redirect its force, like in (18c). The sentence can be interpreted as meaning 'whatever you are implying, it concerns you as well'. Another way out of the potential manipulative grip prompted by the combination of words like *finally* as [PROLONGED DURATION] with other linguistic elements, is to challenge the interlocutor to express his attitude in a more direct fashion. This is exactly the situation in (1), where the speaker explicitly demanded an explanation of *finally* (*What do you mean 'finally'?*). The interpretation provided may then be judged by the hearer as irony or a terribly rude accusation, or yet something else suggested by the larger context of the exchange.

4. Conclusions

The discussion and analysis offered here aimed at elucidating some characteristics of the word *finally*. More precisely, an attempt has been made to distinguish a sense of *finally* which in certain contexts serves to subjectively express the speaker's attitude towards the addressee, and as such can be used for manipulative purposes. I hope that the above discussion – however simplistic – made it clear how a word like *finally* may be used to implicitly communicate certain emotions. The present paper has by no means exhausted the potential of *finally* as a tool in manipulative discourse.

On a different level, the present analysis addresses the role of words in online meaning construction, emphasizing the fact that the precise semantic contribution of a word is established in a specific context (see Evans, 2006). Identifying words which, like *finally,* may contribute to communicating "subjectivized attitudes" will require integration of theoretical ideas with extensive empirical testing. It

opens up a wide area for future research, which should subsequently move on to analyzing reactions to implicitly communicated attitudes, and 'finally' allow to draw important conclusions as to the mechanisms of manipulative behavior.

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Macmillan English Dictionary for Advanced Learners (2006)

SUMMARY

The present paper investigates one of the many ways speakers infuse their discourse with personal opinion without giving it prominence. Specifically, it analyses the word *finally*, which in combination with other elements may bring about an implication of the speaker's negative judgment about the hearer. In general, the paper addresses the role of words in meaning-construction. More specifically, it identifies the word *finally* as potential carrier of 'hidden' attitudes. The discussion starts with considering various interpretations of *finally*. It goes on to implement the "principled polysemy" model (see Evans, 2004) to determine whether the semantic contributions of *finally* as interpreted in various contexts constitute separate, well-established senses, or whether they are emergent from the interplay of contextual factors. Having distinguished distinct senses of *finally,* the paper focuses on the one that is activated by the specific manipulative context under analysis. The example is illustrative of a "subjectivized attitude", i.e. an attitude communicated in an indirect fashion. Its various interpretations surface in ways of reacting to the speaker's negative evaluation implied by a specific use of *finally*. While it is difficult to ignore the speaker's implication, it is, at the same time, problematic to interpret. The indirect expression of an attitude

invites the addressee to evaluate its strength himself and, thus, it allows for numerous different interpretations.

In brief, *finally* in one of its senses may be used to implicitly communicate certain emotions and judgments. A more general conclusion is that a word which by itself does not need to carry any negative charges, may combine in a way that gives rise to implied hostile attitudes of the interlocutors, and, as such, it represents a potential resource for interpersonal manipulation. For the sake of expanding the research in manipulative discourse, it is important to identify words such as *finally* and explain their indirect contribution to communicating on the interpersonal level.

Keywords: cognitive grammar, principled polysemy model, subjectivity, encyclopaedic knowledge, meaning-construction, manipulative discourse

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Semantic transfusion of the lexeme *miłość* in the light of cognitive linguistics[1]

1. Introduction

This paper aims at presenting the process of gradual replacement of the semantic value of the lexeme *miłość* 'love' with a new one. The trigger for this transfusion was the victory of *Platforma Obywatelska* 'Civic Platform' (PO) in Polish parliamentary elections in 2007. Since then, the party has declared their political objectives to be realised under the banner of love. Following articles commenting on *polityka miłości* 'policy of love' of the government allows to draw conclusions as for the influence using the word *miłość*[2] has on voters and public opinion in a new political context.

The term *semantic transfusion* has been derived from M. Kuczyński (2004) who defines it as the process of transferring the value of word. In reference to the lexeme *love*, it consists in replacing its original semantic value with some other one, or extending it or narrowing it down. In the linguistic process discussed it is *signifié* which becomes transfer red but not *signifiant* of the lexeme.

[1] This is an improved version of the article entitled "*Polityka miłości* w świetle semantyki kognitywnej" given to be published in *Poradnik Językowy* (2009).

[2] In the text, English equivalents for Polish concepts and metaphors will be used.

The semantic transfusion will be analysed on the basis of cognitive semantics. It provides such tools for research as base, profile, conceptual amalgam and metaphor. They allow to answer the question why Polish public opinion has accepted the implementation of *love* in politics, and to explain a new metaphor of political game coined by politicians. The linguistic material stems from articles published in "Rzeczpospolita" from 12/11/2008 to 14/2/2009.

2. Cognitive semantics and semantic transfusion

The semantic transfusion of *love* is embedded in a political context which imposes a certain course on it. Although Saussure's binary nature of the linguistic sign (*signifiant* vs. *signifié*) was emphasized in the *Introduction*, the process will not be analysed according to the structural paradigm but it will be enriched with the communicative aspect of language. In the process of semantic transfusion of *love*, it can be noticed that an interpretation of relation which connects the form of sign with the meaning is of the relatively subjective nature and can be changeable. It will be presented in the article further. This fact suggests that cognitive semantics provide adequate tools for a description of the transfusion. According to this approach, a key determinant in interpreting the linguistic sign constitutes, apart from psychological and cultural issues, subjectivism (Grzegorczykowa, 2002: 81).

2.1. Base and profile

According to cognitive semantics, conceptualisation of the world takes place with the use of p r o f i l i n g, which means highlighting certain elements of the b a s e –– consisting of elements in a given semantic structure –– and downplaying others at the same time (Langacker, 2007:438-441). In other words, p r o f i l e constitutes a highlighted element in a set. Profile and base are also called figure and ground or trajectory and landmark (the last two are used in the description of conceptual schemas).

The emergence of the term *miłość* in the lexicon of Polish politics, and approval of such the *status quo* by the society can be explained by

the fact that the victory of PO in 2007 triggered a change in the way political reality had been perceived. Namely, previous government of *Prawo i Sprawiedliwość* 'Law and Justice' (PiS) is being associated with constant dissensions, political strife and attacks, which is, in fact, reflected in a peculiar language called *pisomowa*, being a new version of the Polish compound *nowomowa* 'newspeak' with the prefix *nowo-* 'newly' replaced with the acronym *PiS*, used by the then government (Głowiński, 2006:14). Moreover, it is important to notice a particular way of profiling events by mass media which favour news values and a nine days' wonder more than bringing a party manifesto into effect. It appears that highlighting negative aspects of the government of PiS had a disapproving impact on undecided voters who became motivated to cast their votes for the opposite party –– which had declared an introduction of the "policy of love" during the electoral campaign. The political situation of that time is vividly described in the following fragment of the article entitled *Nadchodzi czas rządów miłości* 'There Comes a Time of the Rule of Love', which was published in "Rzeczpospolita" three days after the elections:

> Ci, którzy gotowi byli głosować na PiS po dwóch latach ataków w mediach, po dwóch latach okazywania im nienawiści i pogardy, po wezwaniach, aby odbierać im dowody –– nie uwierzą we „wzajemne zrozumienie i miłość", które deklaruje dziś Donald Tusk. (249.7846; emphasis mine).
>
> 'These who were bound to vote for PiS after the period of two years of being attacked in mass media, after two years of pouring hatred an scorn at them, after calling to deprive them of any evidence –– will not believe in "mutual understanding and love" presently declared by Donald Tusk' (translation and emphasis mine)[3].

This quotation implies that, in order to take the power over, PO appealed to the concept LOVE to replace war as metaphor with a new one which would connote positively. If the Polish political scene were considered as base, the change of electoral preferences could be described as redirecting attention of the society from the "party of

[3] Translations of all quotes which will be presented further are mine.

war" (PiS) to the "party of love" (PO). This process resulted in emergence of such an opinion pertaining to both parties: *PO kojarzy się z miłością, a PiS z nienawiścią* 'PO is associated with love but PiS with hatred' (Szułdrzyński, 2008b).

2.2. The conceptual amalgam *polityka miłości*

Before the analysis of press news commenting on the policy of love has been carried out, it seems worth pondering over hypothetical effects produced by the introduction of the word *love* to politics. In order to do so, the notion of conceptual amalgam proposed by G. Fauconnier and M. Turner (1998) will be used. Their theory of conceptual integration networks assumes that concepts are blended, which contributes to, as a result, creative enlargement of language. Defining a hypothetical reality becomes possible by virtue of setting apart at least two input mental spaces (I_1 and I_2) and projecting their counterparts to the third mental space –– the generic one (G). In turn, concretisation of these counterparts leads to a selective projection, via elaboration, to another space called blend. This blend contains an emergent structure not present in input spaces (Faconnier, Turner 1998: 10) and constitutes a conceptual amalgam.

So as to explain the notion of conceptual amalgam the sentence *Premier wznosi gmach cywilizacji miłości* 'The Prime Minister is building the edifice of the civilisation of love' will be used. It is a paraphrase of the following newspaper fragment:

> Czy starczy mu [Donaldowi Tuskowi] mocy, by jak dotąd skutecznie walczyć o reformy, ograniczać biurokrację, budować autostrady, tłumić korupcję, obniżać podatki, przyciągać rozgoryczonych emigrantów, z dnia na dzień wznosić gmach cywilizacji miłości? (Lisicki 2008c; emphasis mine).
>
> 'Will he [Donald Tusk] be strong enough to fight for reforms successfully, to reduce bureaucracy, to build motorways, to restrain corruption, to reduce taxes, to attract embittered emigrants and to build the edifice of the civilisation of love?'.

This paraphrase allows us to delineate four input mental spaces:

I_1 -- p o l i t i c s; the sphere of political activity of the Prime Minister, which encompasses such elements as proposing reforms, fighting against bureaucracy and pathologies in political life, etc.,

I_2 -- c o n s t r u c t i o n; this category is implied by the verb *wznosić* 'to build' and the direct object *gmach* 'edifice'. This mental space indicates development and the dynamic nature of Prime Minister's activity,

I_3 -- c i v i l i s a t i o n; this category highlights the global range of Prime Minister's activity,

I_4 -- l o v e; the sphere of political activity becomes enriched with the sphere connected with the concept LOVE. It means that the Prime Minister intends to form such a policy that would base on the value of love.

The mental space (G) constitutes political reality the Prime Minister participates in. He proposes reforms, which aim to improve the Polish economy, and is guided by moral principles in the realization of objectives. In the sentence *The Prime Minister is building the edifice of the civilisation of love*, the mental space is internally structuralised due to the cross-space mapping launched by the verb *builds*. There can be selected a number of counterparts shared by all the input spaces. However, they are all projected onto one amalgam which, in that case, may be defined as *polityka miłości* 'policy of love'.

The amalgam discussed helps to understand a hypothetical reality presupposing the introduction of the concept LOVE into the world of politics. Since this process is taking place indeed, its linguistic representation (including lots of metaphorical expressions) which takes the form of commentaries made by politicians and press commentators will be analysed from the perspective of a cognitive approach to metaphor.

2.3. Metaphorical aspects of *polityka miłości*

As it has been already mentioned, the introduction of the word *love* into a political context resulted in the change of the way the Polish political scene had been profiled, and in occurrence of a new metaphor, i.e. the LOVE metaphor. Metaphor is, in turn,

„understanding and experiencing one kind of thing in terms of another" (Lakoff, Johnson 1980: 5), and an intention of implementing the lexeme *love* into political discourse was aimed at, doubtlessly, creating a positive party image and convincing voters into reciprocating Donald Tusk's love:

> […] wszyscy odebrali słowa o miłości jako zapowiedź, że nowy premier przede wszystkim będzie ze wszech sił nas kochał. Nie całkiem o to chodziło. Plan jest taki, że premier wszystko podporządkuje temu, żebyśmy to my kochali jego. Żeby ta miłość narastała, narastała, i ostatecznie osiągnęła apogeum w roku 2010, czyli w okolicach wyborów prezydenckich (Ziemkiewicz, 2007; emphasis mine).
>
> '[...] everybody understood the words about love as an announcement that a new Prime Minister will love all of us heart and soul in the first place. However, he meant something else. His plan is to bring everything under manage to force us to love him. The aim of this love is to increase and increase, and finally to reach a climax in 2010, that is near the presidential elections'.

In order to analyse the LOVE metaphor present in political language, a cognitive approach to the theory of metaphor, i.e. a definition of conceptual metaphor, will be employed here. According to this theory, popularised in the 80s by G. Lakoff i M. Johnson, conceptual metaphor constitutes a relation between elements of conceptual source and target domains. This relation allows people to conceptualise abstract concepts (the target domain) in terms of those which are more delineated and concrete ones (the source domain).

In the process of semantic transfusion, POLICY IS LOVE constitutes a conceptual metaphor and is realised by the following expressions:

(1) […] Wpisuje się ona [inicjatywa polityczna] w program pojednania Polaków ogłoszony przez Donalda Tuska tuż po wyborach, którego głównym elementem jest przekształcenie PO w *partię miłości* (Rosiak, 2007).

'[…] It [political initiative] correlates with the manifesto, issued by Donald Tusk soon after the elections, of uniting all Poles. Its main element is to transform PO into the *party of love*'.

(2) Z tą *miłością* jako *programem nowej władzy* to nikt, okazuje się, nie zrozumiał, o co chodzi (Ziemkiewicz, 2007).
'It seems that nobody has understood so far what this *love*, as the *new government's manifesto*, is about'.

(3) Czy Tusk i Sikorski zamiast *polityki miłości* nie powinni raczej *uprawiać polityki* zdrowego rozsądku? (Magierowski, 2007).
'Should not Tusk and Sikorski, instead of the *policy of love*, *make a policy* of common sense?

(4) Co jednak z *polityką miłości*? *Miłość* można przecież *uprawiać* także w czasach bessy, bez autostrad, podatku liniowego i emerytury pomostowej (Krasnodębski, 2008).
'What is, however, with the *policy of love*? *Love* can be still *made* during the stock market fall, with no motorways, no linear tax or bridge pension'.

(5) Dlatego naiwnością było sądzić, że wystarczy *ogłosić miłość* i uśmiechnąć się do nich [Niemców], aby zmienili zdanie (Krasnodębski, 2007).
'Accordingly, it would be naive to think that it is enough to *declare love* and smile at them [the Germans] to make them change their mind'.

(6) Kiedy *wyborcy* poczują się zmęczeni *przepełnionym miłością Tuskiem* i kontrującym go w ostrych słowach Kaczyńskim? (Semka, 2008).
'When will the voters feel tired of love-filled Tusk and Kaczyński –– who controls him with the use of harsh words?'

(7) Czy alternatywą koniecznie musi być postpolityczna modernizacja, polegająca na *wmawianiu obywatelom wizji liberalnej utopii*, *przepełnionej miłością* i zaufaniem? (Szułdrzyński, 2008b).
'Must the post-political modernisation necessarily be an alternative which consists in *making the citizens believe in the vision of a liberal utopia suffused with love* and trust?'.

(8) Od samego początku *alians PiS i toruńskich mediów* był *związkiem*, w którym bardziej niż o *miłości* można było mówić o rozsądku (Migalski, 2008).
'Since the very beginning, the *alliance of PiS and the media of Toruń* has been a *relationship* in which convenience counted more than *love*'.

(9) Zabawmy się na początek w takie oto ćwiczenia z wyobraźni –– czy gdyby zależało to tylko od o. Rydzyka, to właśnie *ugrupowanie Kaczyńskiego* byłoby *obiektem jego miłości*? (Migalski, 2008).
'Let us first have fun and do such an imagination task –– if it were up to Father Rydzyk, would Kaczyński's party become *his object of love*?'.

(10) W istocie jej [partii] rządy, *rządy miłości* i normalności, to pierwsza w Polsce próba stworzenia *ugrupowania postpolitycznego* (Gociek 2008b).
'Its rule [of the party], *the rule of love* and normality has indeed been the first attempt to form *a post-political party* in Poland'.

(11) Recepta na *miłość wyborców* jest prosta (Gociek, 2008b).
'A recipe for *voter's love* is simple'.

(12) Ten pragmatyczny *sojusz miłośników władzy* z PO i PSL jest na najlepszej drodze do stworzenia czegoś w rodzaju polskiego frontu liberalno-instytucjonalnego (Gociek, 2008b).
'This pragmatic *alliance of power lovers* between PO and PSL ('Polish Peasant Party') seems to be the right way to form something like a liberal-institutional front.'

(13) Jednym z wniosków był wybór koalicjanta. PSL, partia bez właściwości, partia obrotowa, *partia miłośników stanowisk*, jest doskonałym partnerem w budowie Polski normalnej, czyli bezideowej (Gociek, 2008b).
'PSL, an uncharacteristic and changeable party, and the *party of post lovers*, is a perfect partner in building Poland which is normal, that is with no ideology'.

(14) Warto zauważyć, że w owym stanie niepewności znajdowały się tysiące obywateli, którzy, jak doniósł wybitny *polityk partii miłości*, wysyłali do niego listy z poparciem i gratulacjami (Lisicki, 2008b).
'It is worth noticing that there were thousands of citizens, in this state of uncertainty, who, as it has been reported by a prominent *politician of the party of love*, were sending him letters of support and congratulations.

(15) Od kiedy to *piewcy powszechnej miłości* i przebaczenia zaczęli się domagać wymierzenia sprawiedliwości byłym esbekom, świat uległ zmianie (Lisicki, 2008d).
'Since the *eulogists of common love* and forgiveness started to demand former *esbecy* ('agents working for the secret police in the People's Republic of Poland') to be brought to justice, the world has changed'.

(16) *Proklamowanie miłości* jako *zasady metapolitycznej* […] słusznie uwzględniało rolę emocji i uczuć w polityce (Krasnodębski, 2008).
Proclaiming love as a *metapolitical principle* […] did rightly take the role of emotions and feelings played in politics into consideration'.

(17) […] *polityka to* także sprawa *serca i trzewi* (Krasnodębski, 2008).
'[…] *politics* is also an affair of the *heart and intestines*'.

When one concept becomes metaphorically structured in terms of another, we deal with structural metaphor (Lakoff, Johnson 1980: 15). The quotations depicted above indicate that POLICY IS LOVE exemplifies such a metaphor since the concept POLICY is metaphorically structured similarly to the concept LOVE. *Słownik języka polskiego* (1995) 'The Dictionary of Polish' defines the meaning of the lexeme *miłość* as follows:

> «głębokie przywiązanie do kogoś lub czegoś, umiłowanie, kochanie kogoś, czegoś; gorące, namiętne uczucie do osoby płci odmiennej; *pot*. także: stosunek miłosny, przeżycie erotyczne»
> 'a deep devotion to somebody or something, loving and affection for somebody, something; a hearty, passionate feeling toward a person of the opposite sex; colloquially also: a sexual intercourse, erotic experience'

Understanding of the world of politics through the prism of this definition may be possible if the substantive pronouns *somebody/something* are replaced with the words *politician/policy* and their derivatives coined on the base of their paradigmatic relations, i.e. power, government, party, voter, etc. It is presented in sentence (1) where the *party of love* can be regarded as a group of people who praise

this value and whose objective is to cause all Poles to reconcile. In addition, sentence (16) informs that the term *love* ought to be publicised and converted into a principle of public life.

Not only does politicians' love apply to Polish politicians and foreign representatives (sentence (5)), but also to citizens (6, 7) who should requite it (11). This is why PO formed, together with PSL, a government coalition called the *alliance of power lovers* (12) or *party of post lovers* (13) so as to be in the majority in the parliament.

In conceptualisation of the concept POLICY, a reference to colloquial understanding of the word *love* takes place, too. Accordingly, political preferences may be defined as a *relationship* (8) and the *policy* itself can be made as *love* (3). Although the expression *to make the policy of love* constitutes, in the first place, a projection of the conceptual metaphor POLICY IS A PLANT, the phrase can be here conceptualised both from the perspective of the target domain POLICY (POLICY IS A PLANT) and of LOVE (LOVE IS A PLANT) –– as it is implied by the context. In that case, we deal with a process of cross-mapping of two conceptual frames with one source domain PLANT, which may result in recalling the frame of the concept LOVE (here: SEX) in the reader's mind by the reference to the verb *make*. Indeed, as the quotation (17) presents: *politics is also an affair of the heart and intestines*.

The introduction of the word *love* to political language and, consequently, discourse initiated its semantic evolution. This fact is linguistically represented in the structural metaphor POLICY OF LOVE IS WAR, whose target domain is *nota bene* constituted by the conceptual amalgam *policy of love*:

(18) Będziemy więc ścierani i czyszczeni tak długo, aż staniemy się godni *ery miłości*. Będzie bolało. Ale *w miłości*, jak na *wojnie*, *wszystkie chwyty są dozwolone* (Gociek, 2007a).
'We will be being scraped and cleaned until we deserve the *love era*. It will be painful. But *love* is like *war* –– *all is fair in love and war*'.

(19) Inny *pocisk miłości trafił* w posła Joachima Brudzińskiego (Gociek, 2007a).
'Another *love missile* hit MP Joachim Brudziński'.

(20) […] kiedyś Polska wkroczy w *erę wojen miłości* (Gociek, 2007a).
'[...] some day, Poland will enter the *war era of love*.

(21) […] przed nami epoka walki z korupcją za pomocą *miotaczy miłości* oraz *rozpylaczy zaufania* (Gabryel, 2008a).
'[…] before us, there is the epoch of fighting against corruption with the use of *lovethrowers* and *trust pistols*'.

(22) Deklarujemy Ukraińcom *strategiczną miłość*, ale w praktyce postępujemy zupełnie inaczej (Glapiak, 2008).
'We pledge our *strategic love* for Ukrainians but, in practice, we act in a completely different way'.

(23) Jego [Waldemara Kuczyńskiego] słowa: *„anty-PiS-owska emocja* jest wartością, nie powinna wygasnąć, trzeba ją utrwalić" są oczywiście podszyte głęboką *miłością* (Szułdrzyński, 2008a).
'His [Waldemar Kuczyński's] words "the *anti-PiS emotion* is a value, it should not die out, it must be solidified" are obviously fraught with deep *love*'.

(24) [Premier:] Mogę powiedzieć bezczelnie, że *strategia miłości*, jaką zaproponowałem, przyniosła efekty akurat w tej sprawie (Waszkielewicz/Gielewska, 2008).
'[The Prime Minister] I can bluntly say that the *love strategy*, I have introduced, did achieve good results just in this issue'.

(25) Bo kto może być *wrogiem miłości*? Tylko *siewca nienawiści* (Gociek, 2008b).
'Who can be an *enemy of love*? Only a *propagator of hatred*'.

(26) Ten pragmatyczny *sojusz miłośników władzy z PO i PSL* jest na najlepszej drodze do stworzenia czegoś w rodzaju polskiego frontu liberalno-instytucjonalnego (Gociek, 2008b).
'This pragmatic *alliance of power lovers between PO and PSL* seems to be the right way to form something like a liberal-institutional front.'

(27) Wyborcy są wciąż *„usypiani" „polityką miłości"* i świadomie realizowaną przez rządowych specjalistów od marketingu *strategią odwracania uwagi* od nicnierobienia rządu (Lichocka, 2008e).
'The voters are still being *made drowsy* with the *policy of love* and the *strategy of diverting attention* from the government's doing nothing, which are implemented by marketing managers'.

(28) Z kolei „Der Spiegel" w artykule „*Strategia miłości*" drukuje takie słowa: „Po ponad pół roku ustawicznych uśmiechów Polacy *żądają od Tuska* czynów (Lichocka, 2008e).
'"Der Spiegel", in turn, publishes such words in the article "*The Love Strategy*": "After more than half a year of endless smiles, Poles demand from Tusk putting his words into action'.

(29) […] w Polsce *zwyciężyła miłość*. I to *do wroga*, *wroga politycznego* (Lisicki, 2008e).
'[...] *Love has prevailed* in Poland. *Love* toward an *enemy, the political one*'.

(30) *Miłość* przyjdzie potem, gdy *pokona się wrogów miłości* –– tych „wyjców", którzy nie potrafią uszanować pogardzających nimi autorytetów (Krasnodębski, 2009).
'Love will come later, when the *enemies of love* get defeated –– these "howlers" unable to respect authorities who despise them'.

The quotations depicted above prove it impossible to separate "love language" from political rhetoric, whose characteristic element is the WAR metaphor. It seems that the dictionary definition of love is not sufficient and exhaustive as far as describing political reality is concerned. This is accurately presented in example (18) where LOVE is conceptualized in terms of WAR. Accordingly, *all is fair in love and war*. *Love missiles* (19), *lovethrowers* (21) and *trust pistols* (21) become weapons employed by politicians whose political fight is based on the *love strategy* (22, 28) of *allies* (26), which is supposed to lead to victory over *political enemies of love* (29, 30), i.e. *propagators of hatred* (25).

It seems worth noticing that the sentences (27) and (28), except for an assertive part, contain semantic presuppositions which are a source of their "axiological interpretation" (Kiklewicz/Prusak, 2006). It means that they implicitly transfer information which undergoes the process of evaluation by the recipient. In the first sentence, *love* arouses negative associations in the reader who perceives the feeling as a tool for distracting attention from actual governmental actions. The fact that the recipient of the information is being made drowsy allows us to isolate a subcategory LOVE IS A WEAPON in the structure of the metaphor POLICY OF LOVE IS WAR. In this subcategory, LOVE is conceptualised as *soporific gas*. Sentence (28) suggests a similar

interpretation. In that case, the *war strategy of love* consists in presenting friendly party image. Nevertheless, it is again perceived negatively, due to the word *demand* of the semantic value: *x demands z from y* is: 'X ~ HAVE Z and Y HAVE Z and X VOL (Y CAUSE (X HAVE Z))'. This meaning implies that the recipient does not expect love or smiles from the Prime Minister but deeds he has not experienced yet. Semantic presuppositions of these political commentaries and associations aroused by the concept LOVE appear to be contradictory. The fact that a basic function of metaphor is explaining and making understanding easier (Jäkel, 2003:44) indicates that conceptualising POLICY OF LOVE in terms of the domain WAR accounts for its nature in the most satisfying way.

Cross-mapping of two conceptual networks of LOVE and WAR proves that in political rhetoric there occurs a phenomenon called p a r a s e m y (Kiklewicz, 2006: 271). The diffusional nature of the expressions described above determines openness of their semantic interpretation. This results from the defective nature of metaphor (its low nominative status) which can be interpreted axiologically in a press text. Such a conceptualization of metaphorical expressions differs from the conceptual amalgam *policy of love* as in the space (G) only negative elements of the input conceptual space (I_1), encompassing the sphere of politics, have been highlighted. It seems that they dominated the blend and, through completion and elaboration, they gave rise to a structure not provided by input spaces. This fact is indicative of constant development of the blend and proves the amalgam to be a dynamic structure which changes the way people perceive *love* in politics.

Donald Tusk, in his exposé, declared love to be introduced to public life and indirectly referred to a biblical meaning of *love* through the words of John Paul II in a following way:

> A Ojciec Święty powiedział w Sopocie: „Ale pamiętajcie też, że nie ma solidarności bez m i ł o ś c i". I ja wiem, że niektórzy na tej sali czasami uśmiechają się, wątpiąc w to, że te słowa mają głęboki sens. Ja wierzę, bardzo wierzę w sens tych słów. I wiem jedno: prędzej czy później i wy w sens tych słów uwierzycie, bo one naprawdę mają głęboki sens" (275.7872; emphasis mine).

> ‘But our Holy Father said in Sopot: “But you should also remember that there is no solidarity without l o v e”. And I realize that some of you, sitting in this chamber, are sometimes sneering and doubting whether these words make sense. As for me, I truly believe in them. And one thing I know: you will believe in them too, sooner or later, as they do make sense’.

This declaration resulted in references of the value of Christian love in politicians’ comments. By virtue of this fact a specific metaphorical projection of POLICY IS CHRISTIAN LOVE can be explicated. This metaphor partially (but coherently) structures the metaphor POLICY IS LOVE. These are examples of LOVE conceptualised in terms of CHRISTIAN LOVE:

(31) Mirosława Grabowska: To, czego bym życzyła tej ekipie i w ogóle nam wszystkim, to żeby spróbować ten *odświętny język miłości* […] przełożyć na myślenie w kategoriach dobra wspólnego, ale konkretnie (Lichocka, 2007a).
‘Mirosława Grabowska: I wish this government tried to treat this *Sunday language of love* rather in terms of the common good, for the sake of all of us, but clearly’.

(32) Rafał Grupiński, Agnieszka Liszka i Tomasz Arabski, konstruują dla niego *opowieść o cudzie*, która przypomina *dobrze skrojoną mszę*. Raz jest o *cudzie miłości*, innym razem o *cudzie porozumienia* (Subotić, 2008).
‘Rafał Grupiński, Agnieszka Liszka and Tomasz Arabski are building for him the *tale of the miracle* which resembles a *nimbly arranged mass*. You can hear either about the *miracle of love* or the *miracle of agreement*’.

(33) Marek Suski: […] To się wszystko wpisuję w tę *nową księgę miłości do bliźniego*, tę *kamasutrę*, którą Ludwik Dorn pisze w swoim blogu” (Sopińska, 2008).
‘Marek Suski: […] It is all consistent with this *new book of love toward your neighbour*, this *Kama Sutra* which is being written by Ludwik Dorn in his blog’.

(34) Najwyższa pora, by Donald Tusk porzucił *politykę miłości*. Dość *nadstawiania policzków* i pokazywania *dobrej woli*. Stefan Niesiołowski […] w nagrodę za *pokorę*, spokój i prawdziwie

chrześcijańską życzliwość wobec bliźnich raz po raz ciągany jest po sejmowych komisjach etyki (Lisicki, 2008a).
'It is high time Donald Tusk quitted his *policy of love*. It is high time he put a stop to *turning the other cheek* and showing *goodwill*. Stefan Niesiołowski [...], as a reward for *humbleness*, *calmness* and *truly Christian kindness toward his neighbours*, is dragged through ethics committees again '.

(35) Donald Tusk stanął przed dramatycznym wyborem: albo *miłość*, albo obiecany cud. Albo *cierpliwe znoszenie zniewag*, albo cieplejsza woda w kranach (Lisicki, 2008a).
'Donald Tusk faced a critical choice: either *love* or the *promised miracle*. Either to *keep quiet when being insulted*, or warmer water at home'.

(36) Od Platformy autor [Waldemar Kuczyński] nie oczekuje jednak *miłości* czy *miłosierdzia*. Obowiązkiem Donalda Tuska jest całkowite zniszczenie Prawa i Sprawiedliwości (Szułdrzyński, 2008a).
'The author [Waldemar Kuczyński] does not expect *love* and *mercy* from Donald Tusk. He is saddled with the responsibility to destroy Law and Justice ultimately'.

(37) Tusk otoczony przez niewłaściwych ludzi?! To żart czy nieoczekiwana zmiana poglądów *apologety Rzeczypospolitej Miłości* [o Tusku]? (Gabryel, 2008b).
'Is Tusk surrounded by the wrong people?! Is this a joke or an unexpected change of views of the *apologist of the Republic of Love*?'

It may be assumed that an attempt to conceptualise the government's policy with reference to the most important Christian value ought to have a positive influence on public image of politicians. In other words, this conceptualisation should correlate with the conceptual blend of the amalgam *policy of love*. Nevertheless, it does not as public opinion notices that love, declared in politics, is not reflected in politicians' activity. This fact is exemplified in the commentary of Prof. Mirosława Grabowska (31). She suggests that politicians are continuously speaking about love instead of focusing on their work. Furthermore, the intertextuality in sentence (32) indicates that the

government's policy is perceived in terms of a biblical parable. It means that it is understood as a well-thought-out tale, what the expression *nimbly arranged mass* suggests, but not actual actions. Hence, such structural metaphors as POLICY OF LOVE IS A BIBLICAL PARABLE or POLICY OF LOVE IS THE MASS occur here. Of paramount significance is the fact that all commentaries that include religion as metaphor fulfil the function of irony. It is clearly presented in sentence (34) in which Stefan Niesiołowski, remarkable for his offensive comments on opposition politicians, is ironically described as a man distinguished by exemplary Christian character traits.

According to the commentaries above, the RELIGION metaphor has become a tool for political criticism used among politicians from opposition parties. In example (33), Marek Suski terms the *policy of love* as *new book of love toward your neighbour*, and compares it further to Kama Sutra. As a result, the sexual aspect is highlighted in the domain LOVE, which diminishes the spiritual one of the concept. In turn, in sentence (37), the Prime Minister is referred to as an *apologist*, which suggests that Donald Tusk defends his political vision. Presumably, the reason for that is the fact that this vision does not meet with public acceptance and the citizens expect reforms (35) but not the value declared. Moreover, example (36) implies that the concept LOVE cannot be applied to the government's policy since its primary task is to eliminate PiS from the political scene.

3. Conclusions

It seems that the introduction of the RELIGION metaphor to political discourse should have met acceptance of public opinion and political commentators. Nevertheless, making references to the concept LOVE has become a tool for irony and pointing the government's mistakes out. Surprisingly, none of the metaphors collected in the linguistic material indicate positive aspects of the government's activity. Perhaps, it is a result of high requirements put forth by the society, which pertain to moral and religious values, to be met by politicians. Yet, it does not change the fact that the word *love* is included in the Polish political language now and its meaning has evolved. At first, dictionary and semantic values of the concept were reflected in the

metaphor POLICY IS LOVE –– except that politician, voter and power were objects of political love. Furthermore, this metaphor was extended to the form of POLICY IS CHRISTIAN LOVE so as to refer to the Polish religious values. However, the semantic value of love turned out to be insufficient in politics and, as a result, was elaborated and partly enriched with certain elements of the concept WAR. Consequently, the metaphor POLICY OF LOVE IS WAR emerged. Besides, the word *love* used to be employed for the sake of irony and mocking at the politicians who had introduced it to political language. This is why it is now valued negatively if used in a political context.

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SUMMARY

This article presents the process of semantic transfusion of the lexeme *miłość* 'love' which was incorporated in political language, during last Polish parliamentary elections in 2007, and began performing new functions in the context of wielding power. The analysis of the linguistic material, excerpted from articles published in "Rzeczpospolita", proved that the word *love* has undergone gradual semantic evolution. Although the dictionary and colloquial meaning of the lexeme is realised in politicians' comments, the concept LOVE has been additionally enriched with elements of the concepts CHRISTIAN LOVE and WAR. Besides, the analysis shows that none of the expressions including the word *love* serves to describe positive aspects of the government's activity and, moreover, making references to love is a tool for irony. This research was conducted on the basis of cognitive semantics. Such tools as base, profile, conceptual amalgam and metaphor proved indispensable in the analysis and for drawing the conclusions.

Keywords: cognitive semantics, semantic transfusion, the conceptual amalgam *polityka miłości*, the *love* metaphor

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