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ΥΠΟΥΡΓΕΙΟ ΕΘΝΙΚΗΣ ΠΑΙΔΕΙΑΣ ΚΑΙ ΘΡΗΣΚΕΥΜΑΤΩΝ
ΕΙΔΙΚΗ ΥΠΗΡΕΣΙΑ ΔΙΑΧΕΙΡΙΣΗΣ ΕΠΕΑΕΚ



ΕΥΡΩΠΑΪΚΗ ΕΝΩΣΗ
ΣΥΓΧΡΗΜΑΤΟΔΟΤΗΣΗ
ΕΥΡΩΠΑΪΚΟ ΚΟΙΝΩΝΙΚΟ ΤΑΜΕΙΟ



Η ΠΑΙΔΕΙΑ ΣΤΗΝ ΚΟΡΥΦΗ
Επιχειρησιακό Πρόγραμμα
Εκπαίδευσης και Αρχικής
Επαγγελματικής Κατάρτισης

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ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΑΤΡΩΝ

ΤΜΗΜΑ ΦΙΛΟΛΟΓΙΑΣ

ΤΟΜΕΑΣ ΓΛΩΣΣΟΛΟΓΙΑΣ

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Μάρτιος/ March 2009



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Foreword

The 1st PICGL (Patras International Conference for Graduate Students in Linguistics) conference took place in March 2008 and was supported by EPEAEK II and University of Patras. The conference is organized once every other year by students of the graduate program "Comparative Linguistics and Language Variety" of the Department of Philology of the University of Patras under the scientific contribution and guidance of the Department's distinguished Faculty.

The conference is engaged into bringing together young researchers from all over the world, giving them the opportunity to exhibit their ideas in public and ultimately advancing the creation of an international network of young researchers.

The 1st PICGL conference was also honored by the presence of the following invited speakers: Alexandra Georgakopoulou (King's College London), Brian Joseph (Ohio State University), Eva Kehajia (McGill University), Io Manolassou (Πανεπιστήμιο Πατρών), Sergio Scalise (University of Bologna) και Neil Smith (University College London).

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Narrative and identity analysis: (Re)claiming identity claims with the small stories paradigm¹

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Abstract

This is a study of self- and other-identity claims such as ascriptions, assessments and categorizations in the classroom interactional data of female adolescent students of a London comprehensive school. The study follows an identities-in-interaction approach and attends to the occurrence of identity claims in stories of recent mediated interactions (e.g. on MSN, by text) between tellers and male suitors, which I collectively call small stories. In a narrative-interactional analysis of such claims in two small stories, I postulate a distinction between taleworld and telling identity claims that allows me to show how the sequential context of the claims has implications for their interactional uptake. I specifically focus on the contribution of identity claims to the stories' tellership rights and tellability. My main aim is to show how identity claims can be intimately linked with and discursively invoke solidified roles (cf. known, habitual) that hold above and beyond the local context.

KEYWORDS: identity claims: taleworld -telling, small stories, breaking news, solidified roles

0. Introduction

The importance of talk and interaction as a prime site for identity analysis is widely recognized in socially minded linguistic approaches. This goes hand in hand with a constructionist view of identities as not existing independently of communication but instead as emerging in specific communicative events. There, they are jointly (re)fashioned by interactants and are contextually bound: intimately linked, among others, with the local activity and the participants' roles and relations. From this point of view, the aim of *identities-in-interaction* research (e.g. see chapters in Androutsopoulos and Georgakopoulou 2003; Antaki and Widdicombe 1998) is not to get to the essence of who people are but to explore what they do being in specific interactions for specific purposes and through specific language choices. In other words, how identities become locally occasioned discursive projects that interrelate with language forms in indirect and mediated ways as opposed to one-

¹ An extended version of this paper has been published in the *Journal of Sociolinguistics* 12 (2008): 597-626. The research reported here was conducted for the ESRC-funded (Identities in Social Action Programme, www.identities.org.uk) project on Urban Classroom Culture and Interaction (UCCI). In addition to myself, the team comprises Ben Rampton (Director), Roxy Harris, Constant Leung and Lauren Small (all based at King's College London) and Caroline Dover (Westminster).

to-one correspondences. This emphasis on the constitutive role of language in social identities, coupled with the recognition that identities can be multiple, fleeting, and irreducibly contingent, has precipitated a shift of interest from category-bound research with a demographic basis, to practice-based research.

In the light of the above, numerous studies have set out to document the ways in which semiotic resources and details in the conversational management more or less subtly index larger social roles (cf. transportable identities, Zimmerman 1998). As a result, a focus on what is admittedly not common occurrence in conversations, that is, on explicit articulations of identities has been under-represented. This may be so on the basis that ‘what people can state is only a small part of what they know, do and are’ (Goodwin 2006: 20 quoting Shweder et al 1987).

Interestingly, this kind of *propositionalization* of identities forms the main object under scrutiny in identity analysis in social sciences: self-ascriptions are specifically initiated, elicited, scaffolded or questioned by researchers in interview contexts with the aim of investigating what kinds of purchase social identities such as gender, class, ethnicity have for individuals; also, what it is that individuals signal as being ‘continuous’ or ‘stable’ aspects of themselves; which social positions they see themselves as fitting in or departing from.

In this paper, I set out to explore self- and other-ascriptions of the kind that social science interview analysts tend to focus upon, what I call *self- and other-identity claims*. To do so, however, I align with the concerns and tools of the interactional research of semiotic resources that only implicitly serve as identity markers. I specifically recognize the importance of storytelling in the study of identity claims and I draw on a contextually sensitive apparatus in order to shed light on them as interactional resources. I also probe into the question of what kinds of insights such claims can give us for the tellers’ *solidified* (cf. known, habitual) roles, that is, roles that hold above and beyond the local context of their occurrence.

The point of departure for this analysis is the occurrence of self- and other-identity claims in the context of certain stories that routinely occur in the data. These stories typically involve recent or planned, imminent interactions, e.g. on MSN, on the mobile phone, between the female tellers and boys that they are interested in. As I will explain in detail below, following recent work (Bamberg 2004; Georgakopoulou 2006, 2007), I call these accounts *small stories* in order to highlight the interactional features that render them distinct in relation to the lengthy, monologic narrative accounts elicited in social science research interviews.

Below, I will examine self- and other-identity claims in the context of two small stories as narrative-interactional resources and, on the basis of this analysis, show their importance as markers of solidified roles. I will also postulate the distinction between *taleworld* and *telling* identity claims recognizing that the immediate sequential context in a storytelling event in which claims occur is consequential for their interactional management. Whether an identity claim is a taleworld or a telling claim also has implications for how it supports tellership and tellability. I will argue that identity claims are predominantly about physical

appearance and modes of conduct. Overall, I will show that the ways in which identity claims point to solidified roles are to be found in what the claims are about, how they are interactionally managed and what kinds of narrative plots they are part of.

1. Data and methods

This paper is based on data collected for an ESRC-funded project entitled UCCI (Urban Classroom Culture and Interaction), 2005-2008. The project employed the methods of ethnographic sociolinguistics. We focused on a group of 14 and 15 year olds in a comprehensive school in London and to collect the data we have employed participant-observation, radio-microphones, interviews, retrospective participant commentary on extracts from the radio-mic recording and video recordings. We also drew on school policy and media documents to set this in a wider context. The data collection involved two phases of audio-recorded data (180 hours in total), about one year apart, from five female and four male focal participants who were in year 9 in the 1st phase of the collection. The recordings covered three days of school on each occasion and included both classroom and playground recordings.

The data for this paper come from the audio-recorded interactions of one female participant whom we call Nadia. I have been focusing on Nadia and the other female students' conversations and interviews with the aim of exploring how they locally report (e.g. rework in small stories) their techno-popular-cultural media engagement, ranging from mobile phone calls, text-messaging to songs and soap-operas, PCs, internet, electronic games, fashion and body-care. I have also been documenting the kinds of narratives and meta-representations that participants draw upon when asked to reflect on this engagement and on other issues of analytical importance.

A profile of Nadia

When the recordings started, Nadia was 14 years old. Her home language is English and she describes her background as mixed race. Her mother is mixed race South African and her father is Armenian. On paper, Nadia is a 'gifted and talented' student, and somebody who finds it easy to get good marks without having to work too hard. Yet, in her interview, she claims that certain teachers 'are just ganging up on [her]' (l. 451) and that she finds school 'a bit boring'. As a result, she feels that she is 'kind of under-achieving' (l. 448) and not working to her 'full potential' (449). It is therefore not surprising that during class, Nadia routinely chats with her friends and frequently engages in a playful, tongue-in-cheek banter with the teachers. This is tolerated by them partly because she is a bright student and partly because she exerts a massive influence over her classmates. Chatting

with friends generally involves stories about boys, fashion talk and media references such as catchphrases from films or television programmes).

Fieldwork observations and the interviews with the participants clearly attest to a leading position for Nadia within the ‘popular’ girls’ group. It is telling that she too self-describes as the ‘queen of the class’. She also knows and socializes with people from other classes in Year 9. Shared music tastes seem to define the friendship network of the popular group but also shared attitudes to school (cf. Goodwin 2006: 78), i.e. which subject is boring or not, curricular and extra-curricular issues. The group varies in academic ability, but Nadia is one of the highest achievers. The other girls though look up to Nadia mostly for her popular culture engagement and knowledge, particularly in relation to music. This engagement is linked with her own aspirations and self-perceptions as somebody who likes ‘creative stuff’ (interview, l. 241) and using the ‘left side of her brain’. Nadia has been to a dance school, and wants ‘to be an actress’ (l. 700) or ‘do something in the media’ (l. 709). It is worth noting that Nadia emerged as the most prolific user of such references in Dover’s (2007) exploratory survey of techno-popular cultural media references employed in sixteen hours of radio-mic recordings of five of our focal participants, three female and two male.

Nadia’s status in relation to new media and technologies also seems to correlate with a certain access to the hetero-sexual market: there are notably no restrictions from her home as to spending a lot of time online and having a mobile phone, which apply to other focal participants. Nadia’s stories report access to technologies and media resources but also positions of popularity with the men she interacts with: she is the one who is contacted and texted, admired for her looks when she shares pictures on the web, and for whom boys like Stefan go ‘live on webcam’, as we will see in the data below.

2. Analysis

2.1 Two small stories about a ‘sweet talker’ and a ‘buff boy’

In recent work, we have proposed small stories (Georgakopoulou 2007; Bamberg and Georgakopoulou 2008) as an antidote to canonical narrative studies, a ‘new’ narrative turn that sets out to include certain under-represented activities in the focal concerns of narrative and identity analysis. We see small stories as an umbrella-term that captures a gamut of frequent and salient narrative activities in conversational contexts, such as tellings of ongoing events, future or hypothetical events,ⁱ shared or known events; also allusions to previous tellings, deferrals of tellings, and refusals to tell. These tellings are typically small when compared to the pages and pages of transcript of interview narratives. On a metaphorical level, the term locates a level and even an aesthetic for the identification and analysis of narrative: the smallness of talk, where fleeting moments of narrative orientation to

the world (Hymes, 1996) can be easily missed out on by an analytical lens which only takes fully-fledged stories as the prototype from where the analytic vocabulary is supposed to emerge.

Small stories can be about very recent or still unfolding events thus immediately reworking slices of experience and arising out of a need to share what has just happened. As we will see, I call such small stories of very recent events *breaking news*. Small stories can also be quickly and elliptically told to back up or elaborate on an argumentative point occurring in an ongoing conversation. Certain small stories may fulfil prototypical definitional criteria such as the temporal ordering of events but others do not (for a detailed discussion of the definition of small stories see Georgakopoulou 2007: ch 2). In all cases, the identification of small stories does not rest exclusively on prototypical textual criteria. Instead, small stories are seen as discourse engagements that integrally connect with what gets done on particular occasions and in particular settings. The claim is that recognizing 'narrativity' or a 'narrative orientation' in certain activities shows regard for situated understandings and makes the social consequentiality of interactional choices part of the analysis. In this respect, I share the view of mainstream narrative analysis that narrative is perhaps the most ubiquitous of speech events, a prime site for constructing self. Within interactional studies of narrative, this view is also shared by e.g. Ochs & Capps 2001: 2; Goodwin 2006: 209. This, however, gives the analyst more reason and urgency for not shying away from any moments of narrative proclivity in everyday environments.

To go back to the small stories of the data at hand, as suggested, these occur frequently in the classroom. On average eight small stories are launched within a period and they typically involve reports of recent mediated interactions with boys, e.g. on MSN, by texting. The sheer act of a boy making contact is tellable in these cases: it is the interaction (who said what and how) that therefore becomes the crux of event-ness in the reports. I more specifically call these small stories of very recent events *breaking news* and further classify them into:

- a) Reports of recent mediated interactions. The most frequent type of small stories in the data (episodically organized as we will see along the lines of 'he's like/he goes/says'; and 'I'm like/I go/say').
- b) Stories-in-the-making. This normally involves text-messages being read as they are received and being consequential for a future course of action.

In both cases, *breaking news* frequently leads to small stories of *projected events (projections)*: these involve (near) future encounters with the men-talked-about and are episodically organized interactions of 'I will say- s/he will say' type.

Breaking news and projections are often sequentially contingent, interspersed with references to shared events and they present thematic affinities. They also lead to thematically related 'second' stories. They thus resonate with Goodwin's (1997) 'family of stories' that were significant for the social group organization of pre-adolescent girls; also, with Schiffrin's 'intertextual stories' (2000), which were found to be a vehicle for meaning-making in the process of putting together a life story.

Small stories occur in the classroom data amidst other activities and in that respect they are in tune with people attending to many things simultaneously. They

are however clearly marked with certain framing devices (e.g. addressee-oriented questions such as ‘did I tell you?’, temporal adverbials such as ‘yesterday’, etc.). They also tend to become focal topics in that they are taken up again, if momentarily exited from (e.g. when students have to orient to the classroom agenda), with minimal marking. We can see how Nadia signals return to the story in the data at hand (see the Appendix) in lines 35-36 with the marker ‘anyways’ (cf. l. 261) and with locally subsequent reference ‘he’ (instead of full name, i.e. Adam) in locally initial position (cf. l. 208, l. 261): *anyways yea:h he text me yesterday*. This type of person reference ‘seeks to bring off continuity across an intervening hiatus’ and signals ‘resumed same spate of talk’ (Schegloff 1996: 452). In this way, the small stories in the data act as ‘continuing state of incipient talk’ (Schegloff and Sacks 1973), where the line of communication for telling remains open throughout the lesson and speakers can engage, disengage and re-engage with the story.

The data at hand comprise two interlocked breaking news stories both told by Nadia during a Maths period. The extended sequence of the stories can be found in the Appendix. The stories involve reports of mediated interactions with two boys/suitors the day before: the first story, which I call ‘Adam the sweet talker’, involves a reported texting communication between Nadia and Adam; the second thematically related story, which I call ‘The buff Stefan’, involves an MSN communication with a webcam appearance from Stefan. When telling the stories, Nadia sits at a small table in the back corner of the classroom with Lisa and Shenice. In the space of approximately eleven minutes, the first story is disengaged and re-engaged four times but remains focal.

As we will see below in detail, Nadia’s assessment of Adam as sweet talker at the end of the reported interaction (l. 79-80) leads to a negotiation between Shenice and her around the topic of falling for sweet talk during which two hypothetical scenarios (l. 94-95, l. 106-107) and two references to shared events (97-104, 117-121) are brought in by Nadia argumentatively (to refute Shenice’s claim that she does not fall for sweet talk). Breaking news frequently leads to projections, as suggested: in this case, the projection (l. 261-272) involves a planned face-to-face meeting with Adam. The second breaking news story (l. 295-372) is more sustained: as it reports a sighting (on the web-cam) of the man talked about, it typically unfolds in slow-motion, with a detailed description of the character’s physical appearance (and outfit) and past progressive verbs which stress the duration of the scene. To sum up, the stories introduced in this stretch of discourse are as follows:

- Breaking news I: ‘Adam the sweet talker’ [lines 1-13, 35-142, 207-227, 197-217]
- Hypothetical scenarios* [lines 94-95, 106-107]
- References to shared events* [l. 97-104, 117-121]
- Projection* [l. 261-272]
- Breaking news II (a ‘second’ story): ‘The buff Stefan’ [l. 295-372]

2.2 Taleworld vs. telling identity claims

Using the basic definition of identity as social positions/orientations about self (but also other), I classify as *identity claims* (in the context of small stories in the data) all self- and other- assessments/characterizations, ascriptions, attributions and categorizations. As we will see below, they are actor-focused inasmuch as they refer to personality traits (e.g. physical appearance, modes of conduct). They are also associated with likes and dislikes and with certain category-bound activities in plots, akin to membership categorization devices (Sacks 1992). Drawing on well-established distinctions within narrative studies between narrated text and narrative event (cf. telling and tale, e.g. see Bauman 1986), I have postulated a distinction, for analytical purposes, between taleworld and telling identity claims. *Taleworld identity claims* pertain to characters (either third parties or the teller as a character) in the reported events and are embedded in the narrative (inter)action (e.g. they may occur in reported speech): e.g. *he was looking so sexy* (l. 300). *Telling identity claims* on the other hand pertain to the interactional level of the here-and-now/ you and I of the local storytelling situation and either suspend the narrative action (reminiscent of external evaluation, Labov 1972) or serve as a follow-up/coda to the reported action: e.g. *I'm too smart for sweet talk* (l.131).

This distinction between two interrelated yet analytically separable aspects of identity claims resonates with previous studies in which character assessments (characterizations) within stories are recognized to be important positioning devices. A case in point is Bamberg's positioning model (1997; also see Bamberg and Georgakopoulou 2008), where how characters are positioned within the story in relation to each other and in space and time constitutes level 1; how the speaker/narrator positions oneself (and *is* positioned) within the interactive situation is level 2 of a three-step operation of analytically tapping into positions. From the interrelations between these two levels, we move to level 3, that is, positions that hold above and beyond the immediate storytelling situation and can be seen as solidified roles. These indicate how the speaker/narrator positions a sense of self that can be traced back to individual conversational moves, to discourses that are in circulation amongst the participants and/or to discourses that are called upon as not necessarily known ('master' discourses). Here too, we will show how taleworld and telling identity claims can provide a window into what may be habitual, tacitly accepted and known roles – but always locally occasioned. Taleworld and telling identity claims are indicated in bold and bold and italics respectively in the data in the Appendix.

As we can expect, most such claims (in fact, all of them in the second breaking news) are introduced by Nadia, as the main teller. In addition, telling identity claims are more frequent than taleworld identity claims (61.1% vs. 38.9%), which is typical not just of this sample but of our other data too. Elsewhere (Georgakopoulou 2008), I have discussed how identity claims are organized relationally, in contrastive pairs of positive and negative attributes; also, how his system of organization comprises hierarchies of attributes and thus (re)constructs notions of normative value agreed upon in the local network.

2.2 Identity claims as narrative resources

Below, I will show how identity claims support the main teller's rights to tell of the story's events and how they contribute to their tellability; also how they create opportunities for negotiation and co-construction between the interlocutors. In conversations, it has been shown that first assessments make a claim to epistemic primacy for the speaker (Raymond and Heritage 2006). We can extend this argument to the taleworld identity claims of the stories at hand. Such claims support tellership in the sense of experiential primacy. It is thus not accidental that in both breaking stories Nadia as the main teller is the one who produces all taleworld identity claims.ⁱⁱ

Telling identity claims on the other hand are normally produced in relation to a story's evaluation in the sense of local relevance of telling and of overall assessment of the characters talked about. They therefore set up spaces for co-construction between teller and interlocutors and a joint exploration of moral frames. We can see this in Nadia's question at the end of the reported texting interaction with Adam: *Do you fall for sweet talk?* (l. 82). This question immediately follows a telling identity claim (*he's so sweet*) and the dislike associated with it (*but I don't like sweet talkers*). This leads to a sequence of negotiation between Nadia and Shenice, which we will discuss below.

Identity claims also contribute to or undercut tellability. Taleworld identity claims in the stories at hand enhance tellability by reporting the positive or negative attributes of the male characters talked about. They thus play a pivotal role in stories which serve as occasions for (re)affirming and constructing the teller's positions in the heterosexual market. In Nadia's case, these are positions of popularity, as the one who is being pursued (e.g. contacted or texted by men that tend to be positively assessed). Such stories also serve as occasions for the joint exploration and (re)affirmation or contestation of normative models of heterosexual relationships. In the data at hand, the negotiation between Nadia and Shenice on the topic of falling for sweet talk is premised on an agreed implied norm that sweet talkers and falling for them are 'bad'. In this negotiation, identity claims become consequential for plots, allowing or disallowing certain future scenarios. For instance, Nadia's proclamation *I'm too smart for sweet talk* (l. 131) at the end of the negotiation puts a particular interpretative spin on the previously reported events. It indicates that, in a market in which Nadia has got multiple suitors, prospects of a relationship with somebody who says the wrong thing are slim. Comparably, in the projected meeting with Adam (l. 261-272), Lisa attempts to allow for the scenario in which she will be joining Nadia at the meeting by bringing in the identity claim of a little white girl. The taleworld identity claim 'I'll act like I'm a little white girl' (l. 267) is mobilized here by Lisa to disallow the scenario of Stefan liking her and, instead, to allow for her to join Nadia at the meeting.

In addition, identity claims may be confirmed or refuted by prior (shared) experiences and may be qualified as a result. This in the interactional sequence between Nadia and Shenice on the topic of falling for sweet talk. Lisa's qualified negative answer (*not really*, l. 85) to Nadia's question '*Do you fall for sweet talk?*' (l. 82) prompts Nadia to specifically address Shenice, probably by turning her head

towards her at the same time as uttering the exclusive '*Do you?*' (l. 86). There must be some kind of a non-verbal cue in the place of a 'no'. This is a dispreferred response: the preference for agreement in type-conforming questions is well attested to (see Raymond and Heritage 2006). Nadia picks up on this non-verbal cue of a negative answer and as a result goes on to say '*don't lie to me Shenice*' (l. 87).

Accusations such as this (*don't lie to me Shenice*) make relevant a denial or some type of counter-claim by their recipients (Goodwin 2006: 118). In this case, this takes the form of an extreme case formulation (l. 96 *I've never said that to you*; Pomerantz 1986) from Shenice, after Nadia has brought in one hypothetical scenario in order to back up her accusation:

(1)

94 N: if a brere says one nice thing to you you're like
 95 ((high pitched)) >oh he's so sweet he's so lovely<
 96 S: I've never said that to you

Extreme case formulations lend themselves easily to refutation by a single reference to one exception and in this way they are 'factually brittle' (Edwards 2000). In this case, Nadia responds to it by moving from the hypothetical to the actual, thus bringing in one narrative incident (98-100), which she presents as shared memory with Lisa (*like remember you called me*). A second extreme case formulation (l. 112 *cos a brere has never said something sweet to me*) by Shenice is also a response to a hypothetical scenario brought in argumentatively by Nadia. The extreme case formulation in l. 112 is met by yet another accusation from Nadia (l. 113 *don't lie*), which repeats that of l. 87 (*don't lie to me Shenice*). This leads to a reformulation by Shenice (l. 116 *Not that I can remember*). Having qualified her claim, Shenice opts out of elaborating on how the incident referred to by Nadia was different and does not respond to Nadia's (slightly qualified) restated initial question: 'do you fall for sweet talk on a level?' (l. 127-128 above). This may be heard as backtracking on Shenice's part. Indeed, Nadia hears this silence as a transition relevance point and, after a rather long pause (8 seconds in l. 130), she shifts from Shenice to her own point of view on the topic. She does this by means of the telling identity claim 'I'm too smart for sweet talk' (l. 131) which we will discuss in more detail below.

2.3 Identity claims as interactional resources

In this section, I will show how identity claims are drawn upon as interactional resources, in order to justify, defend, or challenge a point of view. In similar vein, I will argue that tellers of identity claims do not always wholeheartedly subscribe to the claim made but at times they may playfully invoke it and distance themselves from it. I suggested above that telling identity claims often become the object of negotiation and contestation amongst the participants. This may be so because they tend to be invoked accountably, that is, so as to justify either another claim or a selected course of action in the taleworld. For example, 'I am too smart for sweet

talk' (l. 131) justifies Nadia's previously stated dislike of a telling identity claim (l. 80 *I don't like sweet talkers*). In similar vein, tellers tend to defend their self-identity claims in cases of challenges. In this case, Nadia insists on her claim that she is too smart for sweet talk (l. 138 *No seriously I AM*) as a response to Shenice's laughter (l. 132 *ha ha ha*) that is heard as undercutting it.

There are also cases, however, when the tellers do not wholeheartedly identify with the identity claims they make but instead over-perform, play with and ironicize them. We can see this in the case of the identity claim *I am a little white girl*. Its first mention illustrates the accountable uses of identity claims, as discussed above. Specifically, Lisa uses it to justify why she does not know the tune *Make it vibrate* that Nadia is singing (l. 150). Thereafter, the claim remains focal throughout this stretch, entering the story of projected events, as we will see in excerpt 11 below. However, my contention is that, in contrast to 'I'm too smart for sweet talk', 'I'm a little white girl' is not to be taken at face value, that is, as a statement that Lisa fully subscribes to. Instead, it presents a double-edginess throughout. On the face of it, it is not a refuted claim: Nadia's denial, 'you are not white, you are black' (l. 161-162), is keyed as non-serious, as evidenced by the accompanying laughter. It is also contradicted later on: You are a little white girl, l. 268. The claim is also supported by a telling of shared events (l. 273-280) which provides purchase for the trajectory of this self-claim, showing that Lisa 'being white and not black' has at times been focalized in the friends' interactional history:

However, there also seems to be a knowing allusiveness in 'I'm a little white girl'. First, it is uttered by Lisa in a stylized way (i.e. keyed as non-serious, jocular), accompanied by a shift in tone of voice and laughter (e.g. l. 284 in excerpt 10 below). It also co-occurs with 'stock-phrases' in Nadia's group that are uttered in either stylized posh accent or in stylized American English (l. 289 *shut up*, l. 290 *but no*, l. 291 *you're so funny*):

(2)

- 282 N: It was hilarious (.) I was laughing
 283 hhhhhh ((in American accent)) she didn't find it funny though
 284 L: I don't find anything funny (.) I'm a little white girl hhhh
 285 N: Could you stop saying that ple:ase? just cos you're white
 286 doesn't mean that you're stupid or anything
 287 L: Being a little white girl is so funny sometimes
 288 N: (3) ((stylized American)) is it me or is my leg vibrating
 289 L?: Is ((stylized American)) is it me or just shut up
 290 N: ((stylized posh accent)) but no
 291 L: ((laughing)) you're so funny
 292 ((gasping)) (I'm a loner)
 293 N: You said it ((sings)) *make it make it vibrate* 23.08

In addition, the more the associations of the claim are unpacked, the more its negative force is cancelled out. For instance, Lisa distances herself from the claim

by shifting from 'I am a little white girl' to 'I'll act like I'm a little white girl' (l. 267). Nadia picks up on this distancing and reinstates the claim (l. 268). Whether she orients to both the skin colour and the cultural capital that 'little white girl' evokes is unclear in this case. However, in l. 270, she mitigates what is perceived as negative about the claim by referring to Lisa's looks. Further down (l. 285-286 in excerpt 10 above), Nadia explicitly disassociates *white* from *stupid* (in the sense of not plugged into certain kinds of music, 'un-cool'): *Could you stop saying that please? just cos you're white doesn't mean that you're stupid or anything*. In response to this, Lisa herself also qualifies the negative associations of 'I'm a little white girl': 287 L: *Being a little white girl is so funny sometimes*.

What the above suggests is some kind of over-performance going on, a playful allusiveness to the participants' shared knowledge that there are competing discourses around the claim: on the one hand, as borne out by the playback session too of these data with the participants, 'white' is associated with lack of symbolic capital and access to or knowledge of certain techno-popular cultural resources (in this case, music). On the other hand, this association knowingly inverts the skin colour hierarchy that also circulates in the local network. As we have seen in the identity claims of the second breaking news story (l. 261-372), having a 'light skin colour', like the male character Stefan, particularly if this is associated with blue-eyes, is considered to be a positive attribute on men (and in other cases in the data, women too).

3. Identity claims and solidified roles

Uncovering some kind of continuity of self (i.e. stable and habitual aspects that hold above and beyond local contexts), even if multiplicities and contradictions are allowed, remains central to any identity analysis project. To this, the identities-in-interaction inquiry has raised serious objections by stressing the irreducible contingency and the discursive emergence of self. At the same time however, there has been a recent turn towards a more moderate and conciliatory position of documenting habituality in constructions of self and other, while staying committed to fine-grained language-focused analysis (e.g. Wetherell 2007, Wortham 2006). Within this turn, continuity in self-construction tends to be sought on the intersection between ethnographic methods and analyses of patterns across data. The former provide access to what the participants routinely orient to as stable aspects of themselves and others. The latter allow the analyst to identify certain semiotic resources that recurrently serve as markers of self and other.

In the same spirit as the above research, I began this paper with the aim of finding out what kinds of insights into solidified roles the analysis of identity claims in small stories affords us. As this sort of analysis shies away from any deterministic, *a priori* assumptions about people's identities, it needs to be made clear that solidified roles are not seen as static and context-independent self-definitions. Instead, solidified roles offer 'glimpses' of identities that may have some kind of constancy for the participants. Constancy refers to habituality and resonance for the participants (e.g. 'I can identify with this self-description') as well as to sharedness and recognition (e.g. 'People who know me well recognize this self-description').

On the basis of this paper's analysis, I argue that identity claims, even if always locally occasioned, are not necessarily ephemeral self- and other-ascriptions that occur only once. Instead, they often are recurrent ascriptions that have been uttered before and are recognized as such. In those cases, we can claim that identity claims are closely linked with solidified roles: they call upon them and are shaped by them. In fact, the narrative-interactional analysis of the identity claims in the two small stories at hand allows us to take one step further and suggest that there are three interactional features that contribute to identity claims acting as markers of solidified roles: iterativity, narrativity and stylization. The more these features are at play, the more an identity claim refers to an aspect of self or other that is solidified.

Let us take each feature separately. As noted by previous studies (e.g. Wortham 2006), recurrence, what I call here *iterativity*, of certain semiotic resources, in this case, of identity claims, is highly suggestive of solidified roles at play. In my analysis, iterativity includes not only recurrence (over time and across data) but also habitual formulations (e.g. by means of a closed set of lexical choices) and associations such as the ones we saw above. To be specific, the positive and negative self and other attributes expressed in slang lexis (e.g. 'buff', 'cris', 'butters') were frequently used in stories not only in the first phase of the data collection, but in the second phase too (one year later). Similarly, the frequently used identity claims presented a certain constancy in terms of lexical formulations: e.g. 'little white girl' was always uttered in the data as one prosodic unit and was not decomposed into e.g. 'little girl' or 'white girl'.

Iterative identity claims call upon and form evidence for the participants' shared *interpretative repertoires*, defined as 'systems of signification and building-blocks used for manufacturing versions of actions, self and social structures in talk' (Potter and Wetherell 1995: 85). Interpretative repertoires constitute 'available resources for making evaluations, constructing factual versions and performing particular actions' (idem). These shared systems of meaning making can be assumed to be traceable to the systematic recurrence of identity claims in certain discourse *practices* in certain sites; in this case, small stories amongst friends during the school lesson. The assumption here is that any self- and other – identity claims are inextricably linked with the social relations at play and the fact that they appear in the context of telling small stories, indeed, a specific type of small stories.

Identity claims also invoke solidified roles by drawing on lived/shared experience. In fact, they are often traceable to or accountable for within stories of shared events. We saw an example of this in the case of 'I am a little white girl' and the reference to the shared event of Nadia giving Lisa a makeover with 'brown people's foundation' (l. 270-280). This jointly constructed story shows that the identity claim in question has, if anything, been circulating in the group and become part of their interactional history. The same applied to Shenice's claim that she does not 'fall for sweet talk', which, as we saw, was challenged by Nadia with references to shared events (l. 97-104, 1170-121). In both cases, identity claims presented *narrativity*, that is, they had become part of emplotment scenarios (ready-made experiential packages), which could be invoked argumentatively. This

tends to have implications for the uses of identity claims as negotiation devices in local contexts and the extent to which they can be contested, by whom, and how. In a previous study, identity claims and other social positions that were frequently employed in stories of shared events were found to be less contestable than more ephemeral claims (see Georgakopoulou 2007, ch. 4). This is not to be taken as a deterministic finding. Instead, the suggestion here is that from the moment identity claims enter shared emplotment scenarios in a close group's interactional history, they tend to become more crystallized and tacitly accepted.

A third interactional feature of iterative identity claims in the data is that of *stylization*. This refers to crystallized or formulaic phrasing (cf. 'iterative and quotable fragments of language'; Coupland 2001: 345), allusive and with the potential of playful engagement. As both Rampton (1999) and Coupland (2001) have argued, stylization involves exaggerated and performance-oriented quotations of voices that introduce shifts to codes other than the one of the surrounding talk. In the data at hand, 'I am a little white girl', for instance, tends to be uttered in an American accent or a baby-like intonation. In addition, as we have seen, it co-occurs with other stylized phrases (e.g. *oh shut up*). Stylizations have been found to act as indexical resource (ibid) by being conventionally associated with certain types of people, activities, social groups and situations.

In the light of the above, we can say that through habitual engagement (iterativity) in similar practices, participation in plots (narrativity), and formulaic uttering (stylization), certain identity claims can become part of a *rehearsed self*. This involves a more or less strategic and agentive deployment over time of more or less reflected upon, tried out and experimented with positions (versions of self). In other words, it is in those continuous and repetitious engagements that we can begin to get a sense of a habitus (plural) that then becomes the source for a continuous sense of who people are – a sense of a person as 'same' in spite of continuous change. Put differently, the actual "work" that is being conducted by individuals in interactive engagement with identity claims in the telling of small stories can feed into a sense of self – in the form of a continuous process within which this sense comes to existence (emerges).

We can present the above schematically in Table 2 below. The left column summarizes (in no particular order) the three interactional features of identity claims in small stories (i.e. iterativity, narrativity, stylization) that act as pointers to solidified roles. The middle column shows the links of these features with the interlocutors' (shared) models of meaning making in local contexts. Finally, the right hand side column shows their links with the production of social life. These interrelated processes should not be seen as linearly connected but as mutually feeding and multiply associated. It is my contention, however, that there are closer links to be found horizontally in the diagram below than vertically.

| INTERACTIONAL FEATURES | MODELS OF MEANING MAKING | PRODUCTION OF SOCIAL LIFE |
|------------------------|----------------------------|---------------------------|
| Iterativity | Interpretative repertoires | Practice(s) |
| Narrativity | Emplotment scenarios | Historicity |
| Stylization | Indexicality | Rehearsed (versions of) |

| | | |
|--|--|------|
| | | self |
|--|--|------|

Table 2: Identity claims as solidified roles

4. Conclusion

Drawing on classroom-based data from a London comprehensive school, I have attempted to establish links between identity claims and the telling, tellers, and tellability of small stories in which they routinely occur. I have also delved into the habituality and tacitness of the versions of self and other that these claims support and are shaped by. To do so, I have closely attended to the relation of the identity claims to the stories' sequential unfolding (i.e. as taleworld vs. telling identity claims).

The analysis showed that it was not only the occurrence of the identity claims in the current story that was of significance but also their narrativity in a more general sense, that is, their belonging to a history of shared events. Claims were supported or challenged by references to such shared events. As such, they supported tellership rights but they also opened up spaces for a joint exploration of normative notions of what constitutes an agreed upon list of attributes (positive and negative, having to do with what one does and says) in heterosexual relationships. From this analysis, I abstracted iterativity, narrativity and stylization as the three main interactional features through which identity claims invoke and are based on solidified roles. In turn, I argued that each of those processes intimately linked with certain patterns of interactional management and intersubjectivity amongst the participants, having to do with models of sharedness (interpretative repertoires – emplotment scenarios – indexicality); also with the production of social life in time and space (practice – historicity – rehearsed versions of self). I posed those interrelations as dynamic and mutually feeding as opposed to being linearly connected and immovable.

As suggested, the study of identity claims tends to fall within the remit of social science interview research. In this paper, I adopted an interactional perspective in order to identify a range of analytic tools for explaining how participants bring in self- and other- ascriptions within stories-in-interaction, which should however be of relevance for narrative interview research as well. Here, I will single out certain points of intersection between the interactional management of identity claims and social identities, as those have emerged from our analysis. These, I believe, can constitute relevant domains for narrative interview research too.

The first has to do with well-rehearsed arguments in the literature (e.g. Potter and Hepburn 2005 for a recent example) according to which all interview data should be treated as interactional data. As we have seen in the analysis, when participants bring into their practical activity self and other identity claims, they still locally occasion them; in other words, they mobilize them in support of interactional projects. This suggests that the commonly found emphasis within narrative interview research on the representational aspects of the stories and the claims in them (cf. Atkinson and Delamont 2006) may be overstating them as self-construction resources as well as skewing the ways in which they are intimately

linked with the interview as talk-in-interaction. We have seen here that identity claims are integrally connected with the local interactional context in which they occur and should therefore not be taken as unmediated or authentic records of self.

The second notable feature of the identity claims studied here is that they predominantly involve 'others' (which, in turn, normatively implicate self). This suggests that the excessive emphasis on stories and statements about self in interview situations underestimates the wealth of identity work done when the focus is on characterizations of others.

As we have seen, identity claims draw irrevocably on lived/shared experience and have a historicity that can be contested or accepted. This is normally obscured in interview narratives, where primacy is given to the single event and the researcher's extrapolation of dominant discourses at play from that event.

Finally, the approach of this paper recommends a shift from the 'big' identities (e.g. ethnicity, class, gender) to their co-articulations and mediations by the participants' focal concerns at a particular point in their lives. It must be recognized that participants can talk about big identities in more or less explicit ways, in other words, that propositionalization is not an all or nothing issue. In this case, we saw an emphasis on actor-focused claims that apprehended race and gender rather than explicitly stating them. Perhaps more importantly, we saw those claims being mediated by and subservient to the participants' focal concerns. These had to do with heterosociability and heterosexual relationships as those were informed by communication technologies and the possibilities they afford for the (re)formation of interpersonal relationship.

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Appendix

Period 1 Maths: 8.55-9.40am

The extract begins five minutes after Nadia has entered the classroom. Nadia sits at a small table in the back corner of the classroom with her friends Lisa and Shenice (her best friend Laura is not in the lesson). The girls are supposed to be doing their maths coursework but Nadia has been talking about her looks, stating that she will never be able to be a model because she is not the correct weight and has a bump on her nose. They then share some snacks as Nadia compares Harry Potter's eyebrows with those of a character from the television programme 'The OC'. As Mr O'Cain begins the lesson, Nadia launches the small story about Adam texting her the previous day.

Participants: N: Nadia, L: Lisa, S: Shenice

Taleworld Identity claims are in bold. Telling identity claims are in bold and *italics*.

Transcription conventions:

| | |
|--------|---|
| // | the point in a turn where the utterance of the next speaker begins to overlap |
| = | two utterances closely connected without a noticeable overlap |
| () | speech that can't be deciphered |
| (text) | analyst's guess at speech that's hard to decipher |
| (()) | stage directions |
| (.) | micro-pause, not timed |
| (1.) | approximate length of a pause in seconds |
| .. | emphasized speech |
| > < | faster than normal speech |
| :: | extended speech |
| ? | rising intonation/question |

- 1 N: ((excited)) oh: Adam text me yesterday 12.31 mins ((into the lesson))
2 d' you know what he said:?=
3 L: = Re:ally?
4 N: he was gonna come and see me (.) yesterday
5 Mr O: Fo:lks you haven't got time to talk
6 N: and then I says why didn't you?
7 he was like (.) cos I got lost
8 he said (.) I was gonna come down to your school
9 I was like hh ((high pitched))
10 and you never come becau:se↑
11 he's like (.) I didn't know where I was going
12 > I was like< ((high pitched)) **oh::: you're so lovely**
13 I love you (.) oh my Go:d 12.52

In the interim, Nadia asks Mr O’Cain for the equipment she needs to begin her coursework. When asked by Lisa (and Shenice?) to help them with their coursework, she (jokingly) refuses to do so by saying ‘you’ve got to work it out for yourselves’. As the girls are trying to do that, she hums the tune of a song called ‘Make it Vibrate’. She then returns to the story about Adam, in a whispering voice.

14.49 mins

35 N: Anyways yea:h
36 he text me yesterday h-
37 oh yeah (.) I didn’t forget my phone by the way
38 (6) ((taking phone out?))
39 he text me
40 I don’t know
41 (6) ((going through messages?))
42 Yeah he said (.)
43 Mr O: ((taking register)) Laura
44 N: ((locating text))Here
45 Mr O: Habibah
46 N: I goes to- he text me
47 and I said to him
48 wait (.) this is how the conversation went
49 he text me and he was like hey (girl)
50 let me know when you get this
51 >I was like< who the fuck is this?
52 Mr O: Lisa
53 L: Yes sir
54 Mr O: Otis
55 N: He goes hey girl
56 how are you doing
57 hope you’re all good
58 was gonna try come see you today
59 and I was like
60 Mr O: //Shenice
61 N: //who’s this?
62 S: Yes sir
63 N: he’s like you forgot me already (.) it’s Adam
64 and I was like (.) oh I didn’t have your number saved
65 and he goes (.) I gave it to you yesterday (boo)
66 how was your day?
67 and I was like (.) >it was alright<
68 and then he’s like-
69 I go why didn’t you come?
70 and he goes didn’t know where I was going //but I
71 Mr O: //Nadia
72 N: might come next week
73 ((louder))yes sir
74 he said he’s gonna come next week
75 to see me
76 I was like YE:S!
77 (4) ((reading text)) yeah just cochin now

78 dad was on it (.) I miss you still
79 *o:hh he's so sweet*
80 ((shift in tone)) *bu:t (.) I don't like sweet talkers*
81 (2)
82 do you fall↑ for sweet talk?
83 L: hmm↑
84 N: Do you fall for sweet talk?
85 L: Not really
86 N: Do you?
87 don't lie to me Shenice
88 that is=
89 ?: shh::
90 N: =breeze
91 ((laughing)) that's rubbish
92 you do
93 L: (how do you spell multiples?)
94 N: If a brere says one nice thing to you you're like
95 ((high pitched)) *>oh he's so sweet he's so lovely<*
96 S: I've never said that to you
97 N: Oh yes you have
98 like if you get chirpsed on road
99 like remember you called me
100 to tell me 'bout that time you was with Laura
101 L: (how do you spell multiples?)
102 N: Me um:- wait let me write it down
103 S: I didn't say they were (*lovely*)
104 I said *they were butt ugly*
105 N: Yeah I know but like
106 if a brere says something sweet to you
107 you think *he's lovely*
108 Mr O: ((background)) you're doing your (coursework)
109 you didn't even bother to bring your basic equipment
110 how can you do your work properly?
111 S: I don't know
112 cos a brere has never said something sweet to me
113 N: don't lie
114 S: I swear to God=
115 N?: =sure
116 S: Not that I can remember
117 N: Dan said he loved you
118 that's sweet=
119 S: =(that's) different
120 N: How is it different
121 S: It's different
122 N: (Okay)
123 ((referring to food the girls are sharing)) give me some
124 more please (.) they taste good
125 (11) ((Nadia eating))
126 but innit?
127 do you fall for sweet talk
128 on a level?

129 S: ()
 130 (8)
 131. N: *I'm too smart for sweet talk*
 132. L: ha ha ha
 133. N: What d'you mean ha ha ha?
 134. *I AM*
 135.? mm↑ mm↓
 136.N: huh↑
 137. ? : mm↑ mm↓
 138. N: *No seriously I AM*
 139 breres are like
 140 **ah you're the best thing** I've seen in Kilburn all day
 141 is it re:ally? ((laughs))
 142 how many other girls have you said it to so far? 17.33
 143 (6)
 144 N: ((singing a tune)) *make it make it vibrate*
 145 do you like that tune?
 146 S: No
 147 N: *make it make it vibrate*
 148 L: I've never heard of it
 149 N: Ok
 150 L: *I'm a little white girl*
 151 N: So what *if you're white* (.)
 152 that doesn't mean you don't kno- you can't know
 153 you know you know some music
 154 //because *you're white*
 155 L: *//little white girls like me*
 156 don't know a lot of things //()
 157 N: //you know cos just cos
 158 you probably don't like them kind of music innit
 159 L: ((sarcastic tone)) no >it's cos<
 160 *I'm a little white girl=*
 161 N: *=you're not a little white girl*
 162 *you're black* >ha ha< and it's not cos you smoke too much
 163 cos you don't smoke (.) 18.15

Mr O'Cain asks the class to be quiet. Nadia continues to whisper to Lisa about the Government's plans to stop people smoking. She and Lisa debate whether they Government will be able to achieve their target. Lisa tells Nadia her mum smokes.

207 N: but still 19.53
 208 and he was like I'm gonna come see you next week
 209 I was like ((high pitched)) yea:h!
 210 and I was like-
 211 I was talking to this next boy Lee who knows him
 212 and he's like ((deeper voice)) ah
 213 he's like to me (1)
 214 oh (.) how (.) he doesn't-
 215 ((low voice)) I said to him
 216 but he won't like me yeah if we link

217 and he goes 'how d'you know that'
 218 I said beca::use-
 219 he goes why d'you think that
 220 >and then he goes< um
 221 if you say it's because of your looks yeah
 222 ((smile voice)) I'm gonna slap you
 223 seriously cos I know it's not
 224 I was like- .hh
 225 (.) yeah but it IS
 226 he's like no >no no no no<
 227 I don't think so 20.27

Lisa changes the subject back to the coursework task by criticising (Shenice?) for doing something incorrectly. She refers to a scratch on her face which leads the girls onto the subject of Lisa's cat. Nadia muses over how much time there is before the lesson ends.

261 N: Anyways yeah (.) he's like (.) 21.52
 262 he wants to come and see me
 263 but I would say yeah you can come Lisa
 264 but you can't
 265 L: Why:
 266 N: Because he'll like you instead
 267 L: **Well I- I'll act like I'm a little white girl ()**
 268 N: **You are a little white girl**
 269 L: Exactly:: gosh
 270 N: **Yeah but you're a pretty white girl**
 271 L: Look (.) you can do the make up on me you did at my house
 272 **then he won't like a pretty bla- little white girl**
 273 N: ((laughs)) I swear down **this girl she's so funny**
 274 she goes to me do my make up please
 275 so I done it yeah (.) **I made her look like a clown**
 276 ((laughing)) I put yeah (.)
 277 brown people's foundation on her ((slaps table twice))
 278 I made her wash it off though
 279 then I put like this thick black stuff on her eyes
 280 It was so: funny
 281 L: **She's so deep**
 282 N: It was hilarious (.) I was laughing
 283 hhhhhh ((in American accent)) she didn't find it funny though
 284 L: I don't find anything funny (.) **I'm a little white girl**
 285 N: Could you stop saying that ple:ase? **just cos you're white**
 286 **doesn't mean that you're stupid** or anything
 287 L: **Being a little white girl (is so funny sometimes)** 22.50
 288 N: (3) ((stylized American)) is it me or is my leg vibrating
 289 L?: Is ((stylized American)) is it me or just shut up
 290 N: ((stylized posh accent)) but no
 291 L: ((laughing)) you're so funny
 292 ((gasping)) (I'm a loner)
 293 N: You said it ((sings)) **make it make it vibrate** 23.08
 294 ? ()

295 N: Anyways Shenice 23.18
 296 yeah oh m-
 297 ((excited)) oh my God oh my God
 298 ((muffled)) Oh my God
 299 Stefan yeah? he went on webcam for me
 300 ((high pitched)) **he was looking so sexy**
 301 () **my man's light skin** yea:h?
 302 >he got cane-row and everything<
 303 **he IS** ((excited whisper)) **buff!**
 304 he went on webcam for me yesterday yea:h?
 305 **he was lookin' cris**
 306 >and I was like< blood
 307 ((stylized)) **he was looking some kinda sexy**
 308 >I was like< >quack quack quack<
 309 ?: ((giggling))
 310 N: An' his eyes look blue you kno:w
 311 cos he was wearing (.) dark blue
 312 and um: (.) silver
 313 **and he's mixed race**
 314 **nice colour mixed race** >wait<
 315 (2) there's no one in our class
 316 **he's like (.) a little bit darker** than Madeleine yeah::
 317 **and (.) nice smooth skin** everything
 318 no //spots (and like that)
 319 L: //tall- taller than you?
 320 N: No
 321 L: Smaller?
 322 N: yeah //he's
 323 L: //Taller than me?
 324 N: He's five- seven
 325 L: Taller than me ok (.) //()
 326 N: //listen and he's and he's
 327 I goes to him I goes- um=
 328 L: =if you give him my email address
 329 ?: No=
 330 N: =NO:
 331 L: Why::
 332 N: He's got Madeleine's you know
 333 L: Why Madeleine's?
 334 N: ((hushed)) because **Madeleine's butters**
 335 and he doesn't like her
 336 L: Why not me?
 337 N: **Cos you're too pretty**
 338 you'll take him away from me
 339 L: No I wo:n't
 340 because I'm never online ((laughs))
 341 N: ((laughing)) that's true
 342 cos your sister's always on
 343 L: NO:!
 344 N: Well she's on when you wanna go on

345 and she turfs you an' things
 346 L: Oh my go:sh! I've got these leather shoes-↑
 347 N: Yeah anyways (.) and // um ((laughs))
 348 S: Sha//::me=
 349 N: ((laughing)) =I haven't finished
 350 and then he goes-
 351 and I goes to him (.) what colour are your eyes? yeah
 352 cos his- cos he was wearing blue↑
 353 his eyes looked blue
 354 >and I was like< what colour are your eyes?
 355 he was like (.) blue
 356 no I'm joking ((laughs))
 357 the camera just makes them look blue
 358 >I was like< oh seen
 359 L: (right) what colour are his eyes?
 360 N: They're just brown
 361 but *he's so nice* (.) I was like
 362 ?: (He::)
 363 N: and I was like (.) he's like to me (.) he's like to me
 364 **hey beautiful** when I came online
 365 I was like ((high pitched)) ahh:::~::~
 366 I don't like it when brere's say
 367 **you're buff or you're choong** it's-
 368 (.) when they say **you're beautiful::**
 369 or **you're gorgeous::**
 370 or **you're stunning**↑
 371 or something like that
 372 it's just better

25.02

How Is *NC₀ Satisfied in Standard Modern Greek?

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1. Introduction

According to Optimality Theory (OT), which was recently articulated (Prince & Smolensky, 1993, McCarthy & Prince, 1993a, b), each and every language form surfaces as the ‘optimal’ candidate, the one with the least possible violations of the conflicting markedness and faithfulness constraints concerning the relevant phenomenon to this form. Markedness constraints refer to the universal tendency of the languages to avoid marked forms, whereas faithfulness constraints concern the universal preference of the languages to remain ‘faithful’ to the underlying form without changing it. Since the ranking of the constraints involved in a phenomenon differs from language to language, the ‘optimal’ and thus surfacing form is different in each language, even though the constraints involved are usually the same. The same set of constraints for a phenomenon relates to the idea of innateness and Universal Grammar.

One known and well-studied markedness constraint in Optimality Theory framework is the so called *NC₀ markedness constraint which is defined as “No nasal/voiceless obstruents sequences” (Pater, 1999, 2001). This constraint expresses the typological pattern that sequences of nasal/voiceless obstruents (NC₀) clusters are universally disfavoured. Furthermore, the constraint is phonetically grounded, since a NC₀ sequence requires an unnaturally quick velar closure to be produced, whereas when a voiced obstruent follows the nasal, the raising of the velum occurs gradually and thus, more easily (Huffman, 1993). The fact that this constraint is asymmetrical, meaning that the cluster C₀N is not disfavoured, can be explained based on the Zuckerman’s (1972) finding that “the velum can be lowered more quickly and with greater precision than it can be raised”. The *NC₀ constraint is also supported by evidence from first language acquisition such as the later emergence of NC₀ clusters in children’s speech in English (Smith, 1973), Greek (Drachman and Malikouti-Drachman, 1973) and Spanish (Vogel, 1976).

According to OT, a NC₀ sequence such as /NT/ can be satisfied by violating one or more different (faithfulness) constraints. Thus, one of the following repair strategies can be observed:

a) /NT/>[ND] Postnasal voicing by violating the faithfulness constraint of IdentVoi which is defined as “correspondent obstruents are identical in their specification for [voice]”.

b) /NT/>[T]: Nasal deletion by violating the faithfulness constraint Max-IO that disallows the deletion of a segment, defined as “Input segments must have output correspondents”,

c) /NT/>[TT]: Denasalization resulting in gemination by violating the featural identity constraint, Ident-I>0:[F]: “Any correspondent of an input segment specified as F must be F”. Under this definition, nasal fusion does not violate it and it can be optimal under specific ranking.

d) /NT/>[N]: Fusion/nasal substitution by violating Uni-IO defined as “No element of the output has multiple correspondents in the input”, according to Pater (1999, 2001). According to Kager (1999), nasal substitution results by violating the constraints of Featural Identity (“Any correspondent of an input segment specified as F must be F”) and Lin-IO (Linearity), defined as “S1 reflects the precedence structure of S2, and vice versa”, where S1 and S2 are the input and output strings respectively.

Even though the ranking for NC₀ forms involves two more faithfulness constraints that can be violated, there are no strategies using these constraints. Metathesis could be one repair strategy by violating only Lin-IO. Epenthesis also could be a strategy that is not attested in any language; the optimal candidate would violate the Dep-IO constraint defined as “No epenthesis: Output segments must have input correspondents”.

e) When a language uses two different strategies to satisfy a constraint, then it is mentioned as a type of “conspiracy” (Pater, 1999, 2001, Kager, 1999). For example in OshiKwanyama (Steinbergs, 1985, as cited in Pater), a western Bantu language spoken in Africa, it can be observed the application of post-nasal voicing root-internally, while fusion/nasal substitution applies across the prefix-root boundary.

The present paper discusses how the *NC₀ markedness constraint is satisfied in Standard Modern Greek (SMG), where a case of conspiracy is observed. The repair strategies followed are also studied and which constraint ranking results in the surfacing optimal candidate.

Section 2 that follows presents the Greek data with reference to *NC₀ constraint. Section 3 is concerned with the previously suggested analyses and rankings. Section 4 discusses the ranking that this paper proposes, while section 5 discusses the suggested approach and its aspects that need further research. The last section shortly refers to the conclusions.

2. The *NC₀ problem in Greek

According to *NC₀ constraint a NT sequence is marked and is usually avoided. This can also be attested in SMG, thus the surface form is

/NT/ > [ND] as a result of postnasal voicing, where IdentVoi is violated by the optimal candidate, thus this constraint is ranked lower than the others in the hierarchy. However, another surface form also appears in SMG: /NT/ > [D]. Assuming that [D] is a result of nasal deletion after postnasal voicing, [D] is not a possible output, because the optimal candidate will always violate two constraints (Max-IO and IdentVoi) and thus it will be bounded.

Despite this, [D] is a perfectly acceptable output attested in SMG. This paper focuses on studying how D can be predicted as an output following the existing OT analysis for *NC₀ constraint. Also, this paper presents a uniform account of *NC₀ repair strategies in SMG, examining whether [ND], the postnasal voicing output and [D], the nasal deletion after postnasal voicing output surface in the same environments in SMG.

The *NC₀ data in SMG can be divided in three different environments and are presented below:

a) Across word boundaries, both [ND] and [D] forms surface:

/τον τοπο/ [τον δοπο] or [το δοπο] “the_{SgACC,Masc} place_{SgACC,Masc}”
 /τιν πσιξι/ [τιν βζιξι] or [τι βζιξι] “the_{SgACC,Fem} soul_{SgACC,Fem}”

b) Between morphemes that is within a word, both [ND] and [D] forms surface:

/σιμψιφιζο/ [σιμβσιφιζο] or [σιβσιφιζο] “set off_{1SgPres}”
 /εμπατη/α [εμβατηια] or [εβατηια] “animosity, spite_{SgNom,Fem}”

c) Root-internally, both [ND] and [D] forms surface:

/παντελιν/ [πανδελιν] or [παδελιν] “a name_{SgNom,Masc}”
 /πεμπο/ [πεμβο] or [πεβο] “send_{1SgPres}”

As shown, both postnasal voicing (ND) and postnasal voicing accompanied by nasal deletion (D) can occur as surfacing outputs in all three environments. Hence, an environment-conditioned constraint would not work to predict one form over the other. Concerning the data in c), there are very few words having NC₀ root-internally and those are considered to be Ancient Greek remnant words. Therefore, I believe that synchronically NC₀ cluster do not appear inside a root, but the few data presented here are remnants of an earlier era of the language. Lastly, some exceptional cases where NC₀ clusters surface, such as /κομπσοσ/ > [κομπσοσ] “elegant” and /λαμπσι/ > [λαμπσι], are also considered to be Ancient Greek remnant words, but they will not be discussed in this paper.

The Greek data are summarized in Table 1. below:

| | INPUTS | OUTPUTS |
|--|--------|---------|
| | | |

| | | | |
|---------------------------|--------|-----|-----|
| | | | |
| A. Across Word Boundaries | /n+t/ | nd | Ød |
| “ | /n+ts/ | nts | Ødz |
| B. Between Morphemes | /n-t/ | nd | Ød |
| “ | /m-ps/ | mps | Øbz |
| C. Inside Root | /nt/ | nd | Ød |
| “ | /mp/ | mb | Øb |

Table 1: Summary of the Greek NC₀ data

Therefore, the question raised is whether a specific ranking of the constraints involved can result in the optimal candidates that surface in SMG.

3. Previous Theoretical Approaches

3.1. Some necessary background about SMG

Before discussing about the previous suggested analyses, it is needed to mention some information with reference to SMG. Thus, it is known that SMG is a descendant of Ancient Greek, belonging to the Indo-European family of languages and it is spoken by 11,000,000 people and immigrants world-wide (Arvaniti, 1999a). It is a language with a long history which has withstood a situation of diglossia from the middle of 19th century. The two sociolects/varieties are used to be called Katharevousa and Dimotiki. Katharevousa refers to a high variety (H), strongly influenced by Ancient Greek, used in formal situations. The low variety (L) is called dimotiki, used in oral communications, everyday contact and informal situations. The two varieties were clearly differentiated in the middle of 19th century, when the Modern Greek State was founded. Although, this situation of diglossia continues to exist nowadays, the boundaries between the two varieties are now more blurred and their differentiation in all levels of Grammar—especially with reference to vocabulary—starts to fade.

Moreover, it will be useful to give an account of the theories concerning the syllabification of SMG in order to understand the approaches of the *NC₀ phenomenon. Malikouti-Drachman (2001) claims that most theories consider SMG to be an open-syllable language compared to Ancient Greek which was closed syllable. Most of them (Setatos, 1974, Malikouti-Drachman, 1984, Kappa, 1997) suggest that SMG tends to be coda-less,

since it shows a preference to open CV syllables. However, there is a consensus that the codas allowed are: a) word finally, it can be found the [+coronal] /n/ and /s/, while the liquid /r/ is disputed, b) word medially, the liquids /r/ and /l/ are allowed, while the nasals are partly accepted and the obstruents are excluded, allowed only in cases of clusters of three or four consonants. It worth pointing out that accepting a restricted number of coda consonants or no coda in SMG, it affects the formation of syllable onsets in SMG. Therefore, in order to be ‘faithful’ to the allowed coda consonants most syllabification analyses suggested adopt that the placement of coronals in coda position follows the sonority hierarchy [r>l>n>s] (Kappa, 1997).

After this short review of some necessary background information of SMG, I can now proceed in mentioning the main ideas of the previous suggested solutions to the * NC_o data in SMG.

3.2. Previous Suggested Analyses

Arvaniti (1999b) analyzes the NC_o data as a conspiracy between the postnasal voicing candidate ND and the candidate D. Candidate D is seen as a fusion of /NT/ which only violates Uniformity (Uni-IO) instead a result of postnasal voicing followed by a nasal deletion, a process that violates two constraints, Max-IO and IdenVoi and thus, it should be bounded. This type of fusion, unattested in other languages, is due to syllabification and appears in the following environments: a) in word initial onsets, and b) word medially, after /l/. Therefore, a word initial NC_o cluster i.e. /ντυλαπι/ surfaces as [δυλαπι], which is also true word medially after /l/ i.e. /αλμπυρο/ > [αλβυρο]; the D surface form is produced even by the native speakers preferring the [ND] form. Arvaniti additionally gives an account for voiced stops in general, and justifies the appearance of D a) word medially after /l/ so as to satisfy the Sonority constraint imposed on consonant clusters, and b) after a vowel to satisfy NoCoda constraint. Sonority constraint asks for rising sonority in complex onsets and falling sonority in complex codas, whereas NoCoda constraint demands no coda in syllables of SMG.

According to Arvaniti, the constraints involved in the NC_o phenomenon are: Max-IO, NoCoda, Uni-IO, *NC_o, Ident (voice), Voicing Assimilation (VoiAss=regressive voice assimilation between obstruents) and RootVoiAss. RootVoiAss is used to explain the blocking of postnasal voicing in NCC sequences in words such as /κομπσοσ/ “elegant”. The two possible outputs [ND]/[D] result from the same constraint ranking by substituting VoiAss with the morphologically conditioned RootVoiAss. The latest constraint explains why postnasal voicing applies in the NCC sequence in [λαβροσ] (/λαμβροσ/) but not in [κομπσοσ] (/κομπσοσ/), a non-derived word where the sequence is placed root internally.

Arvaniti's analysis however does not give an account for all the real Greek data. She does not explain why /NT/ fusion to [D] is only attested in SMG and how this can be justified. She also admits that Sonority and NoCoda constraints need further refinement and investigation. Syllabification is another problem of her theory, since word medially the nasal cannot be positioned elsewhere, if not in coda position. Moreover, the phonological status of voiced stops for Arvaniti is undetermined implying the theories arguing that voiced stops have no underline phonological status in SMG. Hence, she uses the term "voiced stops" instead of "clusters of nasal+voiceless stop", as more phonetically accurate expressing the opinions arguing that prenasalisation has been interpreted as voicing in SMG (Arvaniti & Joseph, 2000). Another issue is that it is not theoretically founded why she uses Uni-IO constraint instead of the constraints Lin-IO and Max-IO. Lastly, her analysis cannot explain the appearance of [ND] forms word initially and the preference for [D] forms word medially, especially by the young generation (Arvaniti & Joseph, 2000).

4. Suggested solution

The analysis I propose in this paper is based on the assumption that the ND/D variation is due to two sociolinguistically distinct dialects (sociolects); Katharevousa (H) and Dimotiki (L). Therefore, it is assumed that the surface form for H is [ND] and for L is [D]. It has to be mentioned that the two sociolects are mainly differentiated based on functions, as Arvaniti & Joseph's (2000) research showed. With reference to this approach, each dialect is seen as a distinct grammar with its own ranking. Arvaniti (1999) herself implied the existence of two rankings, when talks about native speakers that prefer to use ND forms instead of D form; choice presupposes options.

The present approach is supported by the existence of words that exclusively belong to H or L variety and exclusively show only one of the two available surface forms, i.e.:

H variety: /τον καναΔα/ [τον γαναΔα] "the_{SgACC,Masc} Canada_{SgACC,Masc}",
/εν-τονοσ/ [εν-δονοσ] "bold_{SgNOM,Masc}"

L variety: /τον πσαρα/ [το βσαρα] "the_{SgACC,Masc} fisherman_{SgACC,Masc}"
/τιν ταπερνα/ [τι δαπερνα] "the_{SgACC,Fem} tavern_{SgACC,Fem}"

Supportive arguments are also given by the sociolinguistic study of Arvaniti & Joseph (1999) which showed that young speakers highly used [D], while older speakers showed a high use of [ND], especially in the reading task (formal situation). They conclude that "there are sociolects where language-change has occurred" and the dichotomy between ND and D equals to a dichotomy between formal and informal situation (H vs L variety). Spelling seems to support the higher/more correct status of ND that

the more conservative speakers would choose to follow. The approach suggested in this paper, furthermore explains the unexplained gaps in Arvaniti's analysis and the differentiated distribution across environments as presented in Malikouti-Drachman & Drachman (1988).

I suggest that the constraints involved are: Uni, Max-IO, AgreeV(=Obstruents agree in voicing), used for the NCC clusters, IdentV, IdentN, *NC₀, Dep-IO. Using OT Soft, these constraints predict the following ranking for H and output [ND]:

*NC₀, Uni, AgreeV >> IdentN >> Max, Dep-IO, IdentV

5. Discussion

However, this ranking does not work for L, as [D] is always bounded by the candidates [ND] and [T]. The alternatives to adopt in order to solve this problem are as follows: a) the underlying form for L is not NT but ND, thus the optimal form [D] violates only Max-IO, or b) L variety has not only different ranking, but also additional constraints to those used for H. However, adopting option b raises the question of economy in a language's system.

Examining the first option a), many previous researches (Malikouti-Drachman, 1984, 2001) have shown that NT is the underlying form, while the "conservative" spelling of SMG, result of its long history, is another supportive evidence for NT. The most important supportive data, as also shown in Arvaniti & Joseph (1999), are:

/ο τυριστας/ [ο τυριστας] "the_{SgNOM,Masc} tourist_{SgNOM,Masc}" but,

/τον τυριστα/ [το τυριστα] "the_{SgACC,Masc} tourist_{SgACC,Masc}"

The nominative of nouns is not preceded by an article ending in /n/. Hence, this shows that the underlying form of the noun's initial consonant is indeed a voiceless stop. The same could be argued for NC₀ across morpheme boundaries, because when the word is not accompanied by the morpheme/prefix ending in a nasal, it starts with a voiceless stop.

/σιμπσιφιζο/ [σιμβζιπσιζο][σιβζιπσιζο] "set off_{1SgPres}" but,

/πσιφιζο/ [πσιφιζο] "vote_{1SgPres}"

Therefore, these data consist arguments so as to reject option a).

Concerning option b), if we assume that /NT/ to [D] is a case of fusion, it violates only Uni-IO and not Max-IO. The question though is which constraint is satisfied by the optimal form D. I argue that the No-NC-link constraint proposed by Ito, Mester & Padget (1999) suggesting that voice assimilation between nasal and voiceless stop is disallowed seems to be the appropriate one. No-NC-link is based on the assumption that the voicing of sonorants is different from the voicing of obstruents, thus cannot be linked, otherwise the voice feature cannot be spread.

Therefore, the predicted ranking for L has been modified as follows:

*NCo, AgreeV, No-NC-link>>IdentN>>Uni>>Max, Dep-IO, IdentV

The proposed rankings for the two varieties are shown in the following table:

| | |
|------------|--|
| H: [ND] | *NCo, Uni, AgreeV>>IdentN>>Max, Dep-IO, IdentV |
| L: [D] | *NCo, AgreeV, No-NC-link>>IdentN>>Uni>>Max, Dep-IO, IdentV |

Table 2: Constraint ranking of H vs Constraint ranking of L variety

However, for a native speaker of SMG, it is not economic to acquire as a child and to know and alternate between two grammars/two rankings.

Based on a correspondence theoretic approach to lexical stratification as described by Fukazawa, H & al.(1998) and Ito & Mester (to appear in the ‘Handbook of Japanese Linguistics’), I propose that there are not two different grammars but just one and same grammar. On the basis of this theory, “the conflict between language internal variability and ranking invariance is solved” with multiple sets of Input-Output faithfulness constraints; each set is associated with a sub-lexicon/stratum. In this way, stratum specific phenomena can be predicted by one ranking. For example in Japanese, according to the stratum of the lexicon that a lexical item belongs, it is affected by another faithfulness constraint. The strata in Japanese are differentiated based on which language the lexical item/word originates from; i.e. whether the word is of Latin origin. Therefore, in the case of SMG, I propose that the F-IO splits into a F_H and a F_L constraints refer to the H and L variety respectively. Therefore, when an SMG native speaker speaks the H variety in a formal situation satisfies the constraint F_H . Concerning the lexical items that belong only to H or L variety, we assume that they are marked accordingly in the lexicon and that always violate the F constraint of the other variety.

The basic advantage of this approach is that one set of constraints can accommodate all the data. More arguments in favour of this approach are presented and explained in the articles by Fukazawa, H & al.(1998) and Ito & Mester.

The application of the approach I suggest here and the constraints, can be shown in the tables below:

| /τον τοπο / | NC | Max | Dep | AgrV | No-NC- l | FL | Uni | IdeV | IdeN | FH |
|----------------|----|-----|-----|------|-------------|----|-----|------|------|----|
| >το δοπο | | | | | | | * | | * | * |
| τον τοπο | * | | | | | | | | | |
| τον δοπο | ! | | | | *! | | | * | | |

How Is *NC₀ Satisfied in Standard Modern Greek?

| | | | | | | | | | | |
|---------|--|----|--|--|--|--|---|---|---|--|
| το τοπο | | *! | | | | | | | * | |
| τον οπο | | *! | | | | | * | * | | |

Table 3: NC ranking Across morphemes

| /εμπαια/ | NC | Max | Dep | Uni | IdeN | AgrV | FH | IdeV | No-NC-1 | FL |
|-------------|----|-----|-----|-----|------|------|----|------|---------|----|
| >σιμβζιφιζο | | | | | | | | ** | * | |
| σιμπσιφιζο | * | | | | | | | | | |
| σιβζιφιζο | ! | | | *! | | | * | ** | | |
| σιπσιφιζο | | *! | | | * | | | | | |
| σιμβσιφιζο | | | | | | *! | | * | * | |

Table 4: NC ranking Word internally

6. Conclusions

To conclude, this paper exposed the Greek data concerning * NC₀ and suggested an alternative analysis based on a sociolinguistic approach of the data (Arvaniti & Joseph). It was shown that D in SMG is a case of fusion, while the ND/D conspiracy observed between H/L varieties was analyzed based on a split faithfulness constraint according to the two registers/sociolects. This study leaves for further research a more in depth examination and analysis of all data including nasal clusters, while the data such as /kompos/ where NC₀ clusters surface were not discussed at all.

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The Role of Recursivity in the Phonological Word

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1. Introduction

The aim of this paper is to explore recursive phonological words in several morphosyntactic constructions in Greek. More specifically, it is argued that there are different patterns of prosodic organization of derived words, compound constructions and clitic formations. The prosodic analysis proposed in the present paper is based on phonological criteria and the morphosyntax-phonology interface. We adopt a *Weak Layering* approach to prosodic organization (Itô & Mester 1992) and propose that an *extended phonological word* is needed to account for the prosodization of specific one-word and multi-word constructions in Greek. Moreover, this paper builds on Kabak & Revithiadou's (to appear) (henceforth K&R) assumption that the grammar requires recursive morphosyntactic structures to be mirrored in phonology.

This paper is organized in the following way. First, we provide an overview of the constituent of the phonological word. Several structures of Greek that correspond to one phonological word are discussed. Next, we focus our attention on several cases of phonological recursion that derive from prefixation, compounding and clitic combinations. In particular, we argue in favour of the recursive phonological word as the prosodic constituent that is necessary for the prosodic organization of the structures under investigation. Finally, we conclude with a summary of our major proposals.

2. The constituent of the phonological word

The *phonological (/prosodic) word* (PW, Nespor & Vogel 1986) is a prosodic constituent that represents the interaction of the phonological and morphological component (Hall 1999). Moreover, it is the domain for primary word stress assignment which also serves for the application of certain phonological rules (Selkirk 1981, 1984, 1986 *et seq.*, Nespor & Vogel 1986, Nespor 1999). The phonological word is one element in a series of hierarchically ordered phonological constituents known as the *prosodic hierarchy* (Selkirk 1981). The Strict Layer Hypothesis (SLH,

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Selkirk 1984) determines the geometry of this constituent structure as follows.

(1) STRICT LAYER HYPOTHESIS

A prosodic constituent of rank n is immediately dominated by a single constituent of rank $n+1$.

This hypothesis requires each prosodic constituent to directly dominate constituents of the immediately lower category only. Several researchers have argued that SLH cannot be maintained in its strongest form (Itô & Mester 1992, among many others). Selkirk (1995) replaces SLH with a series of four separate constraints, presented in (2).

(2) *Constraints on Prosodic Domination* (Selkirk 1995)

- a. LAYEREDNESS: No C^i dominates a C^j , $j > i$. ex. ‘no σ dominates a foot’
- b. HEADEDNESS: Any C^i must dominate a C^{i-1} . ex. ‘a PW must dominate a foot’
- c. EXHAUSTIVITY: No C^i immediately dominates a C^j , $j < i-1$. ex. ‘no PW dominates a σ ’
- d. NONRECURSIVITY:¹ No C^i dominates a C^j , $j = i$. ex. ‘no PW dominates a PW’

The first two constraints appear to be properties that hold universally, while the last two, namely EXHAUSTIVITY and NONRECURSIVITY may be violated. In the following sections, we propose a set of prosodic representations regarding prefixation, compounding and cliticization that can give rise to recursion and the skipping of levels in the prosodic constituent structure. We follow K&R in assuming that recursivity is a property only of the PW and the phonological phrase (henceforth PhP) because these two are the main prosodic constituents that mediate the morphosyntax-phonology interface.

2.1. PW formations

In this section, we will examine morphological formations that are mapped onto one PW. More specifically, we explore three cases of morphosyntactic

¹ In recent work, K&R revive the interest for the morphosyntactic motivation of recursivity. More specifically, they argue that recursivity is not an inherent property of phonology but the result of its interface with morphosyntax. They point out that there is no need for the constraint NON RECURSIVITY since already available interface constraints such as ALIGNMENT and WRAP suffice to yield recursive structures in phonology.

constructions: (a) derivational suffixation, (b) [stem stem suffix] compounding, and (c) enclitic constructions.²

2.1.1. [stem derivational suffix]

The fact that the [stem suffix] structures have one primary stress suggests that the suffixed words constitute one PW. The prosodic incorporation of suffixes into the stem is further supported by the application of segmental rules, such as dissimilation, voice assimilation, etc. (Nikolou 2007, in preparation).

(3) *Phonological processes in [stem suffix] structures*

a. *dissimilation*

/yraf-simo/ [yraf`psimo]_{PW} ‘writing’

b. *voice assimilation*

/vraz-tos/ [vrasto`s]_{PW} ‘boiled’

The aforementioned data shows that there is no prosodic word boundary between the morphological base and the suffix. Importantly, the above alternations affect the segmental material of the base, which shows that suffixes are closely bound to the stem. Based on the above phonological changes we assume the prosodic structure of suffixed words to be the following.



Figure 1: The prosodic structure of suffixes

2.1.2. [stem stem suffix] compounds

This compound type forms one morphological word that is mapped onto one PW (Drachman & Malikouti – Drachman 1994, Nespor & Ralli 1996, Nespor 1999).

² The prosodic structure of Greek clitics has been the topic of investigation of many researchers (Nespor & Vogel 1986, Arvaniti 1991, Malikouti – Drachman & Drachman 1992, Tzakosta 2005, Papazachariou 2007, among others). The phonological shape presented here for clitics is in total alignment with the prosodic typology proposed by the recent work of Revithiadou (2002, 2006) and Revithiadou & Spyropoulos (2008) for clitics in Standard Greek and its dialects.

(4) *prosodic structure of [stem stem suffix] compounds*

- a. /kukl-o-spit-o/ [kuklo`spito]_{PW} ‘doll’s house’
 b. /riz-o-alevr-o/ [riza`levro]_{PW} ‘rice flour’

[stem stem suffix compounds] bear one primary stress which always falls on the antepenultimate (APU) syllable of the compound. Another argument used in the literature in favour of considering these structures as one PW is the application of a vowel deletion rule. This rule is triggered when a sequence of two vowels is created at the juncture of the two compound members, as illustrated in (4b).

2.1.3. Enclitic constructions

Clitics are considered to be morphosyntactic words, which do not constitute PWs of their own (Selkirk 1995). Such elements are prosodically dependent on a neighboring constituent within the clause. Enclitics (i.e. weak object pronouns) appear to be more coherent than proclitics cross-linguistically (Peperkamp 1997), but also in Greek and its dialects (Revithiadou 2006, Revithiadou & Spyropoulos 2008, henceforth R&S) as well as in Greek child speech (Tzakosta 2005). In light of Selkirk’s (1995) typology, we assume Greek enclitics to be internal, that is, to prosodically incorporate into the PW of their verbal host. The evidence for this pattern comes from stress and sandhi rules, such as *s*-voicing and *e*-deletion.

- (5) *s*-voicing
 /pes mu/ [pe`zmu]_{PW} ‘tell me’
 (6) *e*-deletion (optional)
 /fe`re to/ [fe`rto]_{PW} ‘bring it’

To sum up, Greek enclitics have the prosodic organization in (7):

- (7) *prosodic structure of enclitics* (R&S 2008)
 [verb clitic (clitic)]_{PW} internal clitics

3. Constructions that generate recursive structures

The prosodic organization of affixes, clitics and compound structures can induce violations of the requirements of prosodic domination, presented in (1). More specifically, some of these elements neither incorporate into an adjacent PW, nor form an independent PW. The phonological evidence that

shows recursivity is (a) the development of secondary/ rhythmic stress, (b) the blocking or optional (non-obligatory) application of PW-rules (K&R).

The structures we explore come from three morphosyntactic processes, namely derivational prefixation, compounding and cliticization. More specifically, we look at (a) productive³ prefixes in prefix-word constructions, (b) [stem word] and [word word] compounds, and (c) proclitic-verb constructions.

3.1. Derivational prefixation

A prefix-suffix asymmetry has been reported to occur in a large number of languages.⁴ Prefixes opt for prosodic adjunction contrary to the incorporation of derivational suffixes. That prefixes are not incorporated into the PW that dominates the base is strongly supported by the non-application of vowel deletion/semivocalisation rule, a process that applies within the PW domain, e.g. /singenolo`i/ → [sinɣenolo`j] ‘cousin age’, /a`ɣrio/ → [a`ɣrjo] ‘savage’ or across two PWs (optionally, mainly when high vowels occur), e.g. /e`xi aɣora`si/ → [e`ç(j)]_{PW} [aɣora`si]_{PW} ‘he/she has bought’, /e`xo ora`mata/ → [e`x]_{PW} [ora`mata]_{PW} ‘have visions’, in order to resolve hiatus. Consider the following prefixed forms:

(8) *Non-application of vowel deletion rule in hiatus context*

- | | | |
|----------------------|---|-------------------|
| a. /pro-ekloyiko`s/ | [pro[eklojiko`s] _{PW}] _{PW} | ‘electoral’ |
| b. /ipo-apasxo`lisi/ | [ipo[apasxo`lisi] _{PW}] _{PW} | ‘sub-employment’ |
| c. /anti-esθitiko`s/ | [àndi[esθitiko`s] _{PW}] _{PW} | ‘inelegant, ugly’ |
| d. /para-ikonomi`a/ | [pàra[ikonomi`a] _{PW}] _{PW} | ‘third market’ |

Prefixes have an inherent stress on the ultimate syllable (e.g. /anti`/, /ipo`/, etc.). Therefore, the secondary stress they develop is rhythmic. Disyllabic prefixes provide sufficient material to form a trochaic foot (Hayes 1995), which is adjoined into the PW of the base. The blocking of vowel deletion signals the following recursive structure.

PW

³ On the basis of the *productivity* and the *semantic transparency* of the prefixed words, Nikolou (2007) suggests a dichotomy of prefixes into two categories: (a) the unproductive/non-transparent prefixes which refers to a set of Ancient Greek prepositions with an idiosyncratic meaning, as *epi-*, *ek-*, *is-*, *apo-*, *sin-*, *en-*, *kata-*, etc. and (b) the productive/transparent prefixes, *anti-*, *pro-*, *para-*, *ipo-*. Here, we will consider only the productive ones.

⁴ cf. Hannahs (1995) for French, Peperkamp (1997) for Italian and Spanish, Vigário (2003) for European Portuguese, Nikolou (2007, in prep.) for Greek.

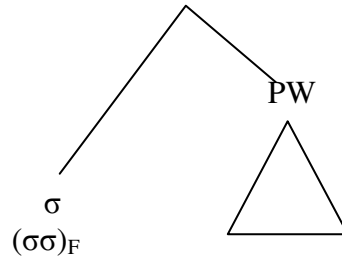


Figure 2: The prosodic structure of prefixed words

Except for the phonological recursivity, there is also recursion in the morphological structure of prefixed forms (Ralli 2002). Prefixes are adjuncts to the base-word they are attached to. We argue therefore that phonologically recursive structures reflect morphological recursivity.

3.2. [stem word] compounds

One-word compounds that have the internal structure [stem word] appear to be prosodically identical to prefixed forms.

(9) *prosodic structure of [stem word] compounds*

| | | |
|----------------------|---|-------------------|
| /noti-o-anatoliko`s/ | [nòtio[anatoliko`s] _{PW}] _{PW} | ‘south east’ |
| /ȳiyant-o-afi`sa/ | [ȳiȳando[afi`sa] _{PW}] _{PW} | ‘very big poster’ |
| /meyal-o-apateo`nas/ | [mèȳalo[apateo`nas] _{PW}] _{PW} | ‘great deceiver’ |

From the above examples, we observe that secondary/ rhythmic stress is assigned on the first compound member and that the *o*-deletion rule⁵ is blocked. The fact that *o*-deletion is blocked in the examples in (9) even if a sonorous vowel (/a/) follows indicates that there is left PW boundary. This entails that [stem word] compounds are organized into a recursive PW. The main stress of the compound falls always on the second component, but because of recursivity a secondary stress is developed on the first syllable of the compound. The compound structures under examination are also characterized by morphological recursion, as illustrated in (10).

⁵ The linking vowel in Greek compounding is deleted in most of the cases when the second member of the compound is V-initial, in order to avoid hiatus. *o*-deletion rule is dynamically enforced when the initial V of the second part of the compound is sonorous (/a/ vs. /i,u/) and moreover, when its stressed counterpart occurs in the compound form (/á/ vs. /o,u/). *o*-deletion follows the following hierarchy (Nikolou 2003):

(i) á >> a >> é >> e >> o >> í >> i >> ú, u.

- (10) *morphological structure of [stem word] compounds*
 [pseft-o-[anarxiko`s]GW]GW ‘not a real anarchic’

We assume that the morphological structure has to be expressed in the phonological shape. This is formalized in the constraint MIRRORING introduced by van Oostendorp (2002).

- (11) MIRRORING:
 The prosodic structure of a word should be isomorphic to its morphological structure.

We conclude that both in prefixed and [stem word] compound forms phonology mirrors morphosyntax. This finding provides an additional argument in favor of K&R’s proposal for clitics and other recursive structures in Greek and Turkish.

3.3. [word word] compounds

Multi-word compounds are morphological units that have more than one stress domain (Ralli 2007). They are treated as phonological phrases, as they exhibit two word stresses (Anastasiasi – Symeonidi 1986, Nespor & Ralli 1996, Nespor 1999). However, it seems that this type of compounding has different prosodic properties compared to phrases (K&R). Let us contrast (12a) with (12b).

- (12) *Adj+N compounds vs. Adj+N phrases*
 a. *Adj+N compounds (rightmost stress prominence)*
 pirinikòs po`lemos ‘nuclear war’
 ðiplomatikò so`ma ‘diplomatic delegation’
 b. *Adj+N phrases (leftmost stress prominence)*
 irakino`s pòlemos ‘Iraqi war’
 ðiplomatiko` àsilo ‘diplomatic asylum’

Word primary stress must fall on one of the word’s last three syllables according to the three-syllable window restriction in Greek. However, in compound constructions, longer words are at the risk of violating the window requirement, therefore they develop ways in order to keep their prominence closer to the right edge. This explains why the primary word stress of a [word word] compound is always assigned on the rightmost compound member.

The fact that [word word] compounds are part of the extended PW and not of some higher prosodic constituent (e.g. the PhP) is also supported by

various segmental rules, which typically apply within the PW domain,⁶ as illustrated in (13). Moreover, the emergence of secondary stress⁷ provides extra evidence for prosodic recursion.

(13) *Phonological processes in [word word] compounds*

a. *Vowel deletion*

| | | |
|-------------------|----------------|---------------------------|
| /mními_éléfanta / | [mn̩meléfanda] | ‘very good memory skills’ |
| /pli`si_egefa`lu/ | [pliseʝefa`lu] | ‘brain washing’ |

b. *Semivocalization*

| | | |
|---------------------|------------------|---------------|
| /zo`ni_asfali`as/ | [zònjafali`as] | ‘safety belt’ |
| /vivlia`rio_iyi`as/ | [viliàriojji`as] | ‘health book’ |

c. *Vowel degemination*

| | | |
|--------------------|------------------|-------------------------|
| /epiðoma_aneryías/ | [epiðomanerjías] | ‘unemployment benefit’ |
| /ko`la_anafora`s/ | [kòlanafora`s] | ‘formal piece of paper’ |

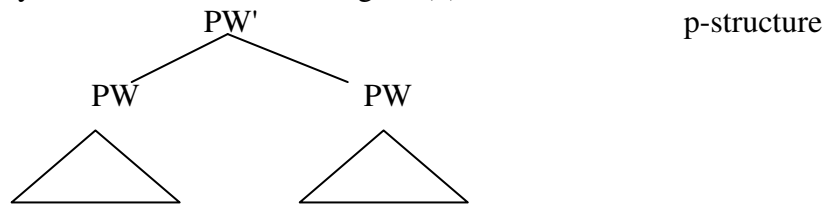
d. *Consonant degemination*

| | | |
|-----------------------|--------------------|-----------------|
| /peðikós_staθmós/ | [peðikòstaθmós] | ‘day nursery’ |
| /kilio`menes_ska`les/ | [ciljòmeneska`les] | ‘moving stairs’ |

e. *s-voicing*

| | | |
|------------------------|----------------------|------------------|
| /fúrnos mikrokima`ton/ | [fùrnøzmikrocimáton] | ‘microwave oven’ |
| /po`lemos ne`vron/ | [pòlemøzne`vron] | ‘war of nerves’ |
| /énoples ðinámis/ | [ènoplezðinámis] | ‘armed forces’ |

The data suggests that multi-word compounds are parsed into an extended PW. Both the prosodic and the morphological structure are recursive and totally symmetrical, as shown in figure (3).



⁶ It should be noted though that these processes also occur optionally within the domain of the PhP.

⁷ The relative prominence of the two stresses of the [word word] compounds is also recognized in Nespor & Ralli (1996). According to the authors there is always one element that bears a stronger stress, and this element is taken to be under their analysis the head of the PPh.

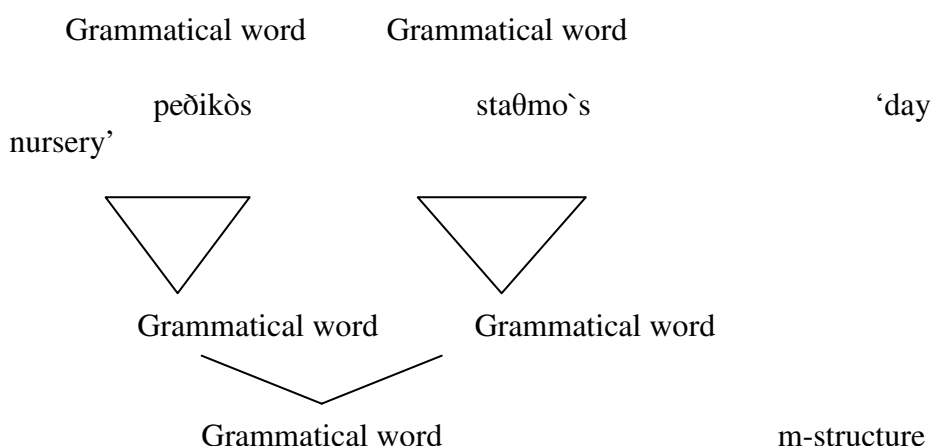


Figure 3: The prosodic and morphological structure of [word word] compounds.

The fact that the [word word] compounds do not always form phonological phrases is also supported by cross-linguistic phonological research. On the basis of phonological evidence, Viga`rio (2003) argues that Portuguese compounds that include more than one stress unit constitute *compound prosodic words* and not phonological phrases. K&R show as well that Turkish compounds form *recursive prosodic words*. This entails that the sequences of the internal prosodic words of these compound constructions are not immediately dominated by the phonological phrasal node.

3.4. Proclitics

Proclitics, unlike their enclitic counterparts, are parsed into a recursive prosodic word structure (R&S). More specifically, weak object pronouns in proclitic position are adjoined to the PW of their verbal host, as illustrated in figure (4).

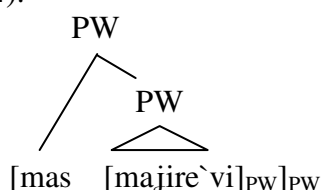


Figure 4: The prosodic structure of proclitics

One of the phonological criteria that R&S use is resyllabification. As they show, this process is blocked in proclitic constructions, simply because the constituents in question do not belong to the same PW.

(14) *Blocking of resyllabification*

- a. /mas mayire`vi/ [maz.majire`vi] ‘(s/he) cooks for us’
 b. /mas ðjava`zi/ [maz.ðjava`zi] ‘(s/he) reads for us’

Proclitics behave similarly to prefixed forms and [stem word] compounds with respect to prosodic organization: they are adjoined to the phonological word of their verbal host. The affixal pattern of proclitics is demonstrated in (15).

(15) *recursive phonological shape of proclitics*

- [(clitic) clitic [verb]_{PW}]_{PW} affixal clitics
mu to e`stile ‘s/he sent it to me’

K&R argue that the ‘left-right’ asymmetry in cliticization is a reflection of the different morphosyntactic structure between the two constructions. Proclitics also have an adjunct status syntactically, which entails that morphosyntactic recursion is mirrored in phonology. The phonological behaviour of proclitics provides additional evidence to our basic proposal that the prosodic structure of prefixed and compound words reflect morphological recursivity.

Table 1 summarizes the prosodic patterns of the morphosyntactic constructions discussed in the above sections.

| MORPHOSYNTACTIC CONSTRUCTIONS | PATTERNS OF PROSODIC ORGANIZATION | PWs | RECURSIVE PWs |
|-------------------------------|--|-----|---------------|
| 1. derivational suffixes | [stem derivational suffix] _{PW} | ✓ | |
| 2. prefixes | [prefix[word] _{PW}] _{PW} | | ✓ |
| 3. [stem stem suff] compounds | [stem stem suffix] _{PW} | ✓ | |
| 4. [stem word] compounds | [stem [word] _{PW}] _{PW} | | ✓ |
| 5. [word word] compounds | [[word] _{PW} [word] _{PW}] _{PW} | | ✓ |
| 6. proclitics | [(clitic) clitic [verb] _{PW}] _{PW} | | ✓ |
| 7. enclitics | [verb clitic (clitic)] _{PW} | ✓ | |

Table 1: Typology of phonological words in Greek

4. Conclusions

In this paper, we have shown that the role of recursivity is very crucial for the prosodization of several morphosyntactic constructions in Greek. More specifically, the extended PW is necessary to account for the prosodization of one-word formations like prefixed forms and [stem word] compounding, but also for multi-word combinations as [word word] compounding and the proclitic plus verb constructions. The evidence comes from phonological processes of Greek referring to the PW, for instance vowel deletion, assimilation etc, as well as from the morphosyntax-phonology interface.

One of the main findings of this paper is that phonologically recursive structures are also morphosyntactically recursive. This observation enforces K&R's assumption that morphosyntactic 'recursion' is mirrored in phonology as recursion at the level of the PW. We took the above claim one step further and showed that the prosodic templates of derived and compound forms reflect morphological recursivity.

As a final remark we would like to point out is that the analysis advanced here allows us to account for different prosodic patterns making use of one and the same constituent, i.e. the PW. This offers a more economic approach to the prosodification of multi-word constructions, such as [word word] compounds.

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The Interpretation of Chinese Null Objects by English Natives

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Abstract

This paper brings quantitative data to examine the extent of L1 transfer in L2 acquisition. A grammaticality judgment task was conducted, whereby 16 pre-intermediate-level L1-English-speaking learners of Chinese judged bi-clausal sentences involving embedded null and overt pronominal objects. The results reveal that the L1-English-speaking learners had a strong preference for allowing ambiguity in the interpretation of embedded null objects. This finding suggests that the L1-English-speaking learners had L2 syntactic knowledge with respect to null object interpretation.

1. Introduction

As is known, Chinese is a language that displays the freedom for the use of null arguments in its grammar (Huang 1984, 1987, 1989, Xu 1986, Li 1990, He 1996, Huang Y. 2000). It not only allows either a subject or an object to be dropped, but also can drop both of them at the same time without leaving any grammatical ambiguity assuming that the context unambiguously provides antecedents. In English, however, pronouns cannot be dropped from grammatical sentences generally. Consider the example below.

- (1) A: Zhangsan kanjian Lisi le ma?
Zhangsan see Lisi Asp Q
“Did Zhangsan see Lisi?”

B: (a) null subject
 \varnothing kanjian Lisi le.
see Lisi Asp
“(He) saw Lisi.”

(b) null object
ta kanjian \varnothing le.
he see Asp
“He saw (him).”

(c) null subject and null object

\underline{e} kanjian \underline{e} le
 see Asp
 “(He) saw (him).”

In the above view, it is clear that Chinese displays the freedom for the use of null arguments in its grammar. From the translation counterparts, however, it is evident that English allows none of them. In spite of the free use of null arguments in Chinese, the interpretation of embedded null objects in Chinese has been a disputed topic in the literature (Huang 1984, 1987, 1989, Xu 1986). Also, even though English does not allow arguments to be dropped, English does have null objects (Rizzi 1986, Cummins & Roberge 2004).

2. Previous Research

2.1 Null Objects in English

Cummins & Roberge (2004) claim that null objects are available in English. They indicate three types of null objects. In the first, it is bound type: a definite null object coreferential with an overt topic. Cummins & Roberge (2004) interpret this type of null objects as bound variables or null constants, giving the example below.

- (2) Bond: a definite null object coreferential with an overt topic
 The book_{*i*}, I hated \underline{e}_i .

In (2), “the book” is moved from the object position of the verb “hate” to the topic position and leaving a trace behind. In the literature, this phenomenon is known as “topicalization” (Tsao 1977, Huang 1984, 1989). On this account, the null object in (2) is a null constant licensed by the anaphoric operator, i.e., the overt topic, “the book,” and thus, it is interpreted as a variable.

In the second, it is discourse-linked type: a definite null object coreferential with a referent mentioned in the discourse. Cummins & Roberge (2004) construe this type of null objects as null pronominals, with the example below.

- (3) Discourse-linked: a definite null object coreferential with a referent mentioned in the discourse
 A: What do you think of my cake_{*i*}?
 B: *I like \underline{e}_i .

Cummins & Roberge (2004) indicate that in English when a referential interpretation is forced, a null object is impossible. In this regard, the null object in (3) is coreferential with the “cake” mentioned in the discourse; thus, the interpretation of the null object is forced. As a consequence, this null object is not available in English.

In the third, it is internally-licensed type: an indefinite null object coreferential with a generic overt topic or with an unmentioned referent. Cummins & Roberge (2004) describe this type of null object as null cognate objects or bare nouns. This is derived from the fact that an overt cognate object, if unmodified, provides no semantic information beyond that contained in the verb itself. Similarly, this account is expected to operate in the case of null cognate objects. It therefore suggests that a sentence with a null cognate object mainly focuses on the action or on the verb itself. Consider the example below.

(4) Internally-licensed

- a. an indefinite null object coreferential with an overt topic

Wine_i, I bought e_j.

- b. an indefinite null object coreferential with an unmentioned referent

You like e?

Similar to (2), the null object in (4a) is coreferential with the topic “wine” which is moved from the object position of the verb “bought” to the topic position. That is, the null object in (4a) is licensed by the overt topic - wine. Notice that, however, the overt topic in (4a) is indefinite/generic rather than definite as in (2). In (4b), furthermore, contrary to (3), the null object is not forced to a referential interpretation, and thus, it is acceptable in English.¹

From what we have seen above, overall, we can conclude that in English a null object is available when it is coreferential with an overt topic (either definite or indefinite). On this view, it suggests that a null object in English is A'-bound by a topic, and is interpreted as a variable.

Bearing the view of English in mind, let us turn now to look at the cases in Chinese.

2.2 Null Objects in Chinese

Huang (1984) proposes that there is a subject-object asymmetry in Chinese with respect to the distribution of empty categories. Huang claims that the distribution of empty categories is more restricted in object position

¹ Note that some native speakers of English do not consider this sentence acceptable, while some do.

than in subject position: embedded null subjects rather than embedded null objects can refer to matrix subjects. To be more specific, what it means is that embedded null subjects can be coindexed with matrix subjects and be interpreted as *pro*, whereas embedded null objects can not. Consider the examples below.

(5) a. Embedded null subject

Zhangsan_i shuo [e_i bu renshi Lisi].
 Zhangsan say not know Lisi
 “Zhangsan_i said that (he_i) did not know Lisi.”

b. Embedded null object

Zhangsan_i shuo [Lisi bu renshi e_i*]
 Zhangsan say Lisi not know
 “Zhangsan_i said that Lisi did not know (him_i*).”

In view of (5), the embedded null subject in (5a) can refer to the matrix subject *Zhangsan*, whereas the embedded null object in (5b) cannot. As a result, the embedded null subject in (5a) can be interpreted as a pronominal (i.e., *pro*), while the embedded null object in (5b) cannot.

In spite of the asymmetry indicated above, both embedded null subjects and embedded null objects can be interpreted as variables. Huang (1984) asserts that a null argument is left because of the movement to the topic position and where the topic position is null is because of the “Topic-NP Deletion.” Tsao (1977) claims that Chinese-type languages have a rule called “Topic-NP Deletion,” which operates across sentences to delete the topic of a sentence having an identical referent in the preceding sentence. Also, it is noteworthy that the null argument is topicalized first before the topic is deleted from the topic position. On this account, sentences in (5) can be interpreted as (6) below.

(6) a. Embedded null subject

Discourse Topic_j ... [Zhangsan shuo [topic e_j [e_i bu renshi Lisi]]]
 Zhangsan say not know Lisi
 “Zhangsan_i said that (he_j) did not know Lisi.”

b. Embedded null object

Discourse Topic_j ..[Zhangsan shuo [topic e_j [Lisi bu renshi e_i]]]
 Zhangsan say Lisi not know
 “Zhangsan_i said that Lisi did not know (him_j).”

Sentences in (6) suggest that the embedded null subject in (6a) and the

embedded null object in (6b) are moved from their initial position to the topic position where the topic is deleted through the process of topic NP deletion. This is to say, the embedded null subject in (6a) and the embedded null object in (6b) are coreferential with their null topics, and are interpreted as variables.

To summarize, an embedded null subject in Chinese can be interpreted either as a null pronominal when it is A-bound by an element which is outside of the governing category, or as a variable when it is A'-bound by a (zero) topic. By contrast, an embedded null object in Chinese can only be A'-bound by a (zero) topic and be interpreted as a variable. This phenomenon is known as the subject-object asymmetry in the literature and is held by Huang (1984) to lend support for the claim that *pro* is only available to the subject position but not to the object position except for a language with a rich verb-object agreement marking system. This assumption, nevertheless, has been challenged by Xu (1986) in the theoretical literature.

Contrary to Huang, Xu (1986) proposes that embedded null objects in Chinese can also be coreferential with matrix subjects, and thus, they can be interpreted as *pro* as well. Xu (1986) argues that it is true people would not take matrix subjects as the controller of the embedded null objects without additional context in the examples Huang illustrated. Xu (1986), nonetheless, asserts that many other sentences are capable of allowing embedded null objects coreferential with matrix subjects unless context has led the readers or hearers to do otherwise; we have such an example below.

- (7) *xiaotou_i yiwei [mei ren kanjian e_i]*
 thief assume no man see
 “The thief thought nobody saw (him).”

In (7), it is clear that hearers or readers would spontaneously take the matrix subject *xiaotou* “thief” as the referent of the embedded null object. In this case, this embedded null object is interpreted as *pro*. To explain this, it can be ascribed to the semantic and pragmatic factors.² Xu (1986) claims that without considering semantic and pragmatic factors, the syntactic constraints should not be the first choice of reading a sentence. Thus, Xu (1986) suggests that the interpretation of embedded null objects in Chinese should consider the semantic and pragmatic factors. Indeed, the issue with the influence of semantic and pragmatic factors in the interpretation of a sentence has been discussed in the literature (Comrie 1988, LaPolla 1993).

² For more details with regard to the interpretation of embedded null objects in Chinese, please see Hsieh’s forthcoming doctoral dissertation.

In so far as what we have seen, we can conclude an embedded null object in Chinese can be either A'-bound by a (zero) topic, in which case it is interpreted as a variable, or A-bound by a matrix subject, in which case it is interpreted as *pro*.

To deal with the discrepancy with respect to null object interpretation in Chinese and English, overall, it triggers the motivation of the study.

3. The study

The aim of the study is to investigate how L1-English-speaking learners of Chinese interpret embedded null objects in Chinese. In order to determine the extent of L1 transfer in L2 acquisition, in this study, the Full Transfer model (Schwartz & Sprouse 1996) is adopted. Schwartz and Sprouse describe *Full Transfer* as the entire L1 grammar composing the L2 initial state. Furthermore, L2 learners will not stay at the stage based on their L1 grammar in their whole L2 learning process. When the L1 grammar is unable to reconcile the properties in the L2 input, learners will restructure their current L1-based interlanguage grammar in response to the properties in the L2 input.

This section is organized as follows: section 3.1 specifies the hypotheses, section 3.2 indicates the test items, section 3.3 describes the participants, and section 3.4 details the procedure.

3.1 Hypotheses

Hypotheses for the study are illustrated as follows:

Hypothesis 1: Assuming Full L1 Transfer, and that participants' interlanguage grammar is at the initial state with respect to null object interpretation, the L1-English-speaking learners will construe embedded null objects in Chinese as variables (since, following Cummins & Roberge (2004), null objects in English can only be interpreted as variables).

Hypothesis 2: If the L1-English-speaking learners have moved beyond the initial state and have restructured their L1-based interlanguage grammar, they will display optionality in the interpretation of embedded null objects in Chinese. In other words, they will interpret embedded null objects sometimes as variables, sometimes as *pro*, or/and sometimes as variables/*pro*.

3.2 Test Items

A grammaticality judgment task was conducted to examine the hypotheses, whereby participants were asked to indicate whether the embedded null objects refer to (A) the matrix subject, (B) someone else, or (C) either. An example of a test item is given below.

- (8) Adam shuo Andy wen e le
Adam say Andy ask Asp
“Adam said Andy asked (him).”

Andy wen shei?
Andy ask who
“Whom did Andy ask?”

(A) Adam (B) someone else (C) either

3.3 Participants

16 L1-English-speaking learners of Chinese participated in the experiment. They were all British and students studying a Chinese degree at UK universities except for one who was working. All participants had learned Chinese for over a year and the majority of them had lived in a Chinese-speaking country from one year to at most 9 years.

3.4 Procedure

Before doing the questionnaire, participants were asked to take the Chinese Proficiency Test, which was from the Chinese Language Testing Centre in the National Taiwan Normal University. The vocabulary/grammar section was used in the proficiency test and there were 40 test items in total. Participants could take their time to do the proficiency test, but were not allowed to use any dictionary, text books or to have any other kind of help. For the actual test, participants were asked to read the test items carefully and to choose the answer that they think most appropriate for the question asked in each test item. Moreover, participants were not allowed to return to the previous test items to change answers, or to attempt to the following test items. Participants were also reminded not to worry about the errors relating to spelling and punctuation. The test was conducted individually with participants or in a group. In principle, there was no time limitation for participants to complete the questionnaire. Generally, it took about 20 minutes for participants to finish.

4. Results

Table 1 below gives the mean ratio/percentage of each response in the interpretation of embedded null objects by the participants.

| Response | Null Objects |
|----------|--------------|
| A | 23/128 (18%) |
| B | 28/128 (22%) |
| C | 77/128 (60%) |

Table 1: Results of null object interpretation by the participants

(Response A represents the option of the matrix subject; Response B means the option of “someone else,” a sentence-external referent; and Response C indicates the option of “either”, either A or B. The ratio represents the number of the response over the total number of responses from the participants.)

What Table 1 reveals is that 60% of the answers indicated response C as the referent of embedded null objects, while only 18% and 22% of the answers indicated response A and response B respectively. The results of *t*-test show that the difference between response C and response A was significant ($t = 4.423$, $df=15$, $p=0.00025$), and so was the difference between response C and response B ($t = 3.069$, $df=15$, $p=0.004$). On this account, it suggests that response C (i.e., either) was greatly preferred by the participants in the interpretation of embedded null objects in Chinese.

5. Discussion

As pointed out above, Cummins & Roberge (2004) propose that a null object in English is A'-bound by a topic and is interpreted as a variable. Thus, Hypothesis 1 predicts that if participants' interlanguage grammar is still at the initial state with respect to null object interpretation, according to Full L1 Transfer, participants were expected to construe embedded null objects in Chinese as variables. Under this principle, participants would highly select response B (i.e., someone else). As is seen in Table 1, however, participants showed a difference picture in the interpretation of embedded null objects. For a better view of the results, Figure 1 below presents the distribution of responses in null object interpretation by the participants.

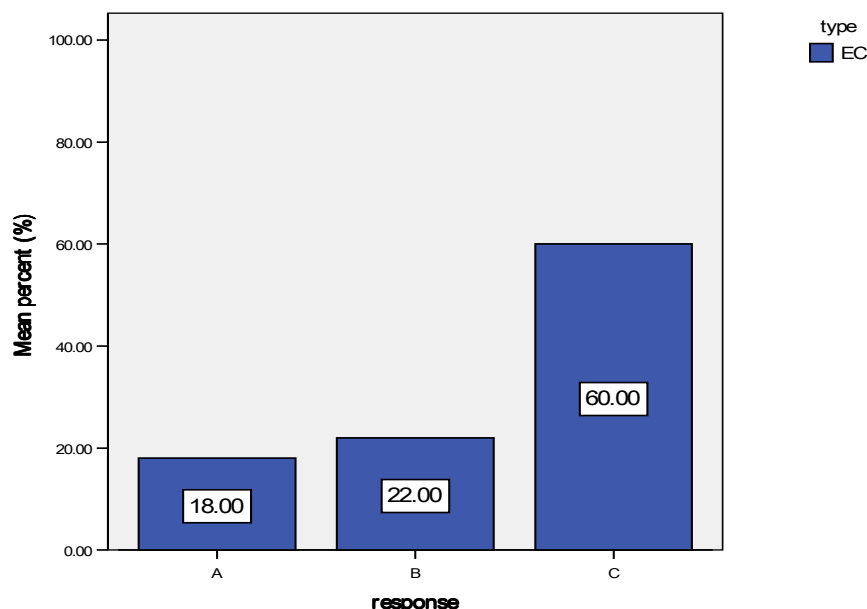


Figure 1: Mean percentage of responses in null object interpretation by the participants (n=16)

From Figure 1, it is clear that response C (i.e., either) was strongly preferred by the participants in the interpretation of embedded null objects. As response C contains the acceptability of response A and response B, therefore, the result means that the matrix subject was accepted as well as a sentence-external entity as the referent of embedded null objects. In such case, it suggests that both variable and *pro* interpretations were embraced by the participants in null object interpretation. In this regard, Hypothesis 1 is not supported by the data.

As to Hypothesis 2, what it claims is that if participants have moved beyond the initial state of L2 acquisition, they will display optionality in the interpretation of embedded null objects in Chinese. In other words, they will interpret the embedded null objects sometimes as variables, sometimes as *pro*, or/and sometimes as variables/*pro*. To be more specific, optionality means participants would sometimes choose response A, sometimes choose response B, or/and sometimes choose response C in their answers. This is to say, their answers should be distributed equally to two or three responses. What we have found from the results, however, is that response C was greatly preferred by the participants in the interpretation of embedded null objects. Notice that this result does not mean that participants interpreted

embedded null objects sometimes as *pro* or/and sometimes as variables. By contrast, what the result suggests is that participants interpreted embedded null objects as *pro*/variables all the time. On this view, Hypothesis 2 is not born out by the data.³

Overall, the findings suggest that participants had L2 syntactic knowledge in the interpretation of embedded null objects. That is, participants were no longer at the initial state of L2 acquisition, and have restructured their L1-based interlanguage grammar in response to the L2 input. Nevertheless, participants did not display the phenomenon of optionality as predicted; instead, they showed a strong preference for interpreting embedded null objects as *pro*/variables all the time.

6. Conclusion

This paper is to investigate how L1-English-speaking learners interpret embedded null objects in Chinese. A grammaticality judgment task was conducted to examine this aim. The results showed that participants had a strong preference for interpreting embedded null objects in Chinese as variables/*pro*. This finding suggests that participants have moved beyond the initial state to the next step of L2 acquisition, and have restructured their L1-based interlanguage grammar in response to the L2 input.

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³ Nevertheless, some participants did display the optionality indicated in Hypothesis 2.

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The Interpretation of Pronominal Expressions in Dyslexic Children¹

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1. Introduction

Developmental dyslexia is as a specific impairment affecting the acquisition of reading and spelling skills, despite adequate intelligence, opportunity and social background, which occurs in absence of physical, neurological, emotional and socio-economical problems (Vellutino 1979). Recent studies show that dyslexia affects around 5-10% of the children, and that it is highly inheritable.

A number of studies have demonstrated that dyslexia is associated with a deficit affecting the verbal component of Working Memory (WM). WM is the memory system responsible for the temporary storage of information during the execution of complex cognitive tasks such as language comprehension, learning and reasoning (Baddeley 1986). The psychological literature provides evidence that typical measures of verbal working memory skills are significantly associated with reading difficulties, with scholastic attainments in reading and in language comprehension, and with measures of phonological awareness, the type of meta-linguistics knowledge most directly involved in learning to read and write (cf. Gathercole and Baddeley 1990; Mann and Liebermann 1984; Alloway et al. 2004; Gathercole and Alloway 2006; Gathercole et al. 2006; Siegal and Linder

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1984; Stanovich et al. 1984). It has been further demonstrated (Gathercole and Adams 1993, Gathercole and Hitch 1993) that WM capacities improve steadily until the teenage years, when it starts leveling off.

In this contribution we intend to present original data from an experimental research that we performed on a group of dyslexic children. We present data from the two experiments. The first experiment tested whether the subject had a preference for the bound variable interpretation over the co-referential interpretation of possessive pronouns. The second experiment tested the subject's ability to correctly process sentences containing referential expressions (in particular zero pronouns and phonetically realized pronouns) according to Ariel's (1991) Accessibility Hierarchy. Both experiments provided interesting results. The first experiment demonstrates that the interpretive choices of dyslexic children were highly predictable. The second experiment demonstrates that dyslexic children, unlike control children, are remarkably impaired in their capacity to correctly interpret and produce referential expressions in accordance with the Accessibility Hierarchy. We conclude arguing that our findings support a model in which developmental dyslexia is due to deficiencies affecting the verbal component of the Working Memory system.

2. Experiment 1

In the first experiment we tested the comprehension of Italian sentences of the type reported in (1).

- (1) Ogni amico di Francesco ha colorato la sua bicicletta
- (2) Every friend of Francesco painted his bike

Sentence (1), as well as its English translation (2), is an ambiguous sentence: It can mean either that all of Francesco's friends painted their own bikes or that each one of Francesco's friends painted Francesco's bike. The two interpretations are associated with different types of underlying anaphoric relations: The anaphoric relation between 'ogni amico di Francesco' and 'sua' is one of variable binding whereas the relation between 'Francesco' and 'sua' is one of coreference (cf. Reinhart 2001). The two interpretations are formally represented in (3) and (4):

- (3) [Every x: friend-of(x, Francesco)](x painted x's bike)
- (4) [Every x: friend-of(x, Francesco)](x painted Francesco's bike)

In plain English, (3) means that for every x such that x is a friend of Francesco, x painted x's bike; (4) means that for every x such that x is a friend of Francesco, x painted Francesco's bike. The aim of the experiment

was to test whether subjects had a preference for one of the two interpretations.

2.1 Materials

The experiment is a Truth Value Judgment Task. The subject is told a story, represented by a set of pictures, concerning a main character and his/her three friends. At the end of the story, a character that has not taken part in the story pronounces the target sentence; the subject is then asked to judge whether the target sentence is a correct description of what happened. Two conditions are tested. In the first condition (condition A) the target sentence is true if the relevant pronoun is interpreted as a bound variable and false if it is interpreted as coreferential with its antecedent. In the second condition (condition B) the target sentence is true in the coreferential interpretation and false in the bound variable one. The judgment expressed by the subject indicates whether the subject has interpreted the pronoun in the target sentence as a bound variable or as coreferential with its antecedent. In the A condition the subject is told a story of the type exemplified in (5).

- (5) Here is Francesco with his three friends. Every kid has a bike and now the kids want to paint their bikes. That's why they brought some spray colors. Francesco's first friend brought three colors; Francesco's second friend brought three colors; Francesco's third friend brought two colors; but Francesco didn't bring any color. Francesco's first friend paints his own bike with two colors and then he paints Francesco's bike with his last color. Francesco's second friend paints his own bike with two colors and then he paints Francesco's bike with his last color. Finally, Francesco's third friend paints his own bike with two colors. Then the Clumsy Inspector arrives and says: "I know what happened: every friend of Francesco's painted his bike!"

After the Clumsy Inspector has pronounced the target sentence, the subject has to decide whether the Inspector has said something correct or not. If the target sentence is judged as correct, it is inferred that the subject interpreted the pronoun "his" as a bound variable. If the target sentence is judged as false, it is inferred that the subject has interpreted the pronoun as coreferential with "Francesco." In the B condition the subject is told a story of the type exemplified in (6).

- (6) Here is Francesco with his three friends. Every kid has a bike and now the kids want to paint their bikes. That's why they brought some spray colors. Francesco's first friend brought three colors;

Francesco's second friend brought three colors; Francesco's third friend brought two colors; but Francesco didn't bring any color. Francesco's first friend paints his own bike with two colors and then he paints Francesco's bike with his last color. Francesco's second friend paints his own bike with two colors and then he paints Francesco's bike with his last color. Francesco's third friend says he doesn't want to paint his own bike, so he decides to paint Francesco's bike with his two colors. Then the Clumsy Inspector arrives and says: "I am sure that every friend of Francesco's painted his bike!"

In this condition, the target sentence is correct under the coreferential interpretation and false under the non-coreferential. Every subject was tested on 6 experimental items, 3 for each condition. Experimental items were randomized across subjects in such a way that it was never the case that the same subject was administered the same story, for instance the "bike painting" story, in both the A and B condition. Conditions were mixed and experimental items were interspersed with unambiguous fillers.

2.2 Subjects

Three groups were tested in the experiment: A group of dyslexic children (DYS) a group of age matched control children (AMC), and a group of younger children (YOU). The DYS group was composed of 18 Italian children (14 male). The group mean age was 9,4 years (standard deviation (SD): 1,4) at the moment of testing. All children were diagnosed as dyslectic by the "Centro Audiofonetico" in Trento, Italy. Diagnostic criteria included: (i) absence of neurological disorders and genetic pathologies; (ii) absence of neuro-sensorial disorders; (iii) absence of psycho-pathological disorders; (iv) IQ above 80 (WISC – R); ability in reading and writing fluently below 2 standard deviations relatively to the subject's age (Tressoldi battery; cf. Sartori et al. 1995). The AMC group was composed of 20 children (3 m) attending primary school with no history of reading and writing problems. The group's mean age was 9;1 years (SD: 0;8). The YOU group was composed of 20 children (8m); the group's mean age was 4;8 (SD: 0;3). YOU were administered a shorter version of the experiment, including 4 experimental trials (and, consequently, 4 filler items) instead of 6.

Almost every subject was able to answer correctly to warm-up and filler items. Only one dyslectic subject (with a particularly severe form of dyslexia) gave incorrect answers to one warm-up item and several fillers and was unable to conclude the experiment; this subject was excluded from the sample.

The first measure collected is preference for the bound variable interpretation. Every true answer given to a Condition A experimental item and every false answer to a Condition B item was counted as a preference for the bound variable interpretation. Every false answer to a Condition A item and every true answer to a Condition B item was counted as a preference for the coreferential interpretation. DYS chose the bound variable interpretation 54% of the times. AMC chose the bound variable interpretation 50% of the time. YOU chose the bound variable interpretation 60% of the times. Difference from chance level, as for what concerns the preference for the bound variable reading, was calculated by means of two-tailed t-test (test value = .5) relatively to each group. The results show that all groups do not significantly differentiate from chance level. DYS: t (SD: 17) = .42; P = .68; ACM: t (SD: 19) = 0; P = 1; YOU: t (SD: 19) = .57; P = .57.

The three groups differentiate in that AMC behaved at chance rate both as a group and individually whereas DYS and YOU included a considerable number of subjects with a strong preference for one of the two readings. Table 1 shows the distribution of AMC and YOU subjects relatively to the number of time they chose a bound variable interpretation out of the six experimental trials.

Table 1

| <i>N. of BV readings out of 6 trials</i> | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
|--|----------|----------|----------|----------|----------|----------|----------|
| <i>ACM</i> | 0 | 1 | 5 | 8 | 5 | 1 | 0 |
| <i>DYS</i> | 5 | 1 | 2 | 2 | 4 | 1 | 3 |

Among the 20 AMC subjects, 1 subject chose the bound variable reading 5 times out of 6 trials, 5 subjects chose it 5 times, 8 subjects 3 times (chance level), 5 subjects 2 times, 1 subject 1 time. Among the 18 DYS subjects, 5 subjects chose the bound variable reading 6 times out of 6 trials, 1 subject chose it 5 times, 2 subjects 4 times, 2 subjects 3 times (chance level), 4 subjects 2 times, 1 subject 1 time, and 3 subjects never chose it.

Table 2 shows the distribution of YOU. Among the 20 YOU subjects, 8 subjects chose the bound variable reading 4 times out of 4 trials; 1 subject chose it 3 times; 6 subjects 2 times (chance level); 3 never chose it.

Table 2

| <i>N. of BV readings out of 4 trials</i> | 4 | 3 | 2 | 1 | 0 |
|--|----------|----------|----------|----------|----------|
| | | | | | |

| | | | | | |
|------------|---|---|---|---|---|
| <i>ACM</i> | 8 | 1 | 6 | 0 | 3 |
|------------|---|---|---|---|---|

Another difference between the groups is that the preferences of DYS and YOU were highly predictable whereas the preferences of ACM were not. In particular, we calculated the probability that two experimental items that occur one after the other in the experiment (although separated by a filler item) were assigned the same interpretation was calculated. In the case of ACM subjects, the condition in which two items in a row are assigned the same interpretation is realized in 40% of the cases. In the case of DYS subjects, the same condition is realized in 67% of the cases. In the case of YOU subjects, this condition was realized in 85% of the cases.

3. Experiment 2

The second experiment aimed at testing dyslexic children's interpretation of referential expressions according to the Accessibility Theory (Ariel 1991). This theory explains how reference assignment works in specific contexts. More precisely, the theory aims at capturing the mechanism that drives the selection of the most appropriate antecedent for a referential expression. The theory assumes that some antecedents are more readily retrievable than others and that speakers select, within a set of available anaphoric expressions, the most appropriate one, in order to help the hearer with accessing the intended referent. Referential expressions are seen as accessibility markers ordered in a precise hierarchy and their position in the hierarchy provides the addressee appropriate instructions for retrieving the antecedent, by indicating how accessible it is in the discourse. The zero pronoun is the highest accessibility marker: its position in the scale informs the addressee that the antecedent to be retrieved has to be the most accessible one; since the most accessible expression of a sentence, i.e. its topic, generally coincides with the subject, the subject is selected as the appropriate referent for the zero pronoun. The phonetically realized pronoun, instead, is a lower accessibility marker and for this reason it informs that the antecedent will be less salient.

Experimental findings have shown that selecting the appropriate antecedent for a referential expression is a quite complex task, imposing a considerable load on WM; moreover, it has been demonstrated that there exists a relationship between this kind of computation and WM (Vender 2008, submitted for publication).

3.1 Subjects and materials

The experimental task was administered to 96 subjects, divided in five different groups: 18 dyslexic children (DC, mean age 9;15), 17 age-matched

control children (AMCC, mean age 9;05), 18 control adults (CA, 30;2), and two groups of younger children, the former composed of 23 children attending the first class of the primary school (FCC, mean age 6;8) and the latter composed of 20 younger children (YC, mean age 4;75).

Experiment 2 was designed to assess the subjects' comprehension of referential expressions, using the Truth Value Judgement Task.

The subject was shown some pictures on a computer screen portraying a short story that involved two characters performing some actions. At the end of the story, the experimenter introduced the subject to a puppet, the Clumsy Detective, whose task was to explain what happened in the short story. The subject was told that the inspector was named "Clumsy" because he could not always correctly describe what happened in the story; so the participant's task was to decide whether the Clumsy Detective provided a correct or wrong description of the story.

The task comprised ten experimental items intertwined with six fillers; there were four different conditions: (i) Zero True, where a zero pronoun was used in a context in which the sentence was true, (ii) Zero False, where the zero pronoun was used in a false context, (iii) Realized True, with a realized pronoun used in a true context and (iv) Realized False, with a realized pronoun used in a false context.

Let us see an example of all four conditions. Context: here are Daisy Duck and Minnie; first, Daisy Duck and Minnie dances together and, after dancing, Daisy Duck goes to the kitchen and prepares dinner. Suddenly, the Clumsy Detective appears and tries to describe what happened. The target sentences uttered by the Clumsy Inspector in the four conditions, are reported below:

- (7) a. *Condition A (Zero True):*
Paperina ha ballato con Minnie e poi Ø ha preparato la cena.
'Daisy Duck danced with Minnie and then Ø prepared dinner.'
- b. *Condition B (Zero False):*
Minnie ha ballato con Paperina e poi Ø ha preparato la cena.
'Minnie danced with Daisy Duck and then Ø prepared dinner.'
- c. *Condition C (Realized True):*
Minnie ha ballato con Paperina e poi lei ha preparato la cena.
'Minnie danced with Daisy Duck and then she prepared dinner.'
- d. *Condition D (Realized False):*
Paperina ha ballato con Minnie e poi lei ha preparato la cena.

‘Daisy Duck danced with Minnie and then she prepared dinner’

The subject’s task was to decide if the Clumsy Detective said something correct or wrong.

3.2 Results

According to the results, DC are remarkably more impaired in comparison to AMCC, while, interestingly, their poor performance does not differ from the one shown by YC, more than four years younger than them. DC show a poorer performance also as compared to FCC, two years younger than them. DC’s error rate (49,99%) was significantly higher than the error rate of FCC (35,65%), AMCC (10%), and CA (2,22%), while DC’s performance does not differ significantly from YC’s performance (50,56%). A one-way analysis of variance shows that DC’s performance differs significantly from AMCC’s and CA’s performance one ($p = .000$) and even from FCC’s performance ($p = .015$). On the other side, DC do not perform differently from YC ($p = 1.000$).

AMC’s and AC’s performance do not differ significantly ($p = .142$), while AMC’s and FCC’s performance are statistically different ($p = .000$). Moreover, FCC’s performance differs significantly not only from DC and AMCC, but also from CA ($p = .000$) and from YC ($p = .006$).

To conclude, YC’s performance resulted to be significantly different from all groups, except from DC ($p = 1.000$).

The results provided by this experiment demonstrate that the performance of DC is remarkably poorer than that of AMCC. Interestingly, DC perform worse even in comparison to children more than two years younger than them (FCC), while their error rate does not differ significantly from the one provided by children more than four years younger than them (YC).

4. Discussion

We propose that the results of the experiments presented in this contribution can be accommodated within a model of developmental in which the primary cause of dyslexic behavior is a poor verbal WM.

As for the second experiment propose that the difficult displayed by the dyslexic subjects in finding a correct antecedent for phonetically realized pronouns is due to their failure to correctly compute a conversational implicature (Grice 1975). In order to appreciate the proposal, consider the following pair of sentences:

- (8) a. Paperina ha ballato con Minnie e poi \emptyset ha preparato la cena.

- ‘Daisy Duck danced with Minnie and then \emptyset prepared dinner’
- b. Paperina ha ballato con Minnie e poi lei ha preparato la cena.
‘Daisy Duck danced with Minnie and then she prepared

Whereas the null pronoun in (8a) is compelled to refer to the subject of the first sentence (i.e. ‘Paperina’), the pronounced pronoun in (8b) can, in principle, refer either to the subject or to the object. However, we assume that the use of the pronounced pronoun to refer to a highly accessible antecedent, such as a subject, is excluded by conversational implicature: if the speaker wanted to convey reference to a highly accessible antecedent, she would have used a null pronoun. According to this interpretive strategy, (8b) can only be true in a situation in which Minnie prepared dinner. However, as it is known in the relevant literature (cf. Chierchia et al. 2001; Reinhart 2006), the computation of conversational implicature is highly demanding in terms of WM resources, since it requires a reference set computation. A reference set computation is a computation that requires the comparison of alternative linguistic representations of the same sentence. As expected, dyslexic subjects, given their poor WM resources, fail to correctly interpret sentences of the type presented in (8b). Moreover, the same failure is found among younger unimpaired children whose WM resources, as it is well acknowledged, are still weak.

As for the first experiment, we propose to justify the results in a similar fashion. Recall that, in Experiment 1, at the end of each experimental condition the subject was faced with an ambiguous sentence, that is, a sentence that can be associated with two alternative meanings. Arguably, the subject had to decide which meaning was more appropriate and, in doing so, she had to keep in WM two alternative representations of the meaning of the sentence. We already referred to this type of computations as reference set computations. Consider also that an essential characteristic of the experiment was that the context provided in the experimental conditions did not help in deciding the meaning of the target sentence. In fact, in the experimental setting, both interpretations, the bound variable and the coreferential, were consistent with the context of utterance and allowed the subject to provide a coherent answer.

Let us see how these observations, combined with the hypothesis that dyslexic subjects are featured by a poor verbal WM, explain the results of the experiment. Control subjects behaved at chance level both as a group and individually. We propose that control children, when faced with a target sentence, processed both possible interpretations and then tried to guess, comparing the two available interpretations against the context of utterance, which interpretation was more appropriate. However, since no interpretation

was favored by the context, subjects tossed the coin and decided arbitrarily for one of the two interpretations, providing the chance level result. As for the dyslexic subjects we propose that, although they could readily process two alternative representations of the meaning of the target sentence, they avoided as much as possible the process of disambiguation. In particular they avoided the reference set computation necessary in order to choose among competing representations of the meaning of the sentence. In order to avoid the reference set computation dyslexics resorted to an alternative strategy: They assigned the same interpretation to most of the items in the experiment. This line of explanation accounts for the fact that dyslexics had a tendency to stick to the same interpretation, no matter which one, in order to avoid reference set computation.

Once again, the proposal is supported by the fact that the results provided by the dyslexic group were significantly associated with the results provided by younger unimpaired children.

5. Conclusion

In this contribution we presented the results of an experimental research we performed on a group of dyslexic children. The results were compared with the results gathered by administering the same protocols to groups of control subject. As we tried to argue, the results of this research can be accommodated within a theory of developmental dyslexia according to which dyslexia is associated with a deficiency selectively affecting the verbal component of WM.

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L2 Idiomatic Comprehension: Do Idioms Reveal Beans or Spill Secrets?

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1. Aim of the study

The present study aims at examining L2 idiomatic comprehension with particular reference to Greek learners' ability to comprehend the meaning of L2 idioms. In particular, it explores the theoretical underpinnings of Glucksberg's idiom comprehension model and challenges his claim that idioms involve the same kinds of linguistic and pragmatic operations used for literal language. This quantitative study takes this challenge as its starting point and presents judgments obtained from adult, Greek native speakers of advanced English proficiency in order to assess Glucksberg's two main hypotheses, firstly, whether idioms retain both their literal meanings as well as their idiomatic ones and secondly, whether idioms' semantic productivity can be independent of compositionality or transparency.

2. Preliminary remarks on idioms

In recent years, we have witnessed a growing interest in the study of idioms, primarily due to their unique status as expressions whose 'non-literal' meanings are highly associated with very specific, and often arbitrary, configurations of words. In more detail, idioms have been viewed as a group of words which when used together in a particular combination, have a different meaning from the one they would have if you took the meaning of each individual word in the idiomatic string separately.

Most definitions draw on two notions, namely, *compositionality* and *transparency*. Idiom **transparency** is viewed as the level of how much someone can find a rationale for why the meaning of an idiom is expressed though that specific form or the level of how much someone can find a link between the meaning of the idiom and the conventional meanings words in the idiom have outside the idiom. With regard to **compositionality**, *the essential feature of an idiom is that its full meaning is not a compositional function of the meanings of the idiom's elementary parts*" (Katz & Postal, 1963: 275). It should be noted that theorists and researchers alike adopt different definitions as to what constitutes an idiomatic expression. What is of immense importance, however, is the fact that their definition depends on two highly-interrelated dimensions, namely, transparency and

compositionality. Hence, the L2 idiom-instruction method proposed by linguists partly depends on their definition of transparency and compositionality.

Since the interest of this paper rests primarily on Glucksberg's idiom comprehension model, I will now turn my attention to the theoretical underpinnings of his phrase-induced polysemy model.

3. Glucksberg's phrase-induced polysemy model

Challenging the traditional claim that metaphors are first recognized as false categorical assertions and then are implicitly transformed into comparison statements, Glucksberg (1997:50) proposes that "metaphors of the form X is a Y may be conceived as statements of property attribution, in which properties of the vehicle Y are attributed to the topic X".

In particular, the interactive property attribution view of metaphor comprehension makes two representational assumptions, namely, that metaphor vehicles and topics play different but interactive roles and that metaphor vehicles have a dual-reference function. More specifically, Glucksberg and Keysar (1990,1993) argue that metaphors such as *my job is a jail* (= *my job is oppressive*) are understood as class- inclusion assertions in which both the topic (*my job*) and the vehicle (*jail*) are cast into a common category, that is situations that are confining and unpleasant. According to this account, the literal referent (actual jails) is a prototypical instance of the figurative vehicle (unpleasant situations). Furthermore, according to the phenomenon of *dual reference* in interpreting a metaphor such as *my job is a jail* the metaphor vehicle can refer either to a prototypical, literal exemplar or to the metaphor category. Hence, the vehicle term *jail* can either refer to actual jails or to oppressive, unpleasant and confining situations.

Shifting his attention to a different type of figurative expression, Glucksberg argues that his dual reference theory can be also applied to idioms. In particular, he claims (2001:78) that compositional-transparent idioms become polysemous through frequent use in idiom contexts and have at least two senses, namely, their default, context-free literal meanings and their idiomatic meanings. Thus, in the idiom context, the verb and the noun *spill the beans* retain their literal meanings, namely, *to be lost from a container* and *edible pulses* but also have the idiomatic meanings of *reveal* and *secrets*. In other words, the phrase-induced polysemy hypothesis of idiom comprehension predicts that understanding an idiom such as *spill the beans* rests on our selecting the appropriate sense of each idiom constituent depending on the context (2001:78).

Furthermore, Glucksberg goes on to claim that semantic productivity can be independent of compositionality and transparency. Instead of being

governed by the formal characteristics of idiomatic expressions or by idiom type, productivity is governed by the same principles that govern such discourse phenomena as adjectival and adverbial modification, quantification and negation. This means that syntactic and lexical flexibility may be relatively independent of idiom type (2001:82-83).

4. Data collection instruments

In order to test Glucksberg's first claim, twenty-compositional transparent, V-NP idioms were chosen from the Collins Cobuild Dictionary of Idioms so as to avoid L1 equivalents. Following Glucksberg, V-NP idioms were preferred because they facilitated immediate mapping of literal senses in contrast to V-NP-PP idioms. The verb and noun of each of the twenty compositional transparent, V-NP idioms were substituted with their literal counterparts in order to see if the literal meanings of such idioms are intimately related to their idiomatic meanings. Their literal counterparts derived from the Collins Cobuild Dictionary of Idioms also involved a verb and a noun phrase (sometimes with the definite or the indefinite article or even with no article at all). Subjects were shown the forty modified idioms and were asked to rate their acceptability on an acceptability scale, ranging from 1 to 5 in the idiom questionnaire (please, see Appendix A).

With regard to Glucksberg's second claim about idiom productivity, a close look at his idiom classification seems necessary. More specifically, this classification, which is based on idioms' degree of compositionality and semantic transparency, proposes four idiom types, namely, a) non-compositional b) compositional-opaque c) compositional-transparent and d) quasi-metaphorical. Thus, in order to test Glucksberg's second hypothesis, adjectival modification, adverbial modification, quantification and passivization were applied to the four idiom types proposed by Glucksberg, using three examples for each idiom type. It should be stressed that I have not used the same idioms in the typology test with the ones in the substitution test since, according to Glucksberg, the substitution test can be only applied to compositional-transparent idioms. So, by definition, the twenty idioms of the substitution test are compositional-transparent. Thus, in the typology test I have used the same idioms in the compositional-transparent category but I was forced to come up with new ones in the remaining three categories, namely, a) non-compositional b) compositional-opaque and c) quasi-metaphorical as is evident in Table 1 below:

| <i>Non-compositional</i> | <i>Compositional-opaque</i> | <i>Compositional-transparent</i> | <i>Quasi-metaphorical</i> |
|--------------------------|-----------------------------|----------------------------------|---------------------------|
| in short | to climb the walls | to sugar the pill | to hit the roof |

| | | | |
|---------------------------------------|--------------------------|------------------------|----------------------------------|
| for keeps | to feather one's nest | to split hairs | to let the cat out of the bag |
| to blow someone to kingdom come | to steal a march | to fill one's shoes | to put your foot down |

Table 1: Idiom types and idioms used in the typology test

The application of the afore-mentioned productive operations to the three idioms of each idiom category above yielded forty-two sentences (please, see Appendix B for the first three sentences) which were rated for their acceptability or non-acceptability by our informants.

5. Subjects

The sample for the experiment consisted of 30 (25 female and 5 male) Greek native speakers of advanced English proficiency whose age varied from 18 to 33. In particular, all subjects were first-year undergraduate students in the Department of English Studies at the University of Athens. A more detailed profile concerning subjects' L2 proficiency, possible immersion in an L2 environment and their experience with idioms was provided through a brief preliminary questionnaire and a self assessment scale (the latter been adopted from Bachman and Palmer 1989), which the subjects filled out before the idiom questionnaire.

Now turning our attention to the subjects' experience with idioms, it was noticed that the majority of subjects (25) has been taught idioms by their language instructor whereas only 5 subjects reported to have received no idiom instruction whatsoever. When they were asked to rate the importance of learning idioms in the foreign language classroom, they scored a mean of 4.33 in an idiom-importance assessment 5-point scale and all stated to have a very strong interest in learning idioms as part of their foreign language study. Whereas all subjects with the exemption of one consider the use of idiom dictionaries very useful, only two reported to always make use of a dictionary to look up the meaning of an idiom.

6. Results of the substitution test

The judgments obtained from the substitution test seem to disconfirm Glucksberg's claim that the constituents of compositional-transparent idioms can be mapped onto the components of the idiom's meaning to a large extent. In more detail, most modified idioms were judged as completely unacceptable or marginally acceptable whereas the majority of participants found only few acceptable idiom variants as is evident in Table 2 below:

L2 Idiomatic Comprehension: Do Idioms Reveal Beans or Spill Secrets?

| Idiom variant | Mean acceptability scores |
|----------------------------------|----------------------------------|
| To pack your place | 0.086 |
| To make hairs | 0.112 |
| To exploit strings | 0.126 |
| To suspect a rat | 0.126 |
| To lose the boot | 0.146 |
| To leave your bags | 0.156 |
| To obtain your batteries | 0.172 |
| To reveal the beans | 0.176 |
| To reduce the pill | 0.184 |
| To take the can | 0.19 |
| To decrease your sails | 0.198 |
| To lower your belt | 0.198 |
| To start the bottle | 0.204 |
| To begin the road | 0.212 |
| To adjust your feet | 0.218 |
| To keep your lips | 0.224 |
| To make the shots | 0.232 |
| To forget the hatchet | 0.238 |
| To take one's shoes | 0.244 |
| To believe the bait | 0.244 |
| To reveal the gaff | 0.258 |
| To hit a journey | 0.258 |
| To get the job | 0.266 |
| To sugar an unpleasant necessity | 0.284 |
| To pull personal connections | 0.312 |
| To button your secret | 0.312 |
| To split distinctions | 0.312 |
| To take the lie | 0.378 |
| To spill the secrets | 0.386 |
| To recharge your strength | 0.398 |
| To bury the quarrel | 0.398 |

| | |
|-----------------------------|-------|
| To trim your expenses | 0.432 |
| To call important decisions | 0.432 |
| To tighten your expenditure | 0.464 |
| To hit the drinking | 0.476 |
| To blow the secret | 0.478 |
| To smell a dishonesty | 0.484 |
| To find your place | 0.496 |
| To fill one's place | 0.538 |
| To carry the blame | 0.544 |

Table 2: Mean acceptability scores of the forty idiom variants in the substitution test

On closer inspection of Table 2, we notice that the biggest degree of unacceptability seems to be exhibited by the idiom variants *to pack your place*, *to make hairs*, *to exploit strings*, *to suspect a rat* and *to lose the boot*. Similarly, the idiom variants *to leave your bags*, *to reveal the beans*, *to reduce the pill*, *to take the can*, *to decrease your sails* and *to lower your belt* had a very low acceptability score. These idiom variants not only reveal idiomatic unacceptability but also bring to light the loss of idiomaticity of such expressions. In other words, such mappings force idioms to lose their idiomatic and metaphorical meanings and become literal expressions as in the examples *to take one's shoes*, *to fill one's place*, *to leave your bags*, and *to forget the hatchet*. Note, however, that in some cases the linguistic meaning of an idiom's constituent may contribute to the idiom's meaning as in example 4, **to trim your sails** \approx **to decrease your expenses** (one of the senses of trim is to decrease) whereas in other instances, the literal meaning of an idiom's constituent may not have any semantic relation to the idiom's meaning as in example 7, **to tighten your belt** \approx **to lower expenditure** (the lexical meaning of the word belt which refers to the long, narrow piece of leather that you wear around your waist does not have anything to do with its idiomatic meaning, namely, expenses).

On the other side, it can be seen that the biggest degree of acceptability was exhibited by the idiom variant *to carry the blame* whereas the idiom variants *to fill one's place*, *to find your place* and *to smell dishonesty* also had a high score of acceptability. What all these accepted modified idioms have in common is that the noun of the idiom in question has been substituted with its equivalent literal counterpart whereas the verb has remained intact. Hence, it seems that participants are far more sensitive

when it comes to substituting the verb component of an idiom with its literal equivalent rather than the noun.

In conclusion, it can be argued that thirty-one out of the forty idiom variants had a mean acceptability score below 0.4 whereas the average acceptability score of all items was 0.246, a rather low score which urges us to reconsider the validity of Glucksberg's substitution hypothesis. The mean acceptability scores we obtained for each individual item as well as overall lead us to infer that such theory is inadequate in dealing with the wide and diverse variety of idioms.

7. Results on the productivity of idioms

Non-compositional idioms: The productive operation of negation when applied to non-compositional idioms did not exhibit a great amount of flexibility or acceptability by the subjects. On the contrary, the productive operation of adjectival modification seems to leave some room for thought about the so called "non-productivity" of non-compositional idioms. The idiom variants *in very short*, *blow to wealthy kingdom come* and *for good keeps* received a warm welcome. Overall, the average acceptability score of all idiom variants was 0.304, again a very low score that challenges Glucksberg's claims.

Compositional-opaque idioms: Passivization and quantification of compositional-opaque idioms had the lowest degree of acceptability by the participants. On the other hand, the productive operation of adjectival modification received a warmer welcome in sentences like *The chairman was busy taking money from the company and putting it into his own bank account*, *feathering his poor nest*, *Manchester United managed to steal a small march over Arsenal*, and *The minute John heard he was fired he climbed the red walls* probably because subjects must have understood its communicative intention. Along similar lines, adverbial modification was also well received by participants in sentences like *John systematically feathers his nest* and *When his wife announced him that she wanted a divorce, John climbed the walls quickly*.

Compositional-transparent idioms: These resist passivization, quantification and adjectival modification as is evident from the low acceptability scores we obtained. The only productive operation that seems to have been well received by subjects is that of adverbial modification. In particular, the following three sentences, namely, *Does John usually sugar the pill when he is talking about his sister's divorce?* *When the boss goes out, I usually fill his shoes* and *This theatre critic is always splitting hairs* were reported to have the highest score of acceptability.

Quasi-metaphorical idioms: Subjects have a great difficulty in accepting adjectively-modified, quantified and passivized metaphorical

idioms in sentences like *Maria let three cats out of the bag when she admitted that she had stolen the money, John had planned to go skiing on his own but his wife decided to put her red foot down and The roof was hit by Mary*. As with compositional-transparent idioms, quasi-metaphorical ones seem to be able to accept only adverbial modifications as the acceptability scores indicate above. In fact, the sentences *My husband always hits the roof when he sees my bills, Susan let the cat out of the bag once when he revealed that John was an alcoholic and John seldom puts his food down when his wife asks him money* were well received by the majority of subjects.

8. Concluding remarks

In this paper an attempt was made to investigate aspects of L2 idiomatic comprehension within the framework of Glucksberg's phrase-induced polysemy model. In particular, it was argued that the aforementioned model has mostly proved inadequate in dealing with the wide and diverse variety of idioms. Moreover, it was shown that the degree of semantic productivity and syntactic flexibility of idioms does not depend on linguistic and pragmatic operations that govern literal language but on the formal characteristics of idiom type. On the basis of such evidence, the idea was put forward that idioms can be described as a radial category since some of them are best considered as large frozen sequences, while others are quite flexible constructions that allow significant variation. Furthermore, the view was presented that although literal and non-literal language processing may occur in the same time course and may involve the same processing mechanisms, it is misleading for a theory of idiom comprehension to assume that some types of idioms behave exactly like literal language. This view can lead to a new line of investigation with respect to this category, that will be based on the kind of data mentioned above and will hopefully yield interesting results.

9. Implications for further research

In summary, there are two important implications of the present study for theories of idiom comprehension. First, Glucksberg's finding that idiomatic language involves the same kinds of linguistic and pragmatic operations used for literal language is not quite right. Although there is a positive correlation between communicative intention and semantic productivity, it is not safe to overgeneralize since differences in the processing of idioms occur not so much because of their syntactic productivity per se, but mainly because of their degree of semantic decomposition and the context in which they occur.

Second, the judgments obtained from the substitutability test seem to disconfirm Glucksberg's claim that the constituents of compositional-transparent idioms can be mapped onto the components of the idiom's meaning to a large extent. Put differently, in their attempt to perform compositional analyses of idiom strings, people assign independent but not necessarily literal meanings that contribute to the overall figurative meanings of the idioms in question. Although, previous experimental research has shown that processing of idioms does not differ significantly from the on-line cognitive processes involved in the comprehension of "literal" language, still the extent and the exact nature of literal language influence remains to be defined.

Now, with respect to experimental research, it is worth mentioning that the results reported so far, seem to disconfirm to a large extent Glucksberg's thesis on idiomatic comprehension. Nevertheless, it should be noted that the judgments we obtained were from L2 speakers of English and not native ones. Alternatively, if the sample of subjects consisted of 30 English native speakers, then we might have had completely different results. In either case, deciding among the above possibilities will require additional research, on both macro- and micro-aspects of idiom comprehension and processing.

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Appendix A Idiom Questionnaire

Purpose: This questionnaire is designed to gather information on how best to teach and learn idioms in foreign languages.

Using the scale range of 1-5 below, how would you characterize the following idiom variants? (Mark one for each) as is indicated in the example:

| |
|-----------------------------|
| 1 = Completely unacceptable |
| 2 = Marginally acceptable |
| 3 = Neutral/Unsure |
| 4 = Acceptable |
| 5 = Perfectly acceptable |

Example:

☐ 1 ☐ 2 ☒ 3 ☐ 4 ☐ 5 to divulge the
beans

1. to spill the beans \approx ¹ to reveal the secrets

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 to reveal the beans
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 to spill the secrets

2. to fill one's shoes \approx to take one's place

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 to take one's shoes
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 to fill one's place

Appendix B

Using the scale range of 1-5 below, how would you characterize the following sentences that contain modified idioms? (Mark one for each)

¹ I will use the notation \approx to relate an idiomatic word to a non-idiomatic near equivalent.

| |
|-----------------------------|
| 1 = Completely unacceptable |
| 2 = Marginally acceptable |
| 3 = Neutral/Unsure |
| 4 = Acceptable |
| 5 = Perfectly acceptable |

1. in short ≈ in few words

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

In very short, that's the meaning of the poem.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

In not so short, I will explain Einstein's theory.

2. for keeps ≈ for ever

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Sarah left John for good keeps this time.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

I am lending you my tennis racket for not keeps.

3. to blow someone to kingdom come ≈ to destroy someone in a violent way

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

After the earthquake, all the houses were flattened and trailers were blown to wealthy kingdom come.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Fortunately, the murderer did not blow John to kingdom come.

Neoclassical Compounds in Modern Greek and English: A comparative view

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1. Neoclassical Compounds in English

Neoclassical compounding, as has been described the word formation process which gives rise to the so-called ‘neoclassical compounds’ has been a very prominent phenomenon in the morphologies of many European languages, alongside English, for the past few centuries. There are a number of controversies surrounding this morphological phenomenon, the most important of them being, whether this process can be incorporated in the native word formation system of the language where it appears, or lies out of it, as it involves borrowed items and nevertheless, exhibits a rather high degree of productivity.

Other important controversies on the process of neoclassical compounding concern a number of parameters relating to its products. One of them concerns the morphological status of the constituent items of neoclassical compounds, which are bound morphemes of Ancient Greek or Latin origin, and is evident from the existence of several different terms adopted or invented in order to name them. Some examples are, ‘Classical Roots’, ‘(Bound) Stems’, ‘Affixes’, ‘Affixoids’, ‘(Initial/Final) Combining Forms’ and ‘Confixes’.

Reasonably enough, all the above terms correspond to different analyses of neoclassical compounds, which have received a certain amount of criticism. To begin with, the status of an affix, has early been defeated, by the simple but significant argument that an affix cannot be a prefix in some words and a suffix in some others, as Scalise (1984) points out, as many of these elements appear both in initial and final position (e.g. *atmosphere* vs. *spherical*, *hydrophobe* vs. *phobia*). Moreover, under such an analysis, neoclassical compounds like for example *biography*, would have to be analysed into a prefix and a suffix (**bio-* *-graphy*). Finally, if these elements were affixes, how would we account for the real affixes that appear in many of them, as for example *-y* in *biography*, *-ous* in *heterogeneous*, *-ical* in *archaeological* and so on? Definitely, all the above imply that these elements should be something more than mere affixes (Scalise 1984), but the most serious argument against this view, is the fact that these elements have greater semantic density than normal affixes.

On the other hand, the term ‘combining form’ which does not constitute a much established morphological term like the more usual ones, is usually adopted in order to describe disputable elements and elements that are found in various contexts, like for example forms arising from blends, or clippings, such as for example *Euro-* or *-(a)holic*. Something similar could also be argued for the constituents of neoclassical compounds, as they regularly appear not only in combinations with each other, but also with native free forms, as in the words *microcomputer* and *filmography*, resembling in this way other combining forms in Bauer’s (1998) terminology.

This idiosyncratic behaviour of neoclassical elements, to appear both in combinations with one another and with native forms could possibly prevent us from classifying neoclassical compounds in a category of their own. However, the fact that there is a vast amount of such words that share very similar characteristics should allow us to recognize a distinct class of them. The main criterion for belonging to that class of neoclassical compounds, could be the degree to which a particular word that includes elements of classical origin, complies with what would be described as the prototype of neoclassical compounding.

The notion of a prototype in neoclassical compounding, also referred to by Bauer (1998), has also been thoroughly discussed by Baeskow (2004: 72) who defines it as the combination of two (or more) bound roots of classical origin. According to her analysis, this process takes place in level 1 of the lexicon alongside the formation of idiosyncratic word forms (e.g. *went*, *children*). Examples of prototypical neoclassical compounds are [[*micro*][*scope*]], [[*astro*][*naut*]], [[*bio*][*log*]], [[*fungi*][*cide*]], [[*anthropo*][*morph*]], [[*geo*][*graph*]], [[*phono*][*electro*][*cardio*][*scope*]]. As it can be seen, some of these are full words, like *microscope*, *astronaut*, *fungicide*, *phonoelectrocardioscope*, while others are only bound root combinations, such as *biolog-*, *anthropomorph-* and *geograph-*. When these bound bases are selected by suffixes, they give rise to full words like *biology*, *anthropomorphic* and *geographer* (73). Suffixation in this case takes place either in level 1 or level 2 of the lexicon, depending on the class of the selecting suffix (e.g. *biolog+y* (Suffix Class I), *geograph#er* (Suffix Class II)¹) and this process is referred to as ‘neoclassical compound derivation’, as derivation is applied after compounding. Both of these processes comprise what we call the prototype of neoclassical compound formation (74).

¹ If the bound base is selected by a class II suffix, its internal structure is no longer visible due to the Bracket Erasure Convention (Baeskow 2004:73).

As far as the morphological status of the elements of neoclassical compounds is concerned, under this analysis, they are regarded as bound stems, rather than as affixes or combining forms. Although the same analysis has been proposed by others, Baeskow's approach is more appropriate because it incorporates two very important features: i) the recognition of a nominal status for the bound stems, and ii) the existence of a linking element. As far as the first parameter is concerned, in contrast to ten Hacken (1994:133), who argues that these elements lack categorical properties and can only acquire them if they combine with suffixes, Baeskow assigns a nominal category to all bound stems that have classical origin. She supports her argument on the fact that there are neoclassical compounds that do not contain any nominalising suffix and nevertheless belong to the nominal category, as for example the word *telephone* (63ff).

The other important feature in this analysis is that concerning the vowel *-o-* (or *-i-* in the case where a bound stem is of Latin origin) appearing in between stems in neoclassical compounds. What is new in this analysis is the fact that this vowel is no longer considered as part of the 1st or the 2nd constituent of these compounds, but rather as a linking element. In the language of origin, namely Ancient Greek, this used to be a thematic vowel that later evolved into a compound marker for Greek compounds (Ralli & Raftopoulou 1999). The fact that in English there are no linking elements, or such compound markers, has led previous analyses² to considering this vowel as part of the initial or final stem (for e.g. *morpho-* or *-ology*).

Baeskow (2004: 87) however, has noticed certain cases, and in particular 'hybrid formations', which are combinations of native free forms with bound stems of classical origin, such as *Egyptologist* or *filmography*, where the *-o-* (or *-i-*) also appears, although it is obviously not part of the initial combining form (**Egypto*, **filmo*). Moreover, many of the bound stems that appear in initial position in neoclassical compounds also appear as bases for plain suffixation, as the words *phonal*, *graphic* and *cephalic* show, without including the vowel *-o-*. For all these reasons, she accounts for this vowel as a linking element in neoclassical compounds (e.g. *astr-o-physics*, *gastr-o-scapy*), thus being consistent with the compound structure in the language of origin. In this way, she can dispense both with allomorphic variants, as ten Hacken proposed (*'morpho'*, *'morph'*) and with combining forms specifically invented for combinations with stems of classical origin, such as *filmo* as it appears in *filmography*.

With the proposed analysis, Baeskow manages to provide the most efficient analysis so far for the words that are described as neoclassical

² Bauer (1998) taking account of the status of the linking vowel in the language of origin, as well as the fact that clipped forms of neoclassical compounds retain this vowel (e.g. *photo*), considers it as part of the initial combining form.

compounds. She argues that there is an infinite number of combinations of bound stems that give rise to new neoclassical compounds, which in her feature-based analysis, she represents with the following configuration frames (99):

- (1) nc-structure 1: [[____/V/][X]]
 nc-structure 2: [[X/V/][____]]
 X = [(bound) root, - Germanic]
 /V/ = /O/ or /I/³

2. Neoclassical compounds in Greek

As we mentioned earlier, the phenomenon of neoclassical compounds exists in many European languages. The language we examine here beside English is Modern Greek (MG), which constitutes a special case concerning the specific morphological phenomenon, because, whereas in other languages, neoclassical compounds consist of non-native bound stems and their formation differs considerably from native compounding processes, in MG the elements involved are native and the formation of neoclassical compounds follows the rules of native compound formation (Ralli 2007a, 2007b). However, neoclassical compounding in Modern Greek shares many more similar characteristics with the same phenomenon in English than what has been so far presumed.

First, we need to take a look at what types of words could be described as neoclassical compounds in MG. Because as we mentioned above what we could characterize as such compounds in MG, actually constitute members of other native compound types, neoclassical compounds in English and other European languages, belonging mainly to scientific terminology, served as a prototype for recognizing a similar class in MG. Therefore, the term ‘neoclassical compound’ is used rather experimentally in the case of MG, and in order to draw a parallel between similar items in the two languages, like for example *biography* in English and *viografia* in MG⁴.

As we saw in English, there are some criteria that would classify a certain word as a neoclassical compound and concern mainly its constituents. These have to be non-native, preferably of classical origin and

³ The linking vowel /I/ usually appears among Latinate constituents and according to Baeskow, in general when the ICF is of Latin origin as in *quadriplegia*, *calciphylaxis*, *semicolon*.

⁴ These two instances belong to the vast class of the so-called ‘internationalisms’ (Wexler 1969). In our case, the term can be used more like a pragmatic description of morphophonologically similar words occurring in different languages, which are formed with elements from Ancient Greek and Latin, and express the same concept.

bound. In MG there is a similar class of compounds that include bound elements. Some examples are the following:

(2)

| | |
|--|---------------------------------------|
| <i>vi-o-γraf(os)</i> ('biographer') | <i>sism-o-γramm(a)</i> ('seismogram') |
| <i>iδr-o-γon(o)</i> ('hydrogen') | <i>γloss-o-loy(os)</i> ('linguist') |
| <i>ipn-o-va-ti(s)</i> ('sleepwalker') | <i>paθ-o-γen(is)</i> ('pathogenic') |
| <i>mikr-o-skop-i(o)</i> ('microscope') | <i>aktin-o-vol-i(a)</i> ('radiation') |

This class of compounds in MG belongs to the broader class of native compounds, which can have the following main structures (Nespor & Ralli 1996):

- (3)
- i) Stem + Stem, e.g. *nixt-o-luluδ(o)*⁵ 'nightflower'
nixt(a) luluδ(i) (infl.suffix)
night flower
 - ii) Stem + Word, e.g. *laxan-aγor(a)* 'grocery market'
laxan(o) aγor(a)
cabbage market

The words we examine, as the examples in (2), belong to the first type, since they consist of stems. The difference of these compounds in comparison to others is the fact that, the stem in final position does not appear as a free form in the language. Stem constituents of Greek compounds and other morphologically complex words are usually bound, but may become free words with the addition of an inflectional suffix as we can see in the examples *nixt(a)* and *loulouδ(i)*, provided above (Ralli 1992). However, this is not the case with the stems under consideration, which still remain bound even after the addition of an inflectional suffix. Namely, *-γraf(os)*, *-γon(os)*, *-va-ti(s)*, *-skop(os)*, *-γramm(a)*, *-loy(os)*, *-γen(is)* and *-vol(os)* which are the final stems of the examples above with an inflectional suffix, are still bound (Ralli 1988, 1992, 2005, 2007b).

Nevertheless, as we noticed in the case of bound stems in English neoclassical compounds, there are different opinions concerning the status of these bound elements in MG, which correspond to different analyses of the compounds these elements appear in. One view, expressed by Giannouloupoulou (2000) is that these elements, such as *-γrafos* in *sismoyraf(os)* ('seismograph') and *-γrafia* in *sismoyraf-ia* ('seismography'), have gradually acquired suffixal characteristics, and should therefore be considered under a new category, namely "confixes" (Martinet 1979,

⁵ Inflectional suffixes in Greek words are presented here in brackets (e.g. (o)). Derivational suffixes are presented with a hyphen (e.g. -ti(s)).

Anastasiadi-Symeonidi 1986). She bases her analysis on the model of ‘secretion’ (Jespersen 1925), also proposed by Warren (1990) for bound stems/combining forms in English. According to that model, part of a complete word is secreted and acquires a new specialized meaning⁶. The word formation process these elements participate in is “confixation”, according to which confixes attach initially or finally to word stems creating new words and could be described more as a type of derivation, than one of compounding.

However, such an analysis as that proposed by Giannouloupoulou, would have the following negative implication: words like *viologyos* (‘biologist’) and *viologyia* (‘biology’), can be no longer morphologically related, but rather constitute products of parallel instances of the same word formation process, i.e. confixation:

- (4)
- | | |
|----|--|
| 1. | <i>vio-</i> + <i>-loyos</i> → <i>viology(os)</i> |
| 2. | <i>vio-</i> + <i>-loyia</i> → <i>viologyia</i> |
| 3. | <i>vio-</i> + <i>-yrafia</i> → <i>vioryrafia</i> |

A rather different view on the status of these elements, is expressed by Ralli (1988, 1992, 2005, 2007b), who examines them through a more diachronic perspective. To begin with, Ralli (2007b: 156ff) recognizes a number of different features that weaken the suffixal character of these items. Specifically, i) they serve as bases to prefixed words, which is evidence that such elements should be considered as stems rather than as suffixes, ii) they carry concrete meaning, in comparison to suffixes which have a more functional role (categorical or relational) or carry a more abstract meaning, iii) they carry valency information, in contrast to suffixes, i.e. information about the obligatory complements of the verbs they come from, and iv) the words they appear in have a compound structure that is recognizable both from the presence of the linking element –o–, which constitutes a compound marker in MG (Ralli 2008) and from the fact that they exhibit recursivity in their structures, which is a common characteristic of compounds in Greek.

As far as the syntactic and grammatical status of these elements is concerned, Ralli (2007b:160ff) supports that they constitute nominal derivatives of a verb base, which are formed through a certain nominalising

⁶ Warren (cf.) includes in the same analysis, both combining forms of classical origin, such as *aqua-*, *astro-*, *neuro-*, *eco-*, *bio-*, *-nography*, *-(a)thon*, *-meter* etc., and other non-classical combining forms like *-gate* (arising from *Watergate*) as in *Yuppiegate*, *-(a)holic* (from *alcoholic*) as in *workaholic*, *-ware* (from *software*) as in *firmware*. Giannouloupoulou (cf.) considers as such the following elements in MG: *evro-* (‘Euro-’), *meta-*, *neo-*, *iko-* (‘eco-’), *paleo-*, *poli-*, *radio-*, *tile-*, *-idis* (‘-oid’), *-ismos*, *-pio* (‘make’), *-piisi* (‘making’), i.e. both initial and final combining forms, which she calls ‘confixes’.

process. One such process is ablaut, according to which, “the change of category is accompanied by the change of the internal vowel of the stem” (Ralli 2005:58, my translation), giving rise to words such as *trox(os)* (‘wheel’), which derives from the verbal base *trex(o)* (‘run’) (*trex*-_V → *trox*-_N), and also to bound elements, such as *-loy*. Some examples are the following (160):

(5)

| Verb | Free derivative noun | Bound stem in compounds |
|-------------------------|-------------------------------|--|
| <i>leyo</i> (‘talk’) | <i>loyos</i> (‘word, speech’) | <i>-loy-</i> as in <i>theoloyos</i> (‘theologist’) |
| <i>klepto</i> (‘steal’) | <i>klopi</i> (‘theft’) | <i>-klop-</i> as in <i>loyoklopos</i> (lit. ‘speech thief’, ‘plagiarist’) |

Another nominalising process which actually gives rise to most of the bound elements in deverbal compounds in Greek is that of conversion which, morphologically, is limited to the mere change of the grammatical category of the stem. E.g.,

(6)

| | | | |
|----------------------------|---|----------------------------|---|
| <i>γraf</i> - _V | → | <i>γraf</i> - _N | as in <i>xoroyrafos</i> (‘choreographer’) |
|----------------------------|---|----------------------------|---|

Finally, the most common nominalising process in MG which also produces bound elements of deverbal compounds is that of overt suffixation, examples of which are the following (162):

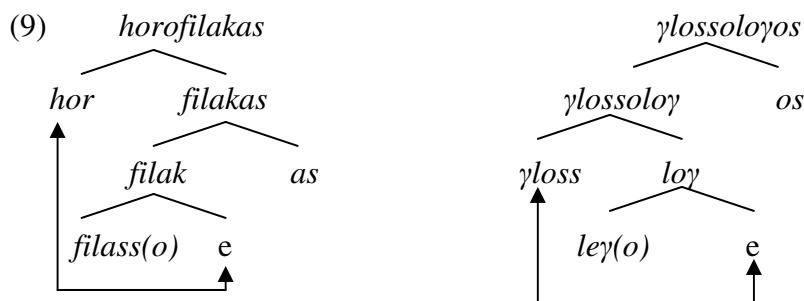
(7)

| | | | |
|------------------------------|---|------------------------------|---|
| <i>den(o)</i> - _V | → | <i>de-tis</i> - _N | as in <i>vivliodetis</i> (‘bookbinder’) |
| <i>θet(o)</i> - _V | → | <i>θe-tis</i> - _N | as in <i>onomatoθetis</i> (lit. ‘name giver’) |

All the above processes more than prove the nominal status, as well as the deverbal character of the bound elements under consideration, which justifies the deverbal nature of the compounds these elements appear in and the relationships holding between their constituents. As a result, these compounds comprise part of the broad class of deverbal or synthetic compounds of MG with which they share a similar structure (Ralli 2005, 2007b). According to Di Sciullo & Ralli (1999), who have dealt with the broader class of deverbal compounds in MG, the deverbal stem carries the features of the verb it derives from, as it happens in synthetic compounds of other languages. The verbal features of that constituent call for theta role saturation by the first constituent of the compound, which, especially in MG appears to satisfy a number of different thematic roles.

Similarly, the bound stems in deverbal compounds impose the same argument structure in the formations they appear in, which is inherited by their verbal base. Below, we see the tree structures of a deverbal compound in MG, *horofilak(as)* (‘policeman’) as it was proposed by Di Sciullo and Ralli (1999) and a deverbal compound with bound stem deriving from

ablaut, i.e. *γlossology(os)* ('linguist'). Theta role saturation takes place in both cases, as the arrows show:



Therefore, the structure proposed by Ralli for complex formations that contain a deverbal bound element is the following: [[word stem][bound stem]](infl.suffix), in which the bound stem can be the outcome of ablaut, conversion or overt suffixation, deriving from a verbal base. This structure can be applied to most of the examples of potential neoclassical compounds in MG that we saw in (2), namely, *vi-o-γraf(os)* ('biographer'), *sism-o-γramm(a)* ('seismogram'), *iδr-o-γon(o)* ('hydrogen'), *γloss-o-loy(os)* ('linguist'), *ipn-o-va-ti(s)* ('sleepwalker'), *paθ-o-γen(is)* ('pathogenic').

Ralli (2007b) has also noticed that most of the deverbal compounds with bound elements serve as bases for the derivation of other nouns, as for example *mikr-o-skop-i(o)* ('microscope') and *aktin-o-vol-i(a)* ('radiation') from our list in (2), which were formed on the basis of the existing or potential deverbal compounds *mikroskop(os)* and *aktinovol(os)*, with the suffixes *-io* and *-ia* respectively. In fact, there is a great number of such derivatives, deriving from deverbal bound stems and receiving suffixes from a small set, namely *-ia_N*, *-io_N*, *-ov*, *-ik_A*. These derivatives constitute deverbal compound derivatives with bound stems and have the following structure: [[word stem]_N[bound stem]_N]+derivational suffix.

3. Neoclassical Compounds in English revisited

Bearing in mind the structure of the deverbal compounds with bound stems in MG that could be described as potential neoclassical compounds we now turn back to neoclassical compounds in English. Below, there are some examples of prototypical neoclassical compounds and neoclassical compound derivatives, according to the analysis proposed by Baeskow (2004):

| | | | |
|------|-------------------|--------------------|-------------------|
| (10) | <i>microcosm</i> | <i>polyglot</i> | <i>microbe</i> |
| | <i>Anglophile</i> | <i>gastroscope</i> | <i>vermicide</i> |
| | <i>xenophobe</i> | <i>carnivore</i> | <i>atmosphere</i> |

*pachyderm**francophone**hydrogen*

As we saw above, Baeskow argues that there is an infinite number of possible combinations between classical roots that can give rise to prototypical neoclassical compounds and no restrictions apply to them. However, she admits that this is not completely true, as there are some bound roots that had verbal features in the language of origin and therefore, are not freely combinable, but impose certain restrictions on their nonheads (101). The parallel that can be drawn through this observation is between such neoclassical compounds in English and the deverbal compounds with bound stems in MG that we have examined above. Indeed, if we look at neoclassical compounds in English with final constituents that derive from verbs in the language of origin, we observe the same situation, namely that theta role saturation takes place, as the nonhead satisfies an internal argument of the verb from which the bound root derives from in the language of origin. Some examples are the following:

| (11) <u>Neoclassical Compound</u> | <u>Bound root</u> | <u>Nonhead</u> |
|-----------------------------------|-----------------------------------|----------------------|
| <i>anglophile</i> | <- <i>phile</i> ('that likes') | <i>Angl-</i> (Int.) |
| <i>carnivore</i> | <- <i>vore</i> ('that eats') | <i>carn-</i> (Int.) |
| <i>hydrogen</i> | <- <i>gen</i> ('that bears') | <i>hydr-</i> (Int.) |
| <i>xenophobe</i> | <- <i>phobe</i> ('that dislikes') | <i>xen-</i> (Int.) |
| <i>gastroscope</i> | <- <i>scope</i> ('that observes') | <i>gastr-</i> (Int.) |
| <i>bibliophag</i> | <- <i>phage</i> ('that eats') | <i>bibli-</i> (Int.) |

Therefore, against Baeskow's claim that no restrictions can apply in the combinations of neoclassical elements in English, there is already a class of roots that carry verbal features and impose a particular structure on the compounds they form. However, if we have a closer look at the list of prototypical neoclassical compounds in the previous page, apart from the ones just described that are repeated immediately above, there are others that do not fit in this structure and should belong to the rest, where no restrictions apply according to Baeskow. But is this the case?

The reason why *microcosm*, *polyglot*, *microbe*, *atmosphere*, *pachyderm* and *francophone* do not belong to the above mentioned class is because their final constituent does not carry verbal characteristics, as it does not derive from a verb in the language of origin. Nevertheless, since these are also compounds, there should be certain relationships that hold between their constituents. A semantic examination of their constituents and their relationships, shows that they are all determinative compounds, either attributive, like *microcosm* ('small' 'world'), *polyglot* ('many' 'language'), *microbe* ('small' 'life'), *pachyderm* ('fat' 'skin'), *francophone* ('french'

'sound') or subordinative like *atmosphere* ('vapour' 'sphere'). However, although things are clearer with *microcosm* and *atmosphere*, as they are hyponyms of their head, namely *cosm* and *sphere* respectively, the situation is quite different with the rest. The reason for that is the fact that *polyglot*, *microbe*, *pachyderm* and *francophone*, all refer to entities that carry the characteristics expressed by their constituents, and are not hyponyms of their heads, which implies that they have an exocentric structure.

Exocentricity is a very widespread phenomenon among neoclassical compounds. It concerns compounds whose final constituent has nominal features and like most neoclassical compounds usually belong to scientific vocabularies. However, only meaning can determine the endo- or exocentricity of a neoclassical compound. An example that depicts this situation comes from the vast area of medical terminology and concerns compounds whose final constituent is the bound root *derm* ('skin'), such as the words *pachyderm*, from the list above, and *mesoderm*. Although, the relationship between their constituents is the same, assigning an attributive character to both of them, their meaning witnesses their different structure. Specifically, *pachyderm* refers to a specific class of echinodermata, such as the star fish, characterized by a particular type of skin, thus having an exocentric structure, while *mesoderm*, refers to the inner layer of skin in embryos, thus having an endocentric structure.

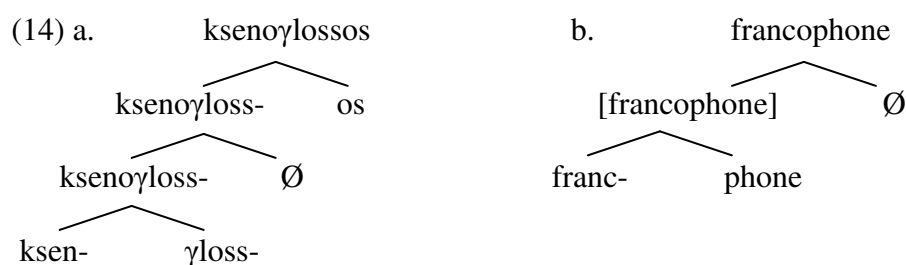
Similar exocentric compounds also exist in MG, and can also be characterized as neoclassical compounds as they are cases of 'internationalisms' belonging to scientific and technical terminology. They resemble deverbal compounds with bound stems, as they have similar inflectional endings, also belong to scientific vocabularies and form derivatives with the suffixes *-ia* and *-ik*. However, they have a completely different structure, as their final constituent is a word stem, carrying nominal features (e.g. 12).

(12)

| | | | | |
|------------------------------------|--------------|---------------|----------------------------|------------------------------|
| <i>ksenoyloss(os)</i> _A | <i>ksen-</i> | <i>-yloss</i> | (< <i>ylossa</i> 'tongue') | ('foreign-language speaking) |
| <i>idrovi(os)</i> _A | <i>idr-</i> | <i>-vi</i> | (< <i>vios</i> 'life') | ('living in water') |
| <i>yallofon(os)</i> _A | <i>γall-</i> | <i>-fon</i> | (< <i>foni</i> 'voice') | ('francophone') |

Both in English and MG neoclassical compounds that are exocentric, the syntactic head lies out of the structure, i.e. their categorial features are not inherited by the head of the structure. As far as exocentric compounds in MG are concerned, how they obtain their categorial features is a point of confusion, because it cannot be through the suffix (*os*) which is only an inflectional one. According to Ralli (2005), these compounds are formed through the process of suffixation, but with a suffix that is not lexically

realised. Null suffixation, therefore, takes place and attributes to the compound new categorial, morphological and semantic features, as we see in tree structure (14a). Similarly in English, except for the fact that there is no inflectional suffix involved (14b):



4. Conclusion

This study has attempted to gain a better insight in the structure of the so-called neoclassical compounds in English, by drawing a parallel with words that could also be considered as neoclassical compounds in MG, and are of two types i) deverbal compounds with bound stems and ii) exocentric compounds belonging to scientific terminology. This comparative view showed that the constituents of neoclassical compounds, i.e. bound roots of classical origin, carry verbal or nominal characteristics which impose certain restrictions on their combinations and determine the structure of the compounds they form. Therefore, the following main types of neoclassical compounds in English have been recognized:

- (i) Neoclassical deverbal compounds, the final constituent of which carries the features of the verb it derives from in the language of origin, calling for theta-role saturation by its first constituent, e.g. *carnivore*, *Anglophile*, *hydrogen*, *vermicide*, *autograph*, *xenophobe*, *psychopath*, *gastroscope*, *bibliophage*.
- (ii) Neoclassical exocentric compounds (attributive), e.g. *allomorph*, *microbe*, *polyglot*, *octagon*, *pachyderm*, *francophone*.
- (iii) Neoclassical endocentric compounds (attributive and subordinative), e.g. *atmosphere*, *microcosm*, *electromagnet*, *mesoderm*.

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Changes in Lexical Derivation in Calabrian Greek: *Innovative Words and Language Death*

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1. Calabrian Greek: a 'dead language'

The *enclave* of Calabrian Greek is situated on the Eastern slope of Aspromonte, in the Reggio Calabria district. *Greco* (often found as *Bovese* in literature), the Calabrian-Greek variety, has been well grounded since the Nineteenth century. The 'traditional *enclave*' includes Condofuri, Amendolea and Galliciano (pop. 5.055 in 2001, see ISTAT 2001), Roccaforte and Chorio of Roccaforte (pop. 802, *ibidem*), Bova (pop. 474, *ibidem*), Roghudi and Ghorio of Roghudi (now desert)¹. Since 1950s, linguistics studies on the area (cf. Rohlfs 1974, Rossi Taibbi, Caracausi 1993, Katsoyannou 1995, Rohlfs 2001) point out that the Greek variety is less and less used in normal communication. According to Marianne Katsoyannou, *Greco* is out of use in every community of the traditional enclave:

Il n'est pas de domaine que lui [au *gréco*] soit réservé en exclusivité; connaître et parler cette langue sont deux choses bien différentes et il nous semble caractéristique que nos informateurs affirment souvent, selon leur propre formulation, 'parler en *gréco* sur demande'. En d'autres termes, *il n'existe pas de domaine ou de situation de communication dans laquelle le *gréco* puisse être considéré comme le moyen de communication habituel non marqué* (Katsoyannou 1995: 35-36).

2. Data and informants

The data I will discuss here were obtained by translation tasks. The questionnaire submitted corresponds, in this part, to the one Gerhard Rohlfs used during the AIS survey in Ghorì di Roghudi in 1924.

Interviews were carried out with at least three informants from each village of the *enclave*, where the variety used to be spoken until 1977: Galliciano, Bova's environs, and Ghorì.

¹ Today, people live in Roghudi Nuovo, a new village built on the seaside near Melito Portosalvo after the evacuation of the ancient community in 1973.

The informants here considered are three: a ‘young’ informant from Bova (Bruno, BT), and two elderly, one native of Ghorìo of Rochudi (Agostino, AS), and the other of Gallicianò (Attilio, AN). The linguistic biographies of these informants are all characteristic of the condition of obsolescence of Calabrian Greek, however in different ways, as far as attitude, uses and learning ways are concerned.

Agostino, a 71-year old retired forest ranger native of Chorìo, learnt *Greco* when he was a child. He won’t speak it anymore out of shame. Attilio, a 63-year old musician native of Gallicianò, learnt *Greco* in his family. Attilio affirms that only when he emigrated to England, he discovered the origin of his mother tongue, that he still uses today only in his song-writing. Instead, Bruno, a 41-year old dentist from Bova, learnt *Greco* during his adolescence, with the old people in his village. He was pushed to learn it by his political ideas.

3. Innovative words

The three informants produced 22 *innovative words* for a sample consisting of the translation from Italian to *Greco* of 119 inputs (words, phrases, and sentences).

According to Susan Gal, *innovative words* are “words which use the word-formation patterns of the language are interpretable by the context but do not appear in the standard or dialect dictionaries” (Gal 1989: 326). Gal assumes that the word-formation devices narrow-users use productively are structurally distinguishable from the ones they have lost [...] those devices which appear with highest frequency in the speech of the broad users are precisely the ones which narrow users [here *semispeakers*] employ innovatively (Gal 1989: 329).

Agostino provides 6 *innovative words*, Attilio provides 12, and Bruno just 3:

a. Agostino: 1. [sti'mia] for It. *sputo* ‘the spit’; 2. [tsɔp:i'menɔ] for It. *zoppo* ‘lame’; 3. [pitsi'kespi] for It. *pizzica* ‘it itches’; 4. [sɔɲ:eg:wi] for It. *sognare* ‘to dream’; 5. [m:ia ɣraf:je'm:ia] / [mia / ɣraf:i'mia] for It. *graffiatura* ‘the scratch’; 6. [ɣraf:i'm:enɔ] for It. *graffiatura* ‘the scratch’; 7. [tsɔ'p:izi] for It. *zoppico* ‘I limp’.

b. Attilio: 1. [si'flai] for It. *fischio* ‘I whistle’; 2. [æspi'ægɔ] for It. *respiro* ‘I breathe’; 3. [ʃ:ɔŋke'm:enɔ] for It. *zoppico* ‘I limp’; 4. [aʃ:uke'm:enɔ] for It. *secco* ‘dry’; 5. [r:u's:eyi] for It. *rusa* ‘he snores’; 6. [eʃ:asti'mia] for It. *incubo* ‘nightmare’; 7. [mblaxe'm:eni] / [b:ra xe'm:eni] for It. *rauca* ‘hoarse’; 8. [eyra'fjeθ:i] for It. *graffiatura* ‘the scratch’; 9. [fisa'leɖa] for It. *bollicina* ‘the blister’; 10. [eŋga'fjeθina] for It. *strinse* ‘he clasped’; 11. [e'st.ɔŋglin:ɛ] and 12. [aʃ:u'kçevgve] for It. *strozzasse* ‘(I thought he was going to) throttle (me)’.

c. Bruno: 1. [an:apa'tidz:o] for It. *zoppico* 'to limp'; 2. [pet:i'mia] for It. *capitombolo* 'the tumble'; 3. [tra:xlɔ'menɔ] for It. *è coricato* 'he went to bed'.

For the same sample in the AIS, 10 *innovative words* are attested:

AIS: 1. [pja'tfej] for It. *mi piace* 'I like'; 2. [sɔ'f:reɔ] for It. *soffro* 'I suffer'; 3. [kure'm:eni] for It. *curata* 'taken care of'; 4. [ε'mɔnevje] for It. *muoveva* 'he moved'; 5. [aɲa'lespi] for It. *essere rigido* 'to be stiff'; 6. [ntsɔn:ε'ti] for It. *sognare* 'to dream'; 7. [εxɔ amflusjɔ'neθtina] for It. *mi sono raffreddato* 'I got me a cold'; 8. [af:u'kçevgve] for It. *strozzasse* 'throttle'; 9. [ar:ap:ε'm:aða] for It. *graffiatura* 'the scratch'; 10. [tsɔ'p:izɔ] for It. *zoppico* 'I limp'.

Bases: types

Most of these *innovative words* (16 out of 22) are derived from a Romance (mostly Italian and Calabrian) base. In 5 cases only the base is unquestionably² *Bovese*:

1. AS: [sti'mia] for It. *sputo* 'the spit': Bov. (b) [stin:ɔ], (ch) [θt:in:ɔ], (g) [t:in:ɔ] 'I spit' (IAEIKI V: 331, LGII: 430).

2. AN: [εf:asti'mia] for It. *incubo* 'nightmare': Bov. [fadz:ɔ] 1. 'I shade' 2. m.pass. 'I am afraid', 'I am frightened' (IAEIKI V: 20).

3. BT: [an:apa'tidz:o] for It. *zoppico* 'to limp': Bov. (g, b) [pa'tidzɔ] 1. 'to press down' 2. 'to tread, to press' (IAEIKI IV: 131-132, LGII: 390).

4. BT: [pet:i'mia] for It. *capitombolo* 'the tumble': Bov. [pe't:ɔn:ɔ] 'I go up', 'I climb' (IAEIKI IV: 168-169, LGII: 398).

5. BT: [tra:xlɔ'menɔ] for It. *è coricato* 'he went to bed': Bov. [tra'klɔ] In the IAEIKI V: 170: 1. 'lying down', 'bedridden'; 2. used as a noun denoting 'a field, a plain'. In the LGII: 137-138 'curved', 'bent', 'went to bed'.

Note that three of such bases are given by Bruno, and account for all the *innovative words* produced by this informant. In one case, the word is probably a loanword from French. The form [si'flai] is provided by Attilio, who lived 15 years in the French part of Switzerland, to translate It. *fischio* 'to whistle'.

However, this type of base does not concern *semispeakers* only. Among ten AIS *innovative words*, bases are Romance in 8 cases out of 10. In two cases,

² In two cases, the Romance base is Calabrian, but of Greek origin, see for AN's [bra xε'm:eni] both, Cal. (r) [mbra'xari] 'to grow faint', (r) 'to be hoarse' (NDDC: 406) and Bov. [vra'xɔn:ɔ] 'to be hoarse' (IAEIKI II: 76, LGII: 95-96). For the AN's [fisa'leða] see above.

moreover, words are not attested at all, namely [aŋa'lespi] and [ˈexɔ amflusjɔ'neθtina].

Change in the base meanings

In some cases, the bases we have just seen show different meaning features compared with the Italian entrance. This can be due to some facts which are different both on the analysis level (diachronic or synchronic, semantic or morphological) and in nature (idiolectal or not, more or less conscious).

A diatopic and diachronic observation can maybe help us to understand the complex value of the form [fi'salɛd̪:a] that Attilio produced in translating It. *bollicina* 'blister'. In Bovesese, the lexeme [fi'sala] is recorded only with the meaning of 'bladder' (see IAEIKI V: 341, LGII: 549). Maybe, the ancient meaning of 'bubble' attested for Ó φῦσα as 'bladder' (see Liddell & Scott 1968) – and now found only in the Catanzarese dialects, cf. NDDC: 269 – has survived in Attilio's idiolect as well. Otherwise, it is likely that derivation from [fi'sala] via the diminutive suffix -éd̪a (cf. GSDI: 164) is no more productive, and that the form is a relic of the process (a Latin-Greek interference?) through which the meaning of 'bladder' was separated by the meaning of 'blister' or 'swelling'.³

Also, the use of Bov.

[pa'tidzɔ] *hto press down_H or hto tread, to press_H* (cf. (IAEIKI IV: 131-132, LGII: 390) in the form

[anapa'tidzɔ] *provided by βruno for it. zoppico hɪ limph_H, presumes* a change in meaning of this verbal base. Probably, the *Greco* form is here interfered by M.Gr. πατώ 'to tread', used in some contexts also with the meaning 'to walk'.⁴

Another slight change has to be signaled for the base of the *innovative word* [ɛŋga'fjɛθina] used by Attilio in translating It. *strinse* 'he clasped', Cal. (r) [ŋga'fjari] 'to connect', 'to fit' or 'to be trapped' (NDDC: 464). It is in this third meaning that Attilio seems to integrate the form in Bovesese. The Calabrian form is selected on the grounds of a meaning it only takes on in particular syntagmatic contexts:

³ Note that the Bovesese form [fi'sala] is isolated in the Greek linguistic system, cf. Chantraine (1968) s.v. φῦσα. The Bovesese form, moreover, is derived from A.Gr. Ó φουσαλλίς meaning, principally, 'blow', 'bellows' and 'bladder' (cf. Liddell, Scott 1968). The meaning of 'blister' and 'bubble' is attested only in Lucianus in the II century B.C., but it is the main semantic trait of Lat. *physālis* (cf. Forcellini III: 706). It seems to me that in Calabrian [fi'sala] we can find both the Greek and the Latin meaning.

⁴ See M.Gr. μην πατάς ξυπόλυτος 'don't tread barefooted' vs. It. *non camminare scalzo* 'don't walk barefooted' but **non calpestare scalzo* 'don't tread barefooted'.

[1][*m̃εηγα'f̃jεθina* / *m̃ε'η'gaʃ:u nda 'mɔrsa* / *ε k:ala'brese*]
I am trapped in a vice... it's Calabrian

Note, however, that the change in base is not characteristic of *semispeakers* either. In the only nominal *innovative word* recorded for the sample in the AIS, the form [*ar:ap:ε'm:aða*] for It. *graffiatura*, ‘the scratch’, the Calabrian verbal base (see Cal. [*ar:a'p:ari*] ‘to wrinkle’, NDDC: 93) has a distinct meaning from that of the Italian entrance *graffiatura*, without any link with the meaning traits of the Italian entrance.

Derivational devices

‘Derivational devices’ are here viewed in a broad meaning. In this perspective, we can consider *innovative words* also those forms derived by suffixation via verbal class, that is to say via suffixes of Bovesse which do not either have a full lexical meaning or do perform a morphological function only. *Innovative words* here analyzed can be grouped in forms derived by: 1. attested suffixes; 2. verbal class markers, i.e. elements described in grammars as verbal class suffixes; 3. past participle suffixes; 4. an innovative suffix.

1. Attested suffixes

‘Proper’ derivational devices are employed by Attilio and Bruno only once respectively. Moreover, as we have just seen, the change in meaning/s in the base [*fisal'εq:a*] could suggest that, even if the lexical form is evidently due to a suffixing process from Bov. [*fɪ'sala*] with Bov. *-εq̣q̣a* (see GSDI: 164), the word is not perceived as a derived form by Attilio.

In the translation provided by Bruno for It. *zoppico*, ‘I limp’, the meaning of the Bov. verbal prefix *aná-* is not clear (cf. GSDI, LGII: 32-36, Καραναστάσης 1997: 130-131). This suffix is recorded in *Greco* with several meanings: it can express upward direction, it can intensify the meaning(s) of the verb being referred to, or be indicative of the iterative action expressed by the verbal base. As an alloform of privative Gr. *α-*, the form *aná-*, can be also attributed a privative meaning (see GSDI:177). Maybe, both meanings, the privative and the intensifying one, state grounds to an innovative use of the prefix to express ‘diversity’, ‘oddity’, as in Modern Greek or other Greek varieties: see Otr. [*anapɔ'djadzɔ*] ‘I deform an intact object’ (see IΛEIKI I: 176-177) and M.Gr. *αναποδιάζω* ‘be or become a strange person, with a bad mood or bad character’ (ΛKN: 103).
 To these conditions,

[anapa'tidzɔ] will approximately assume the meaning *hto tread the ground in a not normal way*_H, as implied by the Italian input.

2. The Verbal Class Markers

Elements such as -áo, -éo, -évo, -éwo, -égwo, -ízo, are described in grammars as verbal class suffixes. In particular, -éo, -éwo, -égwo, all from A. Gr. -έω (cf. GSDI: 120 and Καραναστάση 1997: 96), are described as very productive in the introduction of verbal loanwords. In this use, they are recorded in both the *innovative words* of AIS and in those of my elder informants.

For the sample I am considering here, the class markers in ‘suffixed loanwords’ found in AIS never lose their grammatical value. Also in the form [ˈexɔ amflusjɔˈnɛθina] for It. *mi sono raffreddato* ‘I got me a cold’, the element -éthina keeps its morphemic features (first person of the passive aorist), whereas the presence of the auxiliary has probably to be considered as a hesitation.

On the contrary, sometimes *semispeakers* use these class markers without recognizing their grammatical features, with the result of a translation that suggests the loss of their grammatical value.

In particular, in Agostino’s *innovative words* the class marker and its morpheme keep the grammatical features required by the Italian entrance two times out of three, whereas in Attilio’s we see it happening in three forms out of six.

The grammatical value loss in some verbal class markers (and morphemes) can be seen in the use of -étthi in [eyraˈfjeθ:i] provided by Attilio for It. *graffiatura* ‘the scratch’, and -éthina in [ɛŋgaˈʃɛθina] for It. *mi strinse*. The elements are recorded in GSDI: 120-121 as marks, respectively, of 3rd and 1st person of passive aorist of verbs in -éo < A.Gr. -έω.

A similar case is found in Attilio’s translation of It. *mi strozzasse*, governed by *credevo*, [ɛˈstaŋglin:ɛ]. Here, the element -ínne is recorded in GSDI: 117 as the aorist morpheme of class verbs in -énno, loses its aspectual value since it depends on a non-punctual form, as in [ɛˈpistɛya] (1st person, Imperfect).

In this case also, a recognizable morpheme is thus used to integrate a verbal form rather than providing any grammatical information. This could be true also for the form -[ˈɛsp] used by Agostino in [pits:iˈkɛspi] for It. *pizzica* ‘it itches’. In Καραναστάση (1997: 96), GSDI: 121, the element is reported as the aorist suffix of verbal forms in -égwo, -éggo or -éo. The form is in an If-clause expressing probability (input was *gratta se ti pizzica la rognà* ‘scratch yourself if the mange is itching you’) where present simple is normally used (as in the apodosis, too).

3. The Past Participle Suffix

Another morphological suffix used by my informants in the production of non-attested forms is the passive participle suffix *-méno*. According to Rohlf's (cf. GSDI: 100), it should have a mainly predicative value:

- [2] [tɔn] [ivra] [tʃum]-[i] -[mɛn] -[ɔ]
 him find PFV.1SG sleep - VCLM - PTCP.PASS.PFV. -ACC.M.SG
 'I found him sleeping'

The scholar notes that it was used also with auxiliaries, either in Bov. - [im:ɔ] 'I am', to clarify the patient role of the subject, or in Bov. [exɔ] 'I have', to express the state or the action result:

- [3] [itɔ] [spa]-[m:ɛn] -[ɔ]
 COP.IPFV.3SG. kill - PTCP.PASS.PFV. -NOM.M.SG
 'he was killed'

Different meanings are often attributed to 'innovative' past participles provided by my informants. The absolute forms show a resultative meaning, rather than a clearly predicative value. The form [traˌxlo'mɛnɔ] offered by Bruno for It. *è coricato* 'he went to bed' exhibits no copula, and seems to be derived from the Bovesè adjective [tra'klɔ] 'splay' (and 'lying down') rather than from the Bovesè verb form [tra'klɛnɔ] or [tra'klɛnɔmɛ] 'I lie down', for which the past participle form [tra'klɛmɛnɔ] is attested, see IAEIKI V: 169, LGII: 138. The same attributive value is implicit in Attilio's translation of It. *secco*, 'dry', through the *innovative word* [aˌfuke'm:ɛnɔ]. See the translation:

- [3]
 ['sik:ɔ] [...] ɔ aˌfukɔ'mɛ [...] a aˌfuke'm:ɛnɔ / ke wol 'dire aˌfuyato]
 '['sik:ɔ] or [aˌfukɔ'mɛ]... [aˌfuke'm:ɛnɔ], that means dry'

Here, the tendency to 'lexicalize' the participle suffix of *Greco* is clear, because the suffix is used for the formation of adjectives too, and not only as a grammatical morpheme. This feature is nearer to the semantic traits of the Italian past participle in its adjectival uses than to the Bovesè meanings. Also, in *innovative* past participles preceded by the copula, *semispeakers* seem to attribute a resultative meaning rather than a pure passive one, typical of the Italian past participle that, when preceded by the copula, expresses only the result of the verbal action, without any relation to the

context of enunciation (see the concept of *pura compiutezza* ‘pure accomplishment’ in Bertinetto 1989: 95).

- [4] AS: 1. for It. *graffiatura* ‘scratch’
 [ˈisɛ] [ɣraf:] -[i] -[ˈmɛn] -[ɔ]⁵
 COP.PRES.2SG. to scratch -VCLM -PTCP.PASS.PFV. -
 NOM.M.SG
 ‘You are scratched’
2. for It. *zoppo* ‘lame’
 [ˈɛnɛ] [tsɔp:] -[i] -[ˈmɛn] -[ɔ]
 COP.PRES.3SG. to limp/lame -VCLM -PTCP.PASS.PFV. -NOM.M.SG.
 ‘He is limped’
- AN: for It. *zoppico* ‘I limp’
 [ˈɛnɛ] [tsɔŋk] -[ɛ] -[ˈm:ɛn] -[ɔ]
 COP.PRES.3SG. lame -VCLM -PTCP.PASS.PFV. -NOM.M.SG.
 ‘He is lame’

The resultative meaning (and the attributive function) is found also in Katsoyannou’s past participle examples:

- [5] Katsoyannou (1996: 355):
 [ˈɛn] [ɛm] [prandɛ] -[ˈm:ɛn] -[i],
 NEG. COP.PRES.3SG. to get married - PTCP.PASS.PFV. -
 NOM.F.SG.
- [ma] [ɛ] [mi] -[ˈm:ɛn] -[i]
 CONN. COP.PRES.3SG. mix -PTCP.PASS.PFV. -NOM.F.SG.
 ‘She is not married but she is dishonored’

Also, the non-attested passive participle recorded in AIS for the sentence *fu ben curata*, seems to me to have a similar meaning, even if here, the input in the selection of the translating material could play a role too:

- [6] [ˈitɔ] [kaˈl] -[i] [kur] -[ɛ] -[ˈm:ɛn] -[i]
 COP.IPFV.3SG. good -NOM.F.SG care -VCLM -PTCP.PASS.PFV. -NOM.F.SG

These ‘innovative’ uses of the passive participle mark are attested also in the Greek variety spoken in Apulia, and are particularly similar to those

⁵ Note that this form is given as a provisional one. As we can see below, it is linked by Agostino to the innovative suffix *-imía*.

found in Calabrian Romance dialects and to some uses in Italian, for example Cal. *è zoppatu*, It. *è azzoppato*.

The changes in the uses of past participle among *semispeakers*, the AIS informant and Rohlf's Grammar records, seem to me to be the results of a long-term interference process between Romance and Greek participles, more than a fact due to a decay condition of the variety⁶.

4. The innovative suffix *-imía*

All three *semispeakers* of *Greco* produced *innovative words* with an element *-imía* suffixed to verbal bases attested either in Romance or in Bovesè:

1. *[sti'imía]* provided by Agostino in translating It. *sputo* 'the spit';
2. *[m:ia ɣraf:je'm:ia]* (or *[mía / ɣraf:i'mía]*) used by the same informant for It. *graffiatura* 'the scratch';
3. *[eʃ:asti'mía]* created by Attilio in translating It. *incubo* 'nightmare';
4. *[pet:i'mía]* provided by Bruno for It. *capitombolo* 'tumble'.

Hence, *-imía* is probably a non-recorded de-verbal suffix that has assumed a central role in *semispeakers'* derivational devices for different but convergent reasons:

1. We find the phonetic sequence *-[i'mía]* in a good number of *Greco* lexemes of different origins, as in Byz. γνώριμία 'knowledge', in Bov. *[flasti'mía]* 'insult', 'offence' (< A.Gr. βλασφημία 'word of evil omen', IAEIKI V: 273) or bov. *[flɔɣi'mía]* 'burn' (< Bov. *[flɔɣima]* 'blister from a burn' + suff. *-ía*, see IAEIKI V: 278).
2. The de-verbal functions of the Bovesè suffix *-ía* are not easily recognizable by *semispeakers*, in particular by the elderly. Only Bruno, most consistently than other informants, translates the derivational functions of *-ía* with 17 out of 17 forms, maybe referring them to Italian resultatives. Note, however, that all informants, at least in one case and always when the suffix is embedded in the *-[i'mía]* sequence, provide Italian non-attested forms derived by Italian suffix *-ata*. Bruno and Agostino re-translate, respectively, Bov. *[aŋgali'mía]* 'hug' with Italian non-attested forms, **l'abbracciata* e **l'angalata*, probably derived by It. suffix *-ata*. The same process is involved in Attilio's retranslation of Bov. *[fur:i'mía]* 'batch' with **la fornata*.

⁶ See some interesting participles of the Greek variety of Apulia as Otr. *[agaipato]* 'loved' or *[du'latɔ]* 'served' (cf. GSDI 2001: 114), and, furthermore, some Ancient Greek adjectives as those recorded in Hatsidakis (1892: 184): *δρυσάτος*, *στηθάτος*, *φρυγᾶτος*, *τρεχᾶτος*.

So, from the analysis of retro-translations, it seems that *semispeakers* can recover the meaning of the suffix only by analogy with Italian suffix *-ata*, and only when it occurs in the *[-i'mia]* sequence.

3. A long-term interference process between Romance and Greek past participles, that now pushes the functions of *Greco*'s past participle closer to the Romance ones, Italian in particular (see par. 3. *The Past Participle Suffix*).

4. These facts can possibly play a role in the emergence of interference processes with the Romance derivational pattern for which **graffiata* 'scratch' is lexically formed on the basis of *graffiato* 'scratched' (cf. Scalise 1995: 490; Serianni 1989: 639). This hypothesis can be also borne up on a perceptual basis, because of the textual comments provided by informants. A particularly interesting text is produced by Agostino for his translation of It. *graffiatura* 'scratch':

[7][.]'"" 'ise: [.]'m:ia yraf:je'm:ia [.]'mia / yraf:i'm:ia 'una yraf:ijat
a [.]'yraf:i'm:ia / 'ise yraf:i'm:enɔ / yraf:i'm:enɔ]

'You are.... one scratch.... one scratch.... one scratching... scratch... You are scratched'

Here, not only does the informant spontaneously retranslate the *innovative word* *[yraf:i'mia]* with It. *graffiata* 'scratch', but he also imposes a relation between *[yraf:i'mia]* and *[yraf:i'm:enɔ]*. This relation is maybe analogous to that existing between It. *graffiata* and *graffiato*.

The interference in the derivational pattern (at least for Agostino), the loss of de-verbal functions of Bov. *-ía*, the interference between *Greco* and Romance varieties in the past participle functions, state grounds for the reanalysis, as a de-verbal suffix, of an attested morpho-phonetic sequence.

Conclusions

As predicted by Gal (1989), *semispeakers* use lexical suffixes as formation devices differently from those attested for the variety in the Atlas:

1. All my informants differ from the AIS informant in their producing forms with a non-described derivational device they use consistently, that is the de-verbal suffix *-imía*. The emergence of this 'enigmatic' suffix is probably due to convergent and ancient interference processes that encourage speakers to 'lexicalize' a morpho-phonetic sequence.

2. No-one, instead, uses the deverbal suffix *-áda* (cf. GSDI: 158 and Καραναστάση 1997: 122) as the AIS informant does for *[ar:ap:ε'm:aða]* (in translating It. *graffiatura* 'the scratch'), the only nominal *innovative word* attested for the sample in AIS.

3. The past participle suffix presents a lexical use with a resultative meaning that falls within a group of values ranging from predication to attributive ones; the selection of such value is different between older and younger informants, confirming that the new, pure resultative and attributive value is part of a long-term interference process.

4. Instead, something different happens as far as verbal class markers are concerned. In this case, it is not the lexical functions that are being lost, but the grammatical features. In the *innovative words* produced by the two older informants, these markers are lexically used in line with AIS, i.e. as devices introducing verbal loanwords in Boves. To understand whether it is a peculiar phenomenon of decay, or an old process of change, now more evident for the condition of decay of the variety, more investigations are needed from a pure grammatical perspective.

Also, other facts involved in the production of *innovative words*, such as the considerable amount of Romance forms, mainly in verbal elements, are not exclusive of *semispeakers*.

Therefore, these innovations in suffixes (lexical or not) are not so ‘new’ after all. In this perspective, *innovative words* seem to be part of ancient change-trends due to deep, ramified, and systematic interference processes. Maybe the condition of obsolescence makes their emergence somewhat easier, being the use of the variety less bounded to communicative norms.

Abbreviations

Bov. = Greek Variety of Calabria – Bova. (b) = allophorms of Bova; (ch.) = allophorms of Ghorio of Roghudi; (g) = allophorms of Gallicianò.

Cal. = Calabrian Dialects: (c) = Calabrian Dialect of Cosenza’s Area; (m) = Calabrian Dialect of Catanzaro’s Area; (r) = Calabrian Dialect of Reggio’s Area.

Otr. = Greek Variety of Apulia.

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Preliminary Observations on Derivational and Headedness Properties of Diminutive Suffixes in Bulgarian¹

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1. Background.

Diminutivization is a common derivational process in Bulgarian language, suffixation being the basic mechanism for producing diminutives. Nouns, adjectives, pronouns, numerals, adverbs, and verbs are diminutivized. In this paper we will address the suffixes that produce diminutives from nouns. Properties of these suffixes which constitute evidence for derivational character and headedness will be examined.

Contradictory opinions regarding the status of diminutive suffixes in morphology have been expressed by linguists.

Thus, Anderson (1982 in Bybee 1985) reports that diminutive suffixes in the language Fula are inflectional. Ralli (1988) claims that diminutive suffixes are derivational and heads of their formations in Greek and Booij (1996) claims the same for Dutch. Analyzing the properties of evaluative suffixes in Italian Scalise (1988) proposes that they form a separate category situated between inflectional and derivational suffixes and therefore cannot be heads of their formations. Dressler and Merlini-Barbatesi (1994) claim that diminutive suffixes in European languages are not inflectional, but neither are they prototypical representatives of derivation. Still, they believe that there is no sufficient evidence to assume that evaluative suffixes form a separate category. Investigating the behaviour of diminutive suffixes in Standard Modern Greek and some Modern Greek dialects Melissaropoulou and Ralli (2007) argue that they are derivational and constitute heads of their constructions. Apparently, it is linguistic variation that causes the lack of agreement on the nature of diminutive suffixes.

Melissaropoulou and Ralli (2007) suggest an interesting approach of viewing diminutive suffixes that accounts for linguistic variation as the main source for their diverse nature crosslinguistically. They further develop Scalise's proposal for positioning diminutivization between derivation and inflection claiming that since there is no clear-cut borderline between the two morphological processes, diminutive suffixes cannot form a separate subcategory. Adopting Bybee's (1985) idea of a morphological

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continuum with pure inflection and pure derivation at the two poles, the authors suggest that diminutive suffixes are positioned in between and their being closer to one pole or another is a matter of linguistic variation and a matter of the properties of the particular suffix. These statements are in line with Ralli's (2005) position that a morphological process or a certain characteristic may be derivational in one language, but inflectional in another one. Furthermore, they suggest that word formation processes and affixes are positioned in a scalar hierarchy within the continuum. This suggestion gives an account for the fact that some diminutive suffixes do not behave like typical derivational suffixes.

The model proposed by Melissaropoulou and Ralli (2007) will be used as a framework for a preliminary investigation of the status of Bulgarian diminutive suffixes. In the following part of this paper we will try to demonstrate that they display derivational and headedness features.

2. Bulgarian diminutive suffixes.

Like most Slavonic languages Bulgarian has a rich system of diminutive suffixes, diminutivization being a highly productive process (Krâstev 1976). Nouns, adjectives, numerals, adverbs, pronouns and verbs are diminutivized by means of suffixation. The distribution of diminutive suffixes is subject to categorial restrictions, i.e. they select bases of certain category. In this paper only the suffixes that select noun bases will be addressed. Their behaviour will be examined with respect to their position within the diminutive formation, their distribution, the alternation of diminutive suffixes, the semantic change they bring to the base and the assignment of gender value to the construction they create. It is suggested that in regard to the above issues they share common properties with derivational suffixes and heads of complex words.

2.1. Position within the word.

It has been argued that inflection and derivation appear in different positions within the structure of a word. According to Plank (1994:172) derivational suffixes are generally positioned closer to the base than inflectional suffixes which are situated in the periphery of the word.

The position of Bulgarian diminutive suffixes within the word shows derivational character since they are not peripheral – the inflectional morphemes indicating number and definiteness follow them as can be seen in the examples below.

(1)

| | |
|--------------|---|
| a. snjagØ > | snež-ets-ât |
| snow-MASC.SG | snow-DIM.MASC.SG-DET/ 'the little snow' |
| b. gor-a > | gor-ička-ta |

| | |
|---------------|---|
| forest-FEM.SG | forest-DIM.FEM.SG-DET/ 'the little forests' |
| c. palt-o > | palt- ents-a-ta |
| Coat-NEU.SG | coat-DIM.NEU-PL-DET/ 'the little coats' |
| d. dârv-o > | drâv- če-ta-ta |
| tree-NEU.SG | tree-DIM.NEU-PL-DET/ 'the little trees' |

2.2. Distribution of diminutive suffixes.

Within the category in which they are productive the diminutive suffixes are not distributed freely, but in accordance with certain limitations. Crosslinguistically the application of diminutive suffixes is subject to restrictions of phonological, morphological, syntactic and semantic nature (Grandi 2002:113). For the sake of brevity in this paper we will focus our attention on the most important limitation that governs the distribution of Bulgarian diminutive suffixes, namely the gender of the base they are attached to. This restriction was chosen as criterion for the division of diminutive suffixes into two groups.

In what follows we briefly present the distribution of diminutive suffixes that attach to noun bases to provide the unacquainted reader with a general picture of this morphological category in Bulgarian.

2.2.1. Group A.

This group comprises the suffixes whose distribution is limited to bases of one gender value i.e. they select only masculine, only feminine or only neuter bases. In derivation the gender of the base is preserved.

Masculine diminutives from masculine bases are produced with the suffix –ets:

(2)

- | | |
|--------------|---------------------------------|
| a. dâždØ > | dâžd- ets |
| rain-MASC.SG | rain-DIM.MASC.SG/ 'little rain' |
| b. životØ > | život- ets |
| life-MASC.SG | life-DIM.MASC.SG/ 'little life' |
| c. snjagØ > | snež- ets |
| snow-MASC.SG | snow-DIM.MASC.SG/ 'little snow' |

Feminine diminutives from feminine bases are produced with the suffixes –ka, –itsa, its allomorph –čitsa and –ička²:

(3)

- | | |
|----------------|--------------------------------------|
| a. mašin-a > | mašin- ka |
| machine-FEM.SG | machine-DIM.FEM.SG/ 'little machine' |
| b. rib-a > | rib- ka |

² The suffix –ičk(a) is formed by the accumulation of –itsa and –ka. Accumulation of diminutive suffixes is common in Bulgarian, but will not be examined here.

| | |
|---------------|------------------------------------|
| fish-FEM.SG | fish-DIM.FEM.SG/ 'little fish' |
| c. gor-a | gor- itsa |
| forest-FEM.SG | forest-DIM.FEM.SG/ 'little forest' |
| d. zahar > | zahar- čitsa |
| sugar-FEM.SG | sugar-DIM.FEM.SG/ 'little sugar' |
| e. krâv > | krâv- čitsa |
| blood-FEM.SG | blood-DIM.FEM.SG/ 'little blood' |
| f. gor-a> | gor- ička |
| forest-FEM.SG | forest-DIM.FEM.SG/ 'little forest' |
| g. kol-a > | kol- ička |
| car-FEM.SG | car-DIM.FEM.SG/ 'little car' |

Neuter diminutives from neuter bases are produced with the suffixes –tse, its allomorph -itse and –entse:

| | |
|---------------|------------------------------------|
| (4) | |
| a. ezer-o | ezer- tse |
| lake-NEU.SG | lake-DIM.NEU.SG/ 'little lake' |
| b. ogledal-o | ogledal- tse |
| mirror-NEU.SG | mirror-DIM.NEU.SG/ 'little mirror' |
| c. lits-e | lič- itse |
| face-NEU.SG | face-DIM.NEU.SG/ 'little face' |
| d. mljak-o | mleč- itse |
| milk-NEU.SG | milk-DIM.NEU.SG/ 'little milk' |
| e. palt-o | palt- entse |
| coat-NEU.SG | coat-DIM.NEU.SG/ 'little coat' |
| f. det-e | det- entse |
| child-NEU.SG | child-DIM.NEU.SG/ 'little child' |

2.2.2. Group B.

The suffixes in this group are gender neutral, i.e. they attach to both masculine and feminine (and rarely to neuter) bases. In derivation the gender of the masculine and feminine bases is altered to neuter.

Neuter diminutives from masculine, feminine and rarely neuter bases are produced with the suffixes –e, -le and –če:

| | |
|-----------------|--------------------------------------|
| (5) | |
| a. kľučØ > | kľuč- e |
| key-MASC.SG | key-DIM.NEU.SG/ 'little key' |
| b. rokl-ja > | rokl- e |
| dress-FEM.SG | dress-DIM.NEU.SG/ 'little dress' |
| c. bratØ > | brat- le |
| brother-MASC.SG | brother-DIM.NEU.SG/ 'little brother' |
| d. mážØ > | máž- le |

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| | | |
|----------------------|--|--|
| man-MASC.SG | | man-DIM.NEU.SG/ 'little man' |
| e. knig-a > | | kniž- le |
| book-FEM.SG | | book-DIM.NEU.SG/ 'little book' |
| f. vlakØ > | | vlak- če |
| train-MASC.SG | | train-DIM.NEU.SG/ 'little train' |
| g. kladen-ets > | | kladen- če |
| well-MASC.SG | | well-DIM.NEU.SG/ 'little well' |
| h. star-ets > | | star- če |
| old man-MASC.SG | | old man-DIM.NEU.SG/ 'little old man' |
| i. bul-ka > | | bul- če |
| young woman-FEM.SG | | young woman-DIM.NEU.SG/ 'little young woman' |
| g. Elen-a > | | Elen- če |
| Elena (woman's name) | | Elena-DIM.NEU.SG/ 'dear elena' |
| k. dârv-o > | | drâv- če |
| tree-NEU.SG | | tree-DIM.NEU.SG/ 'little tree' |

2.3. Diminutive suffixes and gender.

Since gender is the basic limitation that governs the distribution of diminutive suffixes that select nouns it is important to make some comments regarding gender assignment.

In Bulgarian gender is realised with three values: masculine, feminine and neuter. Nouns, adjectives, pronouns, numerals are marked for one of the gender values. Traditionally the gender of nouns is determined by means of a phonological criterion, namely the endings of nouns in the singular defined as gender suffixes which are: zero suffix for the masculine, *-a/-ja* suffix for the feminine and *-o/-e* suffix for the neuter respectively. The exceptions to this formal rule are numerous which makes it insufficient for gender determination. Observation reveals that in nouns [+human] gender is determined by means of semantic information, i.e. the physical gender of the referents determines their grammatical gender. Still, there are instances of neuter nouns denoting subjects of masculine or feminine gender, which makes even semantics not reliable enough for gender determination.

It is argued that morphological information also indicates gender through the inflectional suffixes denoting number and definiteness (Nitsolova 2008:52-58, 80; Scatton 1993:199). However, many cases of identical inflectional morphemes coding different grammatical meanings are observed. In fact neither phonology, nor morphology, nor even semantics are applicable in all cases and this renders gender value practically

unpredictable³. Nitsolova (2008:58) makes an interesting observation that in nouns [-human] gender is assigned by the derivational suffix. This does not hold true for those nouns [-human] which constitute morphologically simple words.

It is obvious from the above that there is no criterion reliable enough for gender determination in all cases. In order to account for gender determination in Bulgarian nouns the approach followed by Ralli (2002) in her investigation of gender assignment in Modern Greek was adopted here. In the framework of a feature-based approach gender is considered a property inherent to the items listed in the mental lexicon, i.e. noun stems and derivational affixes. They are specified for a gender feature as an attribute-value pair. In stems it is either fully specified and is displayed by a particular value or underspecified, i.e. it constitutes a feature without a value. Thus, when gender value cannot be predicted by other information it is fully specified and constitutes a feature intrinsic to the noun stem. When gender can be predicted by another co-occurring feature its missing value is filled through a feature specification rule which takes into consideration the information that is relevant for gender determination (e.g. semantic, morphological, phonological). Word-formation processes also participate in gender assignment. The interaction of headedness and feature percolation with derivation (or compounding) results in gender assignment (Ralli 2002:533-542).

This assumption provides a better account for gender determination in nouns and will be adopted in the investigation of the behaviour of Bulgarian diminutive suffixes.

Assuming that gender is a feature inherent to stems and derivational affixes it can be summarized that Bulgarian diminutive suffixes display three gender values as shown below:

Gender values in Bulgarian diminutive suffixes:

(6)

| Masculine | Feminine | Neuter |
|------------------|----------------------|---------------------|
| -ets | -ka | -tse ~ -itse |
| | -itsa ~ čitsa | -entse |
| | -ička | -e |
| | | -le |
| | | -če |

It was shown in the examples above that some diminutive suffixes preserve the gender of the selected base, while others change it to neuter. It is

³ More details regarding gender determination in Bulgarian can be found in the extended version of this paper where more information for the behaviour of the diminutive suffixes examined here is provided (Milenova forthcoming).

assumed that the gender of the derivatives is in fact the gender of the suffix which creates them. This means that in both cases the gender value is assigned to the diminutive formation by the diminutive suffix through feature percolation (Lieber 1989). This suggestion is based on the assumption that gender is a feature intrinsic to stems and derivational affixes (Ralli 2002) and on the law of relativized head. This law postulates that “there is only one head with respect to a feature F within a morphological object and it is the rightmost F-marked category in that expression” (Di Sciullo and Williams 1987 in Ralli 2002:534). Assuming that a gender value is inherent to diminutive suffixes and that they are positioned to the right of the base, in terms of this law they constitute the heads of their formations and therefore determine their gender. Evidence for this argument can be found in diminutive formations [+human] and [-human] and some examples will be repeated here for convenience:

(7)

| | |
|--------------------|--|
| a. bratØ > | brat- le |
| brother-MASC.SG | brother-DIM.NEU.SG/ ‘little brother’ |
| b. mâžØ > | mâž- le |
| man-MASC.SG | man-DIM.NEU.SG/ ‘little man’ |
| c. bul-ka > | bul- če |
| young woman-FEM.SG | young woman-DIM.NEU.SG/ ‘little young woman’ |
| d. kladen-ets > | kladen- če |
| well-MASC.SG | well-DIM.NEU.SG/ ‘little well’ |
| e. vlakØ > | vlak- če |
| train-MASC.SG | train-DIM.NEU.SG/ ‘little train’ |

The physical gender of the referents of the diminutives [+human] (7 a., b. and c.) does not coincide with their grammatical gender which apparently is assigned to the formation by the diminutive suffix. The diminutives [-human] (7 d. and e.) also acquire their neuter gender from the diminutive suffix.

Further evidence in support of the claim that diminutive suffixes determine the gender of their formations is the fact that some of them are multifunctional. Apart from the production of nouns [+diminutive], they produce also nouns [-diminutive] of masculine or feminine gender. Thus, the suffix **-ets** creates masculine nouns from verbs (8 a.), adjectives (8 b.), proper names of cities and countries (8 c.), while the suffixes **-ka** and **-itsa** produce feminine nouns from their masculine counterparts (9 a. and b.):

Masculine nouns produced with -ets

(8)

| | |
|----------------|---------------------------|
| a. krada > | krad- ets |
| to steal | thief-MASC.SG / ‘a thief’ |
| b. mârzel-iv > | mârzeliv- ets |

lazy-MASC.SG a lazy man-MASC.SG / ‘a lazy man’
 c. Kitaj > kita-**ets**
 China Chinese-MASC.SG / ‘a Chinese’

Feminine nouns produced with –ka and –itsa:

(9)

a. studentØ > student-**ka**
 student-MASC.SG student-FEM.SG/ ‘a female student’
 b. gâlâbØ > gâlâb-**itsa**
 pigeon-MASC.SG pigeon-FEM.SG/ ‘a female pigeon’

It is quite reasonable to assume that the above derivatives acquire their gender value from the suffixes that create them. The same happens with diminutive formations – their gender value is determined by the gender value of the diminutive suffix through feature percolation. This means that the preservation of the gender of the base characteristic for the suffixes presented in group A is due to coincidence of the gender values of the stem and the diminutive suffix.

By far it was shown that diminutive suffixes display some features characteristic for derivation and headedness. Their distribution is not arbitrary, but is subject to categorial and morphosyntactic restrictions. The diminutive suffixes examined here select only nouns (with the exception of the suffix –**ička**⁴) and their attachment to bases is gender governed. Besides, diminutive suffixes display three gender values and determine the gender of the formations they create through feature percolation.

The next issue that will be explored in regard to derivational nature is the alternation of diminutive suffixes which is a common phenomenon in Bulgarian.

2.4. Alternation of diminutive suffixes.

Since derivation is characterized by low alternation (Bauer 1983) the production of diminutives from the same base but with different suffix could be considered evidence against derivational nature. Alternation of suffixes is considered a violation of Aronoff’s Blocking principle defined as the ‘nonoccurrence of one form due to the simple existence of another’ (Aronoff 1976:43). The process of producing morphological constructions from the same base with different suffixes seems a common characteristic of diminutivization crosslinguistically. Katramadou (2001 in: Melissaropoulou & Ralli 2007) points out that high alternation characterizes the distribution of diminutive suffixes in Modern Greek. In my opinion in the case of

⁴ This suffix is the only exception to the categorial restrictions to which the suffixes investigated in this paper are subject to. It creates diminutives from nouns, adjectives, adverbs and rarely, though, from numerals, pronouns and verbs (Krâstev 1976). Categorial neutrality is common to diminutive suffixes crosslinguistically (Stump 1992:2).

diminutive suffixes alternation should be examined with regard to some peculiarities of diminutive semantics, namely the fact that different diminutive suffixes do not share the same meaning. This claim is based on evidence from the semantics of Bulgarian diminutive suffixes.

According to Grandi (2005:189) evaluative morphology comprises two aspects of interpretation: one descriptive and one qualitative. Thus, a diminutive formation can refer to the objective physical size, i.e. “small” of the entity being diminutivized or to its quality, i.e. “good” or “bad”, subjectively perceived by the speakers. Vaseva (1994:34) points out that in traditional grammars of Bulgarian language each diminutive suffix is assigned a meaning of its own since it is assumed that different suffixes express different aspects of diminutivity. Thus, according to the interpretation given some suffixes refer mainly to the physical size, others bear the co-notation of affection and tenderness, still others carry pejorative meaning. In the examples given below there are pairs of diminutives derived from the same base but with the attachment of different suffixes. The derivatives in each pair have the same referent but differ in terms of diminutivity aspects expressed by each suffix.

(10)

| | |
|--|--|
| a. gor- itsa forest-DIM.FEM.SG/ ‘dear little forest’ | gor- ička forest-DIM.FEM.SG/ ‘little forest’ |
| b. narod- ets people-DIM.MASC.SG/ ‘poor people’ | narod- če people-DIM.NEU.SG/ ‘little people’ |
| c. хлеб- ets bread-DIM.MASC.SG/ ‘dear/ precious bread’ | хлеб- če bread-DIM.NEU.SG/ ‘little bread’ |
| d. čant- e bag-DIM.NEU.SG/ ‘little bag’ (pejorative) | čant- ička bag-DIM.FEM.SG/ ‘little bag’ |
| e. rokl- e dress-DIM.NEU.SG/ ‘little dress’ (pejorative) | rokl- ička dress-DIM.FEM.SG/ ‘little dress’ |

The first member of each pair displays meaning referring to the qualitative aspect of diminutive semantics, i.e. positive or negative attitude towards the referent. The second member of each pair conveys the descriptive aspect of diminutive semantics, i.e. it refers to the physical size of the referent. It should be borne in mind though, that the same formation may express more than one semantic value, the purely descriptive aspect not being easily distinguishable from the qualitative (Grandi 2005:189). In Bulgarian diminutives these aspects cannot be easily interpreted in words isolated from the context they are used in. Similar to Grandi, Krâstev (1976) notes that one and the same suffix can refer to the small size, to express

endearment, or to imply pejorative evaluation depending on the situation. These slight semantic and pragmatic differences are easily perceived by native speakers. It should be borne in mind, however, that the meaning of diminutive formations is closely related to the particular communicative situation they are used in. Their use in discourse depends on socio-pragmatic factors which should be taken into consideration for the correct interpretation of these formations. Relevant to the above is another interesting semantic property displayed by Bulgarian diminutive suffixes: the diminutivity expressed by different diminutive suffixes is graded. There are diminutive suffixes of first degree and diminutive suffixes of second degree, the latter expressing the notion of smallness or the co-notation of familiarity/ tenderness more intensely (Krâstev 1976). This is shown in the examples below:

(11)

a. Milena > Milen-**ka** / 'little Milena' = 'dear Milena'

b. Milena > Milen-**če** / 'little little Milena' = 'dear, dear Milena'

These diminutives are produced from the same proper name but the derivatives differ semantically as (20b) expresses familiarity and tenderness more intensely than (20a) does. In other words the suffix **-če** is of second degree compared to the suffix **-ka**. Speakers consciously choose between the alternative diminutive formations according to their communicative intentions and according to the socio-pragmatic factors that regulate communication.

One important conclusion can be drawn on the base of the above observations: since constructions with one and the same referent differ semantically claims about alternation should be carefully dealt with when diminutives are concerned. It is argued that the above mentioned diminutive formations produced from the same base with the attachment of different suffixes should not be considered instances of violation of Aronoff's Blocking principle since each diminutive suffix adds different aspect to the meaning of the base. Consequently, it is suggested that the alternation of diminutive suffixes do not constitute evidence against derivational nature.

On the base of the above preliminary observations we will summarize the features of Bulgarian diminutive suffixes examined by far:

- they are positioned closer to the base than the inflectional morphemes indicating number and definiteness;
- their distribution is not arbitrary, but is subject to categorial restrictions and gender limitations;
- they bring semantic change to the base adding qualitative or descriptive aspect to its meaning;
- they determine the gender value of the diminutive formation they produce;

- the alternation of diminutive suffixes creates diminutive formations which differ semantically.

In the next section, we will proceed to the conclusions that follow from these findings.

3. Conclusions

This paper has dealt with some properties of diminutive suffixes in Bulgarian. The preliminary observations made on their behaviour show that they display derivational and headedness features.

First of all, the distribution of the diminutive suffixes examined here is subject to specific category requirements: they select only nouns. Within this category their attachment to bases is not arbitrary but is determined by gender limitations: some suffixes select bases of one gender only, others attach to both masculine and feminine bases (and rarely to neuter bases).

It was shown that some diminutive suffixes are multifunctional in the sense that they are used not only for the production of diminutives but also create masculine and feminine nouns. This could be considered strong evidence for the derivational nature of these suffixes and there is no apparent reason to assume that they change this feature in producing diminutives.

Furthermore, the position of diminutive suffixes within the word also suggests derivational character – they are not peripheral within the formation they create, the inflectional morphemes indicating number and definiteness follow them.

Diminutive suffixes bring semantic change to the base they are attached to adding a descriptive or a qualitative perspective to its meaning. It was shown that in Bulgarian different diminutive suffixes display differentiation in meaning in regard to the above aspects. Moreover, different diminutive suffixes can express the same notion but to a different degree since in Bulgarian diminutivity is graded. Although there are cases of diminutives derived from one and the same base with the attachment of different suffixes, the derivatives differ semantically and pragmatically. This is due to the different aspects of diminutive semantics or different degree of diminutivity expressed by the suffixes. Consequently, it was argued that the alternation of diminutive suffixes should not be perceived as a violation of Aronoff's Blocking Principle and, therefore should not be regarded as evidence against derivational nature.

The conclusion which follows from these preliminary observations is that diminutive suffixes in Bulgarian display derivational properties. Hence, it was assumed that they are also heads of their constructions.

Having in mind the assumption adopted here that gender constitutes a feature inherent to stems and derivational affixes it was argued that

diminutive suffixes determine the gender of the formations they produce by means of feature percolation.

Taking into consideration the findings outlined above it is reasoned out that diminutive suffixes in Bulgarian display properties that are characteristic for derivational suffixes and for heads of complex words. Interpreting these preliminary observations in the light of the model proposed by Melissaropoulou and Ralli (2007) it is suggested that Bulgarian diminutive suffixes are situated in the domain of derivation in the morphological continuum.

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Μη-επιβλεπόμενη Μορφολογική Μάθηση και το πρόβλημα της Αλλομορφίας στην Ελληνική Γλώσσα

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1. Σύντομη Εισαγωγή στην Υπολογιστική Μορφολογία

Η Υπολογιστική Μορφολογική Ανάλυση έχει κιόλας περισσότερο από μισό αιώνα ιστορία, μιας και οι πρώτες προσπάθειες εμφανίστηκε πριν τα πρώτα χνάρια των ερευνών της Μηχανικής Μετάφρασης. Οι Roark and Sproat (2007) αναφέρονται τιμητικά στους Andron (1962), Woyna (1962), Bernard-Georges et al. (1962), Boussard and Berthaud (1965), Vauquois (1965), Schweiger and Mathe (1965), Matthews (1966), Brand et al. (1969), Hutchis (2001). Όλα αυτά τα χρόνια πολλές εφαρμογές δημιουργήθηκαν; οι οποίες είναι μια συλλογή από αναλυτές ριζών, μορφολογικούς αναλυτές, ορθογραφικούς διορθωτές, συστήματα εισαγωγής κειμένων and συστήματα φυσικής γλώσσας.

Παρόλη τη σημαντικότητα των προαναφερθέντων πρωτεργατών, η πιο ενδιαφέρουσα και ρηξικέλευθη εργασία στην υπολογιστική γλωσσολογία ήταν η θεωρία που εξαρτιόταν σε μεθόδους πεπερασμένων συστημάτων. Η κυρίαρχουσα μορφολογία πεπερασμένων συστημάτων υπήρξε η προσέγγιση του Koskenniemi (1983) βασισμένη σε μετατροπείς πεπερασμένων συστημάτων. Ο Koskenniemi (1983) εφάρμοσε την θεωρητική έρευνα των Kaplan and Kay της Xerox PARC; ο KIMMO, ένας μορφολογικός αναλυτής δύο-επιπέδων, εξακολουθεί να είναι state-of-the-art στην υπολογιστική γλωσσολογία. Διαφορετικές προσεγγίσεις στην υπολογιστική μορφολογία βασίζονται είτε στο απερίφραστο μορφοτακτικό μοντέλο πεπερασμένου συστήματος (Allen et al. 1987, Roark and Sproat 2007) είτε σε μοντέλα «αποκοπής επιθημάτων» (McIlroy 1982, Porter 1980).

Όπως σημειώνουν οι Roark και Sproat (2007: 102) η Μορφολογία Δύο-Επιπέδων του Koskenniemi έχει χρησιμοποιηθεί για τη δημιουργία μορφολογικών αναλυτών σε αρκετές γλώσσες, συμπεριλαμβανομένου και της Ελληνικής (πρβλ. Σγάμπας 1997). Ο KIMMO είναι ένα σύστημα που βασίζεται στην παρουσίαση του Koskenniemi, που περιέχει τρεις κεντρικούς άξονες: α) ο πρώτος είναι τα δέντρα (*trees*), η απεικόνιση των λεξιλογίων, β) ο δεύτερος είναι τα *συνεχή λεξικά* (*continuation lexica*), η απεικόνιση των μορφολογικών αλληλουχιών, και γ) ο τρίτος είναι οι *μετατροπείς πεπερασμένων συστημάτων* (*finite-state transducers*), που

παρουσιάζουν τις μορφές, αλλαγές και διαδικασίες της επιφανειακής-λεξικής μορφολογίας.

2. Unsupervised Morphology Learning: Μια θεωρητική προσέγγιση

2.1. Εισαγωγή στη Μη-Επιβλεπόμενη Μορφολογική Μάθηση

Σε αντίθεση με τις υπολογιστικές αναλύσεις της σύνταξης, η υπολογιστική έρευνα στην μορφολογία είναι συγκριτικά και σχετικά πολύ φτωχή. Σύμφωνα με τους Roark και Sproat (2007) η απουσία ενός corpus με λέξεις μορφολογικά σχολιασμένες αποτελεί σημαντικό εμπόδιο για την ανάπτυξη μια μορφολογικής μηχανής εκμάθησης, η οποία να μπορεί με επιτυχία να αντιπαρατεθεί με τον μορφολογικά-πολύπλοκο αναλυτή που προτάθηκε από τον Koskenniemi (1983). Ωστόσο, στο λυκαυγές της νέας χιλιετίας, το ενδιαφέρον στα στατιστικά μοντέλα της μορφολογίας, πιο συγκεκριμένα στην μη-επιβλεπόμενη (ή ελαφρώς επιβλεπόμενη) μορφολογική μάθηση από μεταγραμμένα corpora έχει αυξηθεί ταχύτατα. Σημαντικό μέρος της προσοχή δόθηκε σε αυτόματες – κυρίως μη-επιβλεπόμενες – μεθόδους την ανακάλυψη μορφολογικών αλλαγών.

Με στόχο να δώσουμε μια ξεκάθαρη εικόνα αυτού του συστήματος, θα ήταν καλύτερο να δοθεί ένας ορισμός για το τι είναι μορφολογική μάθηση και να δοθούν τα κατάλληλα παραδείγματα. Ένα βασικός σκοπός του συστήματος είναι να ανακαλύψει τις σχέσεις μεταξύ λέξεων που μοιράζονται μια ακολουθία γραμμάτων βασισμένο σε συγκεκριμένα δεδομένα. Για παράδειγμα, η λέξη *άνθρωπος* έχει τις ακόλουθες εναλλακτικές κλιτικές μορφές: *ανθρώπου, άνθρωπο, άνθρωπε, άνθρωποι, ανθρώπων* και *ανθρώπους*. Επομένως, το σύστημα προσπαθεί να δημιουργεί ένα σύνολο λέξεων με συγγενικές μορφές. Άλλος σκοπός του είναι να δημιουργήσει λέξεις βασιζόμενος σε κάποιους κανόνες επιθηματοποίησης (κλιτικής και παραγωγικής)· το ουσιαστικό *μωρό* μπορεί να γίνει *μωράκι* προσθέτοντας το παραγωγικό επίθεμα *-άκι*. Στόχος του είναι να παράγει νέες μορφολογικές λέξεις που δεν έχει εντοπίσει στην βάση με την εφαρμογή ενός συνόλου κανόνων (Roark and Sproat 2007). Ωστόσο, και για τους δύο στόχους η αλλομορφία δημιουργία σοβαρά προβλήματα. Για την αντιμετώπιση της αλλομορφίας, ο στόχος είναι η εύρεση συσχετισμένων μορφολογικών μορφών της ίδιας λέξης, όπως *κύμα* και *κύματα* (*kima~ kimat*), που δεν έχουν παραχθεί από κανέναν φωνο- και μορφολογικό κανόνα.

Μιας και η πλειονότητα της πρόσφατης έρευνας έχει λάβει χώρα στο πεδίο της μη-επιβλεπόμενης μορφολογικής μάθησης, θα επικεντρώσουμε τη συζήτηση και την κριτική μας σε αυτό το σύστημα, και πιο συγκεκριμένα στη θεωρία της *Περιγραφής Ελάχιστου Μήκους* (*Minimum Length Description*) που προτάθηκε από τον Goldsmith (2001) [άλλες πρόσφατες εργασίες που στοχεύουν στο συγκεκριμένο τομέα είναι των Yarowsky και

Wicentowski 2001, Schone και Jurafsky 2001, Creutz και Lagus 2002]. Η θεωρία του Goldsmith (2001) και η εφαρμογή του προγράμματος *Linguistica* είναι βασισμένα στο πλαίσιο της MDL θεωρίας του Rissanen (1989). Το άρθρο του δεν είναι το πρώτο στο πεδίο της μη-επιβλεπόμενης μορφολογικής μάθησης· υπάρχουν τρεις προσεγγίσεις από τους προηγούμενους ερευνητές. Ωστόσο, η εργασία του είναι η πιο αναφέρεται και θεωρείται το στάνταρ μοντέλο σύγκρισης με άλλα συστήματα.

Η έρευνα στην αυτόματη μορφολογική ανάλυση έχει χωριστεί σε τέσσερις μεγάλες κατηγορίες. Η πρώτη προσέγγιση προσπαθεί να αναγνωρίσει τα όρια μορφημάτων και να τα κατηγοριοποιήσει σε θέματα, επιθήματα και προθήματα, όπως υποστηρίχτηκε από τους Harris 1955, 1967, Hafer και Weiss 1974). Οι συγκεκριμένοι συγγραφείς προσπαθούν με την υποθετική εντροπία προθήματος/ επιθήματος να τοποθετήσουν όρια μέσα στις λέξεις. Η δεύτερη προσέγγιση προτείνει τα διγράμματα και τα τριγράμματα, τα οποία είναι μέρος της μορφής του μορφήματος (πρβλ. Janssen 1992, Klenk 1992, Flenner 1994, 1995). Σύμφωνα με αυτή την επίθεση, η τοπική πληροφορία (σύνολο πιθανοτήτων και συχνοτήτων) σε μια ακολουθία φωνημάτων (δύο ή τρία) είναι επαρκής για μπουν τα όρια μορφημάτων. Η τρίτη προσέγγιση στοχεύει πρότυπο των φωνολογικών σχέσεων ανάμεσα σε ζεύγη συσχετισμένων λέξεων, όπως δόθηκε από τους Dzeroski και Erjavec (1997). Στόχος τους είναι προβλέψουν τη μορφή μιας λέξης βασισμένη σε μορφολογικές αξίες. Στην ακόλουθη ενότητα θα συζητηθεί η τέταρτη προσέγγιση, αυτή του Goldsmith (2001).

2.2. Η Περιγραφή Ελάχιστου Μήκους του Goldsmith (2001)

Το σύστημα του Goldsmith ξεκινά με ένα τεράστιο corpus σχολιασμένων/ μεταγραμμένων κειμένων και παράγει μια ομάδα φύλλων σώματος (*signatures*) μαζί με λέξεις που ανήκουν σε αυτά τα φύλλα. Ένα Φύλλο σώματος (*Signature*) είναι μια ομάδα από προσφύματα (προθήματα ή επιθήματα) που συνδυάζονται με μια δοσμένη ομάδα ριζών ή θεμάτων (Goldsmith 2001, Roark and Sproat 2007). Για παράδειγμα, ένα φύλλο επιθημάτων στα αγγλικά μπορεί να είναι το *NULL.ed.ing.s*, το οποίο συνδυάζεται με θέματα όπως *jump*, *laugh*, *walk*, *feel*, κ.α.: όλα αυτά τα θέματα παίρνουν τα επιθήματα για δημιουργήσουν λέξεις, όπως *jumpθ*, *jumped*, *jumping* και *jumps*. Άλλα φύλλα corpus είναι τα *e.ed.ing*, *NULL.s*, *NULL.ing.s*, *NULL.er.est.ly*, κτλ. Όπως μπορούμε να δούμε αυτά τα φύλλα σώματος είναι όπως τα παραδείγματα, αλλά συνήθως περιέχουν μαζί κλιτικά και παραγωγικά επιθήματα. Επομένως το βασικό σχήμα για το πώς λειτουργούν αυτά τα φύλλα σώματος είναι:

$$(1) \left\{ \begin{array}{c} \Theta\text{EMA}_1 \\ \Theta\text{EMA}_2 \\ \Theta\text{EMA}_3 \end{array} \right\} \left\{ \begin{array}{c} \text{ΕΠΙΘΗΜΑ}_1 \\ \text{ΕΠΙΘΗΜΑ}_2 \end{array} \right\}$$

Εξετάζοντας πιο προσεχτικά τα φύλλα σώματος, παρατηρείται πως μερικά σύνολα δεν είναι πάντα ολοκληρωμένα. Συνήθως τα κλιτικά επιθήματα παρελθόντων χρόνων απουσιάζουν από τα φύλλα σώματος, ακόμα και για τα ομαλά ρήματα. Πιο συγκεκριμένα, θα σας δοθεί ένα από τα παραδείγματα που εντοπίστηκαν από τους Roark and Sproat (2007:120). Επισημαίνουν ότι το φύλλο σώματος *NULL.er.ing.s* δοσμένο από τον Goldsmith (2001: 179), το οποίο περιλαμβάνει θέματα όπως *blow*, *broadcast*, *drink*, *feel* δεν εσωκλείει το επίθημα *-ed*, μιας και τα ρήματα αυτά έχουν ανώμαλο τύπο για τον αόριστο. Εντούτοις, το επίθημα *-ed* απουσιάζει επίσης από ρηματικά θέματα, όπως *bomb* και *farm*, τα οποία έχουν ομαλό τύπο αορίστου (*bombed* και *farmed*), αλλά αυτοί δεν εμφανίζονται στο σώμα κειμένων του! Ο Goldsmith παραθέτει μερικά προβλήματα με τα φύλλα σώματος και σημειώνει ότι το σύστημά του δεν είναι is είναι ικανό να αντιμετωπίσει επιτυχώς διαφοροποιήσεις (π.χ.. *αλλομορφα*), όπως *feel/felt*, μιας και το σύστημα του ασχολείται μόνο με την προσφυματοποίηση.

Όπως θα δούμε στην επόμενη ενότητα, αυτού του είδους η αλλομορφική διαφοροποίηση θα αποτελέσει τεράστιο πρόβλημα αν προσπαθήσουμε να υλοποιήσουμε ένα Μοντέλο Μη-επιβλεπόμενης Μορφολογικής Μάθησης (MMeMM) εφαρμοσμένο στην ελληνική γλώσσα, μιας και η αλλομορφία στα ελληνικά είναι πραγματικά πολύπλοκη και εμφανίζεται σε κάθε επίπεδο σχηματισμού λέξης (κλίση, παραγωγή, σύνθεση).

2.2.1 Παραγωγή Υποψηφίων και Αξιολόγηση

Η δημιουργία των φύλλων σώματος περιλαμβάνει δύο βήματα: πρώτα το σύστημα παράγει μερικά υποψήφια φύλλα σώματος (κάνοντάς τα μέλη) και στη συνέχεια αξιολογεί τα υποψήφια. Για την παραγωγή υποψηφίων, η μέθοδος διαχωρισμού λέξεων είναι βασισμένη στην *σταθμική κοινή πληροφορία* (*weighted mutual information*). Αυτή η μέθοδος ξεκινά να δημιουργεί μια λίστα προσφυμάτων, ένα αντίστροφο λεξικό (αλφαβητίζοντας από το δεξί μέρος των λέξεων) και χτίζει σύνολα πιθανών επιθημάτων μήκους έως 6 χαρακτήρων (για παράδειγμα –ούτσικ[ος]/μικρ#ουτσικ#ος). Έπειτα χρησιμοποιεί έναν αλγόριθμό που «ζυγίζει» όλα τα πιθανά επιθήματα για να εντοπίσει τα πραγματικά επιθήματα και τα ομαδοποιεί έπειτα σε φύλλα σώματος. Εδώ, ο Goldsmith προτείνει μια μετρική αξιολόγησης βασισμένη στην *περιγραφή ελαχίστου μήκους* (*minimum length description*), όπου η καλύτερη πρόταση για τα φύλλα σώματος είναι αυτή που περιλαμβάνει την πιο συμπαγή περιγραφή του σώματος/γλώσσας.

2.2.2 Κριτική

Όπως οι Roark and Sproat (2007:123) ορθώς σημειώνουν, η

μέθοδος του Goldsmith είναι “η *de facto gold standard* για έρευνα στην μη-επιβλεπόμενη κατάκτηση στη μορφολογία”. Ωστόσο, αυτό το σύστημα απέχει πολύ από το να χαρακτηριστεί τέλειο. Όπως παρατηρείται, ένα ΜΜεΜΜ δεν δέχεται κανένα μορφολογικό και φωνολογικό κανόνα, δεν περιέχει κανένα προ-δημιουργημένο λεξικό/ λεξιλόγιο και προφανώς δεν χρησιμοποιεί κανένα πλεονέκτημα από οποιαδήποτε (πιο συγκεκριμένα μορφολογική) θεωρία ή θεωρητικό πλαίσιο. Απλώς προσπαθεί να χωρίσει λέξεις με βάση τεράστια σώματα κειμένων. Διάφοροι ερευνητές διαμαρτύρονται ότι η μέθοδος του Goldsmith δεν εκμεταλλεύεται καμιά σημασιολογική και συντακτική πληροφορία· αυτή η διαφωνία κινείται στο ίδιο μήκος κύματος με την προσέγγιση της ψυχολinguιστικής και την εναντίωσή της στο γεγονός ότι τα παιδιά και οι ενήλικες έχουν πρόσβαση και σε άλλες πληροφορίες πλην των ομάδων των επιθημάτων και προθημάτων. Ωστόσο, αναλογιζόμενοι ότι δεν γίνεται καμιά χρήση μορφολογικού κανόνα ή θεωρίας, δεν πρέπει να αναμένουμε και την χρήση οποιασδήποτε σημασιολογικής και συντακτικής πληροφορίας.

Η αποτυχία σωστής κατάτμησης των λέξεων στα πραγματικά μορφήματα εξαιτίας της απουσίας μορφο- και φωνολογικών κανόνων, τη μη-χρήση της Λεξικής Φωνολογίας και η εμφάνιση σπανίων, μαρκαρισμένων και ανώμαλων περιπτώσεων. Αυτό μπορεί να συμβεί και στο ορθογραφικό και στο φωνολογικό επίπεδο λεξικής μεταγραφής:

- (2) a. έγγραψα > ε – γραφ – σ(α) [ανομοίωση]
θέμα: γραφ
b. eγrapsa > e – graf – s(a)
θέμα: graf

Η αποτυχία ανάλυσης λέξεων σε μορφολογικά πλούσιες γλώσσες, όπως τα Ελληνικά, Φιλανδικά, Σουηδικά, Ουγγρικά και Τουρκικά. Η έντονη παραγωγικότητα της σύνθεσης και της παραγωγής περιπλέκει περισσότερο το ζήτημα με την εκτεταμένη παρουσία της συνδυαστικότητας των επιθημάτων. Σύμφωνα με τους Kurimo *et al* (2007), το υψηλότερο σκορ σε ένα ΜΜεΜΜ αξιολόγησης για τα Φιλανδικά και τα Τουρκικά ήταν 65% και 64% αντιστοίχως και το χαμηλότερο 3% και 2%, παρότι το σύστημα του Kurimo είχε κάποια βοήθεια από επιβλεπόμενη μορφολογία. Αναμένουμε ότι τα αποτελέσματα στα ελληνικά θα είναι χειρότερα λόγω της εκτεταμένης αλλομορφίας της γλώσσας (πρβλ. Καρασίμος 2001, Ράλλη 2005, 2007), όπως και λόγω των περίπλοκων συνδυαστικών ιδιοτήτων των επιθημάτων. Οι Μελισσαροπούλου (2007a, 2007b) και Melissaropoulou & Ralli (2008) σημειώνουν ότι στα Ελληνικά, πέντε παραγωγικά επιθήματα μπορούν να βρεθούν στη σειρά μέσα στην ίδια λέξη.

- (3) χορευταρούλικο > χορ – ευ – τ – αρ – ουλ – ικ –(ο)
θέμα–πε–πε–πε–πε–πε(κε) [5

παρ.επ.(+1)]

| | | |
|---------------------|---|--|
| κοινωνικότητα | > | κοιν – ων – ι – ικ – οτητα(ϕ) θέμα–πε–πε–πε–πε(κε) [4 παρ.επ. |
| (+1)] | | |
| ποτιστικός | > | ποτ – ις – τ – ικ(ος) θέμα–πε–πε–πε(κε) [3 παρ.επ. |
| (+1)] | | |
| ξαναεπαναλαμβάνω | > | ξανά – επανα – λαμβάν(ω) ππ–ππ θέμα [2 παρ.πρ.] |
| παρασυμπαραστέκομαι | > | παρά – συν – παρα –στεκ(ομαι) ππ–ππ–ππ θέμα [3 παρ.πρ.] |
| συμπεριφέρομαι | > | συν – περί – φέρ(ομαι) ππ–ππ θέμα [2 παρ.πρ.] |

Επιστρέφοντας στην θεωρία του Goldsmith ένα φύλλο σώματος είναι το σύνολο επιθημάτων που μπορεί να συνδυαστεί με ένα σύνολο θεμάτων. Επομένως, οφείλουμε να δημιουργήσουμε φύλλα σώματος για επιθήματα που να μπορούν να συνδυαστούν με άλλα φύλλα σώματος για επιθήματα. Είναι εύκολο να φανταστούμε πόσο πολύπλοκο μπορεί να γίνει ένα σύστημα με τέτοιο πλέγμα φύλλων σώματος για επιθήματα/ προθήματα: αντιθέτως, οι επιλεκτικοί περιορισμοί και οι συνδυαστικές επιλογές των προσφυμάτων καθιστούν τη δημιουργία τέτοιων φύλλων σώματος σχεδόν αδύνατη ή πλήρως ατελής.

3. Το πρόβλημα της Αλλομορφίας

3.1. Ορισμός και σύντομη ανασκόπηση προηγούμενων εργασιών

Όπως ήδη ειπώθηκε, η αλλομορφία είναι το μεγαλύτερο πρόβλημα για τα MMeM μοντέλα και είναι ένα ζήτημα που σχεδόν κανένας στην υπολογιστική μορφολογία δεν προσπαθεί να το λύσει ή να το συζητήσει. Ορίζοντας τα αλλόμορφα, είναι οι διαφορετικές μορφές του ιδίου μορφήματος που μοιράζονται λεξική πληροφορία, αλλά διαφέρουν απρόβλεπτα και αυθαίρετα στη φωνολογική τους αναπαράσταση και στο μορφολογικό περιβάλλον, όπου εμφανίζονται. Η αλλομορφία είναι ένα σημαντικό ζήτημα της μορφολογίας και παρά ελαχίστων εξαιρέσεων αυτό το ζήτημα δεν έτυχε ποτέ ιδιαίτερης προσοχής, ιδιαίτερα μέσα στο θεωρητικό πλαίσιο της γενετικής γραμματικής. Όπως υποστηρίζει η Ralli (2006: 2) «ο λόγος μιας τέτοιας αμέλειας είναι κυρίως εξαιτίας του γεγονότος ότι η αλλομορφία θεωρείται συνήθως ως τίποτα περισσότερο από απουσία κανονικότητας, δικαιολογώντας είτε μέσω της ιστορικής αλλαγής είτε του δανεισμού».

Οι Lieber (1982), Booij (1997), Carstairs (1987), and Ralli (1994, 2000, 2005, 2006) παρέχουν μια ιδιαίτερα διερευνητική προσέγγιση της αλλομορφίας, προτείνουν διάφορες αναλύσεις και σημειώνουν μερικά

εξόχως ενδιαφέροντα ζητήματα προς συζήτηση· οι προσεγγίσεις τους αντιμετωπίζουν το πρόβλημα από μορφολογικής σκοπιάς. Πιο συγκεκριμένα, η Ράλλη δείχνει ότι η συστηματική αλλομορφική συμπεριφορά ενός αριθμού ελληνικών θεμάτων επηρεάζει την οργάνωση των παραδειγμάτων με σημαντικό τρόπο. Αντιθέτως, οι Thornton (1997), Mascaro (1996, 2007), Galani (2003) and Drachman (2006) αναλύουν την αλλομορφία με βάση φωνολογικές θεωρίες. Επιπροσθέτως, ο Καρασίμος (2001) παρέχει ένα μεγάλο εύρος παραδειγμάτων από όλες τις τρεις διαδικασίες σχηματισμού λέξεων (κλίση, παραγωγή και σύνθεση) και δείχνει πόσο σημαντική μπορεί να είναι η αλλομορφία για την ελληνική γλώσσα.

3.2. Η Αλλομορφία στα Ελληνικά

Θέματα

Η αλλομορφία είναι το βασικό κριτήριο για την κατηγοριοποίηση ουσιαστικών, επιθέτων και ρημάτων. Η Ράλλη (2000) προτείνει ένα διαχωρισμό των ουσιαστικών σε κλιτικές τάξεις βασισμένες στη συστηματική αλλομορφική ποικιλία θεμάτων και την ομάδα των κλιτικών επιθημάτων.

| | | | |
|------|----------|--------------|----------------------|
| (4.) | άνθρωπος | θέμα: ΑΝΘΡΩΠ | αλλόμορφο: – |
| | ταμίας | θέμα: ΤΑΜΙΑ | αλλόμορφο: ΤΑΜΙ |
| | ψυχή | θέμα: ΨΥΧΗ | αλλόμορφο: ΨΥΧ |
| | πόλη | θέμα: ΠΟΛΗ | αλλόμορφο: ΠΟΛ~ ΠΟΛΕ |
| | κύμα | θέμα: ΚΥΜΑ | αλλόμορφο: ΚΥΜΑΤ |

Στο (4.), η λέξη *άνθρωπος* δεν έχει αλλόμορφο και ανήκει στην πρώτη κλιτική τάξη. Αντιθέτως, οι λέξεις *ταμίας* και *ψυχή* έχουν παρόμοια αλλομορφική συμπεριφορά όσον αφορά το σχηματισμό του πληθυντικού, όπου το τελικό φωνήεν του θέματος διαγράφεται (*ταμία-/ ψυχή*: ενικός, *ταμι-/ψυχ*:- πληθυντικός). Επιπροσθέτως, η λέξη *κύμα* ανήκει σε μια τάξη με ουδέτερα ουσιαστικά που εμφανίζουν αλλόμορφο στον πληθυντικό (και στην γενική ενικού) προσθέτοντας ένα –τ– στο τέλος του θέματος (*κυματ*~). Τέλος, υπάρχουν κάποια θηλυκά ουσιαστικά, όπως η λέξη *πόλη*, που έχει δύο αλλόμορφα, ένα για τον σχηματισμό των γενικών (*πολε*:- γεν.εν, γεν.πληθ) και ένα για το υπόλοιπο κλιτικό παράδειγμα του πληθυντικού (*πολ*:- ον.πληθ, αιτ.πληθ, κλιτ.πληθ).

Όπως υποστηρίξαμε προηγουμένως, τα ίδια κριτήρια εφαρμόζονται και για την ρηματική κατηγοριοποίηση. Η Ράλλη (2005) υποστηρίζει ότι, αντίθετα με τις ονοματικές κλιτικές τάξεις, όπου η αλλομορφία είναι μη προβλέψιμη και εγγενές λεξικό χαρακτηριστικό, το χαρακτηριστικό των ρηματικών κλιτικών τάξεων είναι προβλέψιμο με την εμφάνιση της αλλομορφίας. Τα ρηματικά θέματα συνήθως εμφανίζουν αλλομορφία τύπου ΘΕΜΑ~ ΘΕΜΑΦΩΝΗΝ. Επιπλέον, υπάρχουν ρήματα που εμφανίζουν

αλλαγή τύπου ετεροίωσης, όπως $XX\Phi_1X \sim XX\Phi_2X$ ή διαγραφή τελικού χαρακτήρα θέματος, όπως $X\S \sim X$. Επιπροσθέτως, υπάρχουν και μερικά λιγοστά ρήματα με εκτεταμένη αλλομορφική συμπεριφορά. Εντούτοις, υπάρχουν και μερικά ρήματα που δεν εμφανίζουν αλλομορφο.

| | | | |
|----------------|--------------|---------------|--------------------|
| (5.) αγαπ(ά)-ω | αγάπη-σα | θέμα: ΑΓΑΠ(Α) | αλλομορφο: ΑΓΑΠΗ |
| φορ(ά)-ω | φόρε-σα | θέμα: ΦΟΡ(Α) | αλλομορφο: ΦΟΡΕ |
| βρεχ-ω | βραχ-ηκε | θέμα: ΒΡΕΧ | αλλομορφο: ΒΡΑΧ |
| δεν-ω | δε-σαμε | θέμα: ΔΕΝ | αλλομορφο: ΔΕ |
| παίρν-ω | πήρα/θα πάρω | θέμα: ΠΑΙΡΝ | αλλομορφο: ΠΗΡ~ΠΑΡ |
| γράφ-ω | γράψ-αμε | θέμα: ΓΡΑΦ | αλλομορφο: – |

Τα δεδομένα μας παρέχουν μερικά ενδιαφέροντα στατιστικά για την αλλομορφία. Πέντε από τις οκτώ ονοματικές κλιτικές τάξεις και πέντε από τις έξι ρηματικές κατηγορίες, σύμφωνα με το μοντέλο της Ralli (2005) έχουν συστηματική αλλομορφική συμπεριφορά. Συνήθως αυτές οι τάξεις είναι οι πιο δημοφιλείς και πολυάριθμες. Αν και τα θέματα των επιθέτων δεν έχουν αλλομορφο¹, αυτό το ζήτημα παραμένει ένας μείζων παράγοντας στο σχηματισμό λέξεων της ελληνικής. Η Ralli (2006) σημειώνει ότι η αλλομορφία οδηγεί στο διαχωρισμό της ταξινόμησης: υποστηρίζει την παραδειγματική ομοιομορφία και βοηθά στη διατήρηση της δομής, όταν η τελευταία τελεί σε κίνδυνο. Παρομοίως, είναι ορθό να υποθέσουμε πως η αλλομορφία υποστηρίζει την αρχή οικονομίας στην επιλογή θέματος στην διαδικασία παραγωγής: πιθανώς να δημιουργεί κάποιους περιορισμούς με τις επιλογές επιθημάτων.

Προσφύματα

Τα προσφύματα, αναλόγως με τη θέση τους σχετικά με το θέμα/ ρίζα, χωρίζονται σε προθήματα και επιθήματα. Τα προθήματα είναι μια μικρή ομάδα μορφημάτων τα οποία ήταν κυρίως μέλη των προθέσεων της Αρχαίας Ελληνικής: κάποια από αυτά εξακολουθούν και συμμετέχουν σε λεξικοποιημένες φράσεις, όπως *ανά έτος*, *συν τοις άλλοις*, *κατά το δοκούν*. Μόλις το 32% των προθημάτων έχουν αλλομορφική συμπεριφορά. Αυτή η αλλομορφία είναι συνήθως ένας φωνολογικός κανόνας που έγινε ανενεργός πλέον στη Νέα Ελληνική, όπως ο νόμος του Graussman ή η δάσυνση συμφώνου. Από την άλλη, τα επιθήματα αποτελούν σαφώς πολύ μεγαλύτερο σύνολο από τα προθήματα. Είναι κλιτικά και παραγωγικά. Και οι δύο υποκατηγορίες είναι αρκετά μεγάλες για κατηγορίες πεπερασμένου συνόλου. Η αλλομορφία είναι ένα πολύ κοινό χαρακτηριστικό τους. Σχεδόν 85% των επιθημάτων έχουν αλλομορφο. Οι αλλομορφικές αλλαγές

¹ There are a few exceptions of adjectives, which are ‘relics’ or inheritance from Ancient Greek, such as *βαθός*, *βαθεία*, *βαθύ* ‘deep – three genres’.

εμφανίζονται παρομοίως και στα θέματα και στα επιθήματα. Πιο συγκεκριμένα, αυτά τα οποία μοιράζονται τα ίδια μορφολογικά (ουσιαστικό, επίθετο, ρήμα, κλιτικές καταλήξεις) και φωνολογικά χαρακτηριστικά (ίδιους τελευταίους χαρακτήρες), αυτά έχουν και παρόμοια αλλομορφική συμπεριφορά.

| | | | |
|-----------------|--------------------------|-----------------|------------------------|
| (6.) a. εισφορά | εισέρχομαι | πρόθημα: ΕΙΣ | αλλόμορφο: – |
| υπόλογος | υφυπουργός | πρόθημα: ΥΠΟ | αλλόμορφο: ΥΦ |
| αντιμέτωπος | ανθυγιεινός | πρόθημα: ΑΝΤΙ | αλλόμορφο: ΑΝΘ |
| μετακομίζω | μέθοδος | πρόθημα: ΜΕΤΑ | αλλόμορφο: ΜΕΘ |
| b. ταξιτζής | ταξιτζήδες | επίθημα: ΤΖΗ(Σ) | αλλόμορφο: ΤΖΗΔ |
| παρκάρω | παρκάρισα | επίθημα: ΑΡ(Ω) | αλλόμορφο: ΑΡΙ |
| αβρότητα | αβρότητες | επίθημα: ΟΤΗΤΑ | αλλόμορφο: ΟΤΗΤ |
| σαλιάρης | σαλιάρηδες/ σαλιάρικο | επίθημα: ΑΡΗ(Σ) | αλλόμορφο: ΑΡΗΔ ~ΑΡ |

3.3 Από την κλίση στην παραγωγή και τη σύνθεση

Ο Καρασίμος (2001) διατυπώνει πως τα αλλόμορφα, που χρησιμοποιούνται στις κλιτές μορφές των λέξεων, είναι και οι βάσεις για τις παράγωγες και σύνθετες λέξεις. Πιο συγκεκριμένα, εάν ένα θέμα έχει αλλόμορφο, αυτό και μόνο θα συμμετάσχει στις άλλες διαδικασίες σχηματισμού λέξεων. Εντούτοις, (όπως σημειώνει) αυτό δεν αποτελεί καθολικό κανόνα στα ελληνικά. Υπάρχουν δυο ομάδες αντιπαραδειγμάτων. Η πρώτη είναι τα ουδέτερα ουσιαστικά της έκτης κλιτικής τάξης, όπως *παιδί*, που δεν έχουν αλλόμορφα στην κλίση, αλλά δημιουργούν ένα στην παραγωγή. Η δεύτερη είναι μια υποκατηγορία αρσενικών ουσιαστικών της δεύτερης κλιτικής τάξης, όπως *μπακάλης*; που παρόλη την ύπαρξη ενός αλλομόρφου, δημιουργούν νέο στην παραγωγή.

| | | | |
|---------------|---------------|------------|-----------------|
| (7.) a. παιδί | θέμα: ΠΑΙΔΙ | παιδάκι | αλλόμορφο: ΠΑΙΔ |
| κουτί | θέμα: ΚΟΥΤΙ | κουτάρα | αλλόμορφο: ΚΟΥΤ |
| b. μπακάλης | θέμα: ΜΠΑΚΑΛΗ | μπακάλικο | αλλόμορφο: |
| | | ΜΠΑΚΑΛΗΔ~ | ΜΠΑΚΑΛ |
| τεμπέλης | θέμα: ΤΕΜΠΕΛΗ | τεμπελάκος | αλλόμορφο: |
| | | ΤΕΜΠΕΛΗΔ~ | ΤΕΜΠΕΛ |

Είναι εύκολο να καταλάβουμε το λόγο για την αλλομορφία τύπου–*παιδί*. Εξετάζοντας την αλλομορφική συμπεριφορά των ουσιαστικών της Ελληνικής, παρατηρείται ότι υπάρχει ο τύπος Φ-διαγραφή (π.χ. *καρδιά/καρδι-*) ή Σ-εισαγωγή (π.χ. *παπά(ς)/παπάδ-*) στα ουσιαστικά με φωνήεν ως τελικό χαρακτήρα θέματος. Επομένως, αναμένουμε τα ουσιαστικά της έκτης κλιτικής τάξης να ακολουθήσουν αυτήν την τάση τουλάχιστον στην παραγωγή και τη σύνθεση. Όντως αυτό συμβαίνει στην παραγωγή (π.χ. *παιδάκι, μολυβένιος*) και στη σύνθεση (π.χ. *καρβοκέρης, χαρτοπόλεμος*). Πιθανώς, η αιτία της αλλομορφικής απουσίας στην κλίση να είναι το μηδενικό κλιτικό επίθημα (*παιδί-φ*). Όπως υποστηρίχτηκε από

τις Nespor και Ralli (1996), ένα θέμα στο δεξί μέρος του συνθέτου ακολουθεί τον ειδικό κανόνα τονισμού σύνθεσης, που τονίζει στην προπαραλήγουσα (*παπαδοπαίδι*). Άρα, υπάρχει μια λήγουσα συλλαβή (το \emptyset κλιτικό επίθημα). Επίσης, είναι πιθανό λόγω αλλαγών της ιστορικής εξέλιξης (*παιδί-ον* \rightarrow *παιδί*) ο ι-χαρακτήρας να πρέπει να διατηρηθεί στο κλιτικό παράδειγμα.

Η υποκατηγορία των $X\eta(\varsigma)\sim X\eta\delta\sim X$ φαίνεται να είναι πιο περίπλοκη και πιο απρόβλεπτη. Όπως υποστηρίζει η Ralli (2000), η ομάδα των $X\eta(\varsigma)$, που ανήκουν στην δεύτερη κλιτική τάξη, παράγουν αλλόμορφα τύπου $X\eta\delta$ (*μπακάλη-ς/ μπακάληδ-ες*). Επομένως, περιμένουμε να συναντήσουμε το $X\eta\delta$ αλλόμορφο στην παραγωγή και τη σύνθεση ως τον μοναδικό συμμετέχοντα. Εντούτοις, αυτή η ομάδα παράγει ένα νέο αλλόμορφο, που είναι μοναδική συμπεριφορά στο ελληνικό ονοματικό κλιτικό σύστημα. Σχεδόν όλα αυτά τα ουσιαστικά έχουν τα χαρακτηριστικά [+δάνειο, +τουρκικό]. Ωστόσο, υπάρχουν και άλλα ουσιαστικά με τα χαρακτηριστικά [+δάνειο, +τουρκικό] που παράγουν αλλόμορφο πληθυντικού (επίσης στην παραγωγή και στη σύνθεση) τύπου $XV_{a,\varepsilon}\delta$ (π.χ. *νταλγκά(ς)/ νταλγκαδ(ες)*, *καναπέ(ς)/ καναπέδ(ες)*). Αυτά τα ουσιαστικά δεν δημιουργούν καινούργιο αλλόμορφο στην παραγωγή (*νταλγκάδικος, καναπεδάκι*). Επιπροσθέτως, δύο φωνολογικά γεγονότα λαμβάνουν χώρα σε αυτά τα παραδείγματα: α.) η διαφορετική τονισμένη συλλαβή (σχεδόν πάντα τονισμένη η παραλήγουσα σε σύγκριση με άλλα ουσιαστικά που τονίζονται στην λήγουσα) και β.) το φωνολογικό βάρος του Η-ΤΕΛΕΥΤΑΙΟΥΧΑΡΑΚΤΗΡΑ (/i/ ως υψηλά προφερόμενο φωνήεν έχει την τάση να διαγράφεται).

4. Υπολογιστική επεξεργασία της Αλλομορφίας

4.1. Σύνολο Αλλομορφικών Μετασχηματισμών

Για την υπολογιστική επεξεργασία της αλλομορφίας, αναλύουμε την αλλομορφική συμπεριφορά των θεμάτων και προσφυμάτων. Πρώτα, παρατηρούμε τα συστηματικά χαρακτηριστικά των αλλομόρφων και παράγουμε κάποιους κανόνες. Αυτοί οι κανόνες μπορούν να περιγράψουν τους μετασχηματισμούς μπορούν να κωδικοποιηθούν με τον κατάλληλο τρόπο για έναν μορφολογικό αναλυτή. Οι κανόνες αυτοί βοηθούν κυρίως το σύστημα να αναλύσει σωστά τις λέξεις και να δημιουργήσει ένα σύνδεσμο ανάμεσα στο αλλόμορφο και το μόρφημα. Με λίγα λόγια, θα δώσω το σύνολο των αλλομορφικών μετασχηματισμών για την ονοματική παραγωγή.

- (8.) α. ΜΗΔΕΝΙΚΗ ΑΛΛΟΜΟΡΦΙΑ
Ρίζα -> Μηδενική αλλομορφία (1α, 1β, 5α, 7α)²
{ΑΝΘΡΩΠ -> Μηδενική αλλομορφία}
- β. Α-ΔΙΑΓΡΑΦΗ ΑΛΛΟΜΟΡΦΙΑ
Ρίζα-> Αλλόμορφο τύπου Α-Διαγραφή (2α, 3α)
{ΤΑΜΙΑ -> ΤΑΜΙ}
- γ. Η-ΔΙΑΓΡΑΦΗ ΑΛΛΟΜΟΡΦΙΑ
Ρίζα-> Αλλόμορφο τύπου Η-Διαγραφή (2β, 3β)
{ΨΥΧΗ -> ΨΥΧ}
- δ. Ι-ΔΙΑΓΡΑΦΗ ΑΛΛΟΜΟΡΦΙΑ
Ρίζα -> Αλλόμορφο τύπου Ι-Διαγραφή (6α)
{ΠΑΙΔΙ -> ΠΑΙΔ}
- ε. Δ-ΕΙΣΑΓΩΓΗ ΑΛΛΟΜΟΡΦΙΑ
Ρίζα -> Αλλόμορφο τύπου Δ-Εισαγωγή (2γ, 2δ, 2ε, 2ζ, 3γ, 3δ)
{ΠΑΠΑ -> ΠΑΠΑΔ}
- στ. Τ-ΕΙΣΑΓΩΓΗ ΑΛΛΟΜΟΡΦΙΑ
Ρίζα -> Αλλόμορφο τύπου Τ-Εισαγωγή (8α, 8β, 8γ)
{ΚΥΜΑ -> ΚΥΜΑΤ}
- ζ. ΔΠΛΗ ΑΛΛΟΜΟΡΦΙΑ
Ρίζα -> Αλλόμορφα τύπου Η-Διαγραφή & Αλλαγή Φωνήεντος (4)
{ΠΟΛΗ -> ΠΟΛ~ ΠΟΛΕ}

Παρόμοιοι κανόνες μετασχηματισμού έχουν αναφερθεί και συζητηθεί ήδη στην βιβλιογραφία της υπολογιστικής μορφολογίας (βλ. Jurafsky και Martin 1999, Gaussier 1995, Bernhard 2005, μεταξύ άλλων) για την Αγγλική. Για αυτό που μας απασχολεί στο συγκεκριμένο άρθρο, αλλομορφικοί τύποι, όπως αλλαγή τελευταίου χαρακτήρα (send~ sent), μηδενική αλλαγή (cut~ cut) αλλαγή τύπου ετεροίωσης (drink~ drunk) περιγράφονται συνήθως. Προκαλεί έκπληξη ότι οι ερευνητές αναφέρονται στις αλλομορφικές αλλαγές, αλλά ποτέ δεν προσπαθούν να εφαρμόσουν την θεωρητική τους προσέγγιση/ προβληματισμό στο ΜΜεΜ μοντέλο τους. Είναι κοινός τόπος των ερευνητών της ΜΜεΜ, είτε να αποφεύγουν το πρόβλημα της αλλομορφίας είτε να ελαχιστοποιούν τις επιπτώσεις του ζητήματος. Ένα ελαφρυντικό γεγονός είναι ότι ρηματική και ονοματική αλλομορφία είναι ελάχιστη στην Αγγλική· τα αλλόμορφα της συνήθως δεν συμμετέχουν στην διαδικασία της παραγωγής. Εξάλλου, οι κανόνες μετασχηματισμού προσθέτουν επιβλεπόμενες τακτικές σε ένα ΜΜεΜ μοντέλο. Οι υποστηρικτές της «γνήσιας» ΜΜεΜ θεωρίας (Goldsmith, Gaussier, Bernhard) υποστηρίζουν σθεναρά ότι ένα ΜΜεΜ μοντέλο είναι μη αποδεκτό να βασίζεται σε «ελαφρώς» ανθρωπίνως σχεδιασμένη

² Οι αριθμοί στις παρενθέσεις αναφέρονται στις κλιτικές τάξεις ενώ τα γράμματα στις αντίστοιχες υποκατηγορίες των προηγούμενων τάξεων.

ανάλυση για τα μορφήματα μιας γλώσσας· είναι επίσης απορριπτέο για ένα ΜΜεΜ μοντέλο να βοηθιέται στην αναγνώριση των θεμάτων και να εσωκλείει προ-σχεδιασμένους κανόνες για τη σωστή μορφολογική ανάλυση (Goldsmith 2001: 156-167). Τέτοιες τακτικές υποστηρίχτηκαν επίσης από τους Pacak and Pratt (1976), Koch, Küstner, and Rüdiger (1989) και Wothke and Schruidt (1992).

4.2. Προβλεψιμότητα και Κανονικότητα στην Αλλομορφία

Σύμφωνα με τον ορισμό της αλλομορφίας, αυτό το φαινόμενο περιγράφει αυθαίρετες και απρόβλεπτες αλλαγές μορφημάτων. Εντούτοις, υπάρχει προβλεψιμότητα και κανονικότητα στην αλλομορφία. Αυτό μπορεί να δικαιολογηθεί από ιστορικής πλευράς της Ελληνικής γλώσσας. Τα περισσότερα αλλόμορφα μπορούν να προβλεφθούν από διάφορους ανενεργούς μορφολογικούς και φωνολογικούς κανόνες. Για παράδειγμα, τα αλλόμορφα των προθημάτων *ανθ-*, *υφ-* και *καθ-* έχουν δημιουργηθεί από τον κανόνα δάσυνσης συμφώνου της Αρχαίας Ελληνικής (αντί + υγιεινός -> *ανθυγιεινός*, υπό+ υπουργός -> *υφυπουργός*), η προ-επέκταση του θέματος λόγω του ενεστωτικού αναδιπλασιασμού (πε + περασ-μένος -> *πεπερασμένος*, τε + τελεσ-μένος -> *τετελεσμένος*) και η φωνηεντική αλλαγή λόγω της ετεροίωσης (φέρω -> *φορά*, διαμένω -> *διαμονή*). Ωστόσο, όλοι αυτοί οι κανόνες (μεταξύ άλλων) δεν είναι ενεργοί στη Νέα Ελληνική. Επομένως, αυτά τα μορφήματα έχουν αλλάξει συγχρονικά αυθαίρετα και απρόβλεπτα δημιουργώντας έτσι αλλόμορφα. Το κέρδος της ιστορικής ανάλυσης της αλλομορφίας είναι σημαντικό για την εξαγωγή συμπερασμάτων όσον αφορά τις μορφολογικές αλλαγές. Είναι κρίσιμο για την υπολογιστική εκμάθηση της μορφολογίας, μιας και οι ανενεργοί κανόνες μπορούν να κωδικοποιηθούν στο σύστημα, με στόχο να βοηθήσει το σύστημα να αντιμετωπίσει το φαινόμενο αλλομορφίας.

Συγκρίνοντας τη θεματική αλλομορφία με την επιθηματική αλλομορφία, παρατηρούμε κάποιες κανονικότητες. Τα επιθήματα δείχνουν παρόμοια αλλόμορφα με αυτά των θεμάτων, με τα οποία τα προηγούμενα μοιράζονται μερικά κοινά χαρακτηριστικά. Παραδείγματος χάρη, το επίθημα *-α(ς)* ‘κάποιος που ενεργεί’ είναι παρόμοιο με τα ουσιαστικά τύπου *παπάς*· ακολουθούν τον κανόνα δ-εισαγωγής για τον σχηματισμού πληθυντικού και παραγωγής.

| | | | | | |
|---------|------------|--------------|--------|-----------------|-----------------|
| (9.) α. | παπά(ς) | παπάδ(ες) | -α(ς) | παπλωματ-ά(ς) | παπλωματάδ(ες) |
| | καρδιά | καρδι(ες) | -άλα | κρεμ-άλα | κρεμάλ(ες) |
| | βουν(ό) | βουν(ά) | -εί(ο) | γραφ-εί(ο) | γραφεί(α) |
| | κύμα | κύματ(α) | -μα | πέταγ-μα | πετάγματ(α) |
| β. | τεμπέλη(ς) | τεμπέληδ(ες) | -άρης | περιβολ-άρης(ς) | περιβολάρηδ(ες) |
| | παιδί | παιδ-άκι | -ούλι | σακ-ούλι | σακουλ-άκι |

Αυτή η κανονικότητα εμφανίζεται επίσης και ανάμεσα στα ρήματα και τα ρηματικά επιθήματα. Αυτό συμβαίνει συνήθως λόγω της επανάλυσης των λέξεων, όπου ένα πρώην ανεξάρτητο επίθημα είναι πλέον μέρος του θέματος. Η πιο εντυπωσιακή κανονικότητα είναι αυτή του (9β). Όπως έχω ήδη τονίσει στην υποενότητα 3.3, είναι μερικά ουσιαστικά που παράγουν νέα αλλόμορφα κατά τη διαδικασία της παραγωγής (και σύνθεσης). Παρομοίως, τα επιθήματα, όπως *-άρη(ς)*, *-ούλι*, συμπεριφέρονται ακριβώς όπως τα ουσιαστικά *τεμπέλη(ς)* και *παιδί*. Αυτό σημαίνει ότι δημιουργούν ένα αλλόμορφο παρόλη την παρουσία του (*ταξιδ-ιάρη(ς)* *ταξιδ-ιάρηδ(ες)*, αλλά *ταξιδ-ιάρ-ικός*) ή την απουσία του (*σακ-ούλι* *σακ-ούλι(α)*, άλλα *σακ-ουλ-άκι*) στην κλίση. Όλες αυτές οι αποδείξεις καταδεικνύουν ότι η αλλομορφία συμμετέχει σε όλα τα επίπεδα σχηματισμού λέξεων με την ίδια κανονικότητα. Επομένως, τα αλλόμορφα δεν εμφανίζονται όσο απρόβλεπτα τα όριζε η Lieber (1980). Αυτές οι κανονικότητες μπορούν να μας βοηθήσουν να κατηγοριοποιήσουμε καλύτερα την αλλομορφική συμπεριφορά θεμάτων και επιθημάτων. Μας παρέχει επίσης κοινούς κανόνες που μπορούν να κωδικοποιηθούν σε ένα ΜΜεΜ μοντέλο με εκ των προτέρων ανάλυση μορφημάτων από άνθρωπο. Έτσι, ένα ΜΜεΜ μοντέλο γίνεται επομένως Επιβλεπόμενης Μορφολογικής Μάθησης (ΕΜΜ) μοντέλο.

4.3. Μελλοντική έρευνα

Σκοπεύω να αναλύσω συστηματικά διάφορα θεωρητικά προβλήματα της αλλομορφίας. Θα τσεκάρω όλους τους πιθανούς συνδυασμούς επιθημάτων με ουσιαστικά τύπου *Xη~ Xηδ~ X* με σκοπό να εκμηδενίσω την πιθανότητα εμφάνισης του *Xηδ* αλλόμορφου σε παραγωγικές λέξεις. Επιπροσθέτως, μερικές άλλες ονοματικές κατηγορίες (θέματα και επιθήματα) θα πρέπει να αντιμετωπιστούν επαρκέστερα. επιπλέον, σκοπεύω να αναλύσω και να αξιολογήσω ρηματικούς μετασχηματικούς κανόνες για την ρηματική αλλομορφία ώστε να είναι κωδικοποιημένη και πιο εύκολα υπολογιστικά αντιμετωπίσιμη.

Από την άλλη, μια ικανοποιητικά μεγάλη βάση λέξεων πρέπει να δημιουργηθεί ώστε να δοκιμαστεί το *Linguistica* του Goldsmith ώστε να μας δώσει τις προβληματικές περιπτώσεις που περιμένουμε. Επίσης, τώρα δημιουργώ μια άλλη βάση ονοματικών λέξεων με χαρακτηριστικά (μορφολογικά, φωνολογικά και σημασιολογικά) τα οποία θα τρέξουν στο λογισμικό AMIS, ένα Μοντέλο Μέγιστης Εντροπίας (μια συγκεκριμένη θεωρία της ΕΜΜ). Ελπίζω ότι η δοκιμή αυτού του λογισμικού θα μας δώσει σοβαρές αποδείξεις για την στήριξη της θεωρίας περί αλλομορφικής προβλεψιμότητας.

5. Συμπεράσματα

Η Υπολογιστική Μορφολογία είναι ένας ταχύτατα εξελισσόμενος τομέας της γλωσσολογίας. Η θεωρία της Μη-επιβλεπόμενης Μορφολογικής Μάθησης είναι μια σύγχρονη προσέγγιση μορφολογικής ανάλυσης των προβλημάτων· φαίνεται να λειτουργεί πάρα πολύ καλά με γλώσσες που έχουν φτωχή μορφολογία. Ωστόσο, οι προσπάθειες για χρήση αυτής της θεωρίας σε πλούσιες μορφολογικά γλώσσες, όπως τα Φιλανδικά και τα Τουρκικά, χαρακτηρίζονται από επεικώς μέτρια αποτελέσματα. Εμείς υποστηρίζουμε πως ένα σύστημα χωρίς: α.) εκ των προτέρων ανάλυση από άνθρωπο των γραμματικών μορφημάτων μιας γλώσσας, β.) κάποια χαρακτηρισμένα θέματα και επιθήματα και γ.) προ-εισαγμένοι μορφολογικοί και φωνολογικοί κανόνες για ορθή ανάλυση, θα αποτύχει. Ένα σύστημα που δημιουργεί λεξικά βασισμένα σε κάποιες κοινές ακολουθίες φωνημάτων χωρίς τους κατάλληλους κανόνες είναι αδύνατον να χειριστεί την αλλομορφία. Όπως αναφέρθηκε ήδη, το φαινόμενο της αλλομορφίας στα ελληνικά είναι ιδιαιτέρως εκτεταμένο. Η αλλομορφία συμμετέχει με την ίδια συχνότητα σε κάθε διαδικασία σχηματισμού λέξεων. Μια φυσική ερώτηση είναι εάν ένα μοντέλο MeMM είναι ικανό να επεξεργαστεί και να χειριστεί επιτυχώς την αλλομορφία. Παρουσιάστηκαν ήδη αρκετά δεδομένα με αλλόμορφα και παρουσιάστηκε η περιπλοκότητα των αλλομορφικών αλλαγών παράλληλα με την κανονικότητας εμφάνισης των αλλομόρφων. Μιας και η εισαγωγή κανόνων επεξεργασίας της αλλομορφίας δεν επιτρέπονται σε ένα μοντέλο MeMM, ο στόχος της ορθής ανάλυσης δεν μπορεί να επιτευχθεί. Από μια πιο πρακτική σκοπιά, η δουλειά μου δεν έχει καμία σχέση με το δημοφιλές ερώτημα: ένας νέος ομιλητής αντιμετωπίζει και διαχωρίζει τα μορφήματα της γλώσσας όπως ένα μοντέλο MeMM? Απλώς θέλω να τονίσω ότι μόνο τα μοντέλα EMM με κανόνες και χρήση της ανθρώπινης γνώσης έχουν τις απαραίτητες βάσεις για την υπολογιστική αντιμετώπιση των αλλομόρφων στην Ελληνική.

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Linguistic Analysis of a Corpus of Italian Legal Texts.

A NLP-based Approach

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1. Introduction

Corpus linguistics studies showed that it is not possible to reliably investigate the characteristics of registers (i.e. varieties of a standard language) by considering the relative distribution of individual linguistic features. Rather, register analyses require a comparative approach: «we need a baseline for comparison to know whether the use of a linguistic feature in a register is rare or common» (Biber et al., 1998). This is quite crucial in the legal field, since legal language *differs* from ordinary language, but it is not dramatically *independent* from every day speech (see Garavelli, 2001). Thus, following a comparative approach, this paper intends to perform a linguistic analysis of the Italian legal language focussing on the extent to which it differs from Italian ordinary language. For this purpose, Natural Language Processing techniques were exploited and results obtained on corpora of Italian law texts were analysed. In particular, syntactic peculiarities of legal language were identified by comparing those results with the ones obtained on an Italian reference corpus. Capitalizing on the results drawn by previous studies carried out manually on legal corpora (see, among others, Garavelli, 2001), the aim is to show how computational linguistic analysis techniques can help to shed light on some main syntactic peculiarities of the Italian legal language and can provide quantitative validations of theoretical claims from the literature.

The paper is organised as follows: section 2 and 3 describe respectively the corpora of Italian legal texts on which the study was carried out and the NLP techniques exploited. Section 4 shows the results of the syntactic analysis carried out on Italian legal corpora. Results of a comparative analysis with an Italian general language corpus are also reported. Finally, in section 5 some conclusion are drawn and further directions of research are outlined.

2. The corpus

In this study, two different legal corpora were taken into account, differing at the level of the regulated domain (i.e. the environmental and the consumer protection domains) and of the releasing agencies (i.e. European Union, Italian national state and Piedmont local authority). These two corpora will be henceforth referred to as Environmental Corpus (ENV) and Consumer Law Corpus (CONS) respectively.

2.1. The Environmental Corpus

The Environmental Corpus consists of 824 legislative, institutional and administrative acts for a total of 1,399,617 word tokens. It has been downloaded from the BGA (*Bollettino Giuridico Ambientale*), database edited by the Piedmont local authority for the environment¹. The corpus includes acts released by three different agencies, i.e. European Union, Italian national state and Piedmont local authority, which cover a nine-year period (from 1997 to 2005). It is a heterogeneous document collection including legal acts such as national and regional laws, European directives, legislative decrees, etc., as well as administrative acts, such as ministerial circulars, decision, etc.

2.2. The Consumer Law Corpus

The Consumer Law Corpus containing legal texts which regulate the consumer protection domain is a more homogeneous collection. It is made up of 18 European Union Directives in consumer law, for a total of 74,210 word tokens. Unlike ENV, it includes only Italian European law texts.

3. The Natural Language Processing tools

AnIta (Bartolini et al., 2004) is the Italian parsing system (jointly developed by the Istituto di Linguistica Computazionale of the CNR and by the Department of Linguistics of the University of Pisa) exploited for the analysis of legal texts. It consists of a suite of linguistic tools in charge of text processing at incremental level of analysis including:

- tokenisation of the input text;
- morphological analysis (including lemmatisation) of the text;
- syntactic parsing, articulated in two different steps:
 - a) *chunking*, carried out simultaneously with morpho-syntactic disambiguation;
 - b) dependency analysis.

In what follows, the analysis of legal texts focuses on syntactic levels. In particular, text analysis is concentrated on *chunking*, the shallow

¹ <http://extranet.regione.piemonte.it/ambiente/bga/>

syntactic parsing technique which segments sentences into an unstructured sequence of syntactically organised texts units called *chunks* (Abney, 1991). Abney (1991) in his study demonstrated how chunking has been proven to be highly versatile to produce reliable syntactic annotations of texts. The purpose of traditional full-parsing is to associate to each sentence a fully specified recursive structure, in order to identify the proper syntagmatic composition, as well as the relations of functional dependency among the identified constituents. On the contrary, chunking is a process of non-recursive segmentation of text. The resulting analysis is flat and unambiguous: only those relations which can be identified with certainty have been found out. Accordingly, some of the ambiguous grammatical dependencies (e.g. noun sequences, adjective conjunction, prepositional phrase attachments, etc.) are left underspecified and unresolved. This makes chunking highly suitable to syntactically annotate different types of texts, both written and spoken, and to analyse corrupted or fragmentary linguistic inputs. As long as “parse incompleteness” is reinterpreted as “parse underspecification”, failures due to lexical gaps, particularly complex syntactic constructions, as well as ill-formed inputs, etc. are minimised.

Within the nowadays Natural Language Processing community there is a spread consensus for exploiting this shallow parsing scheme as a reliable approach towards a robust syntactic analysis. Among others, Lenci et al. (2001) claim that «while full parsing is an extremely costly task for most existing systems since it needs huge amounts of linguistic knowledge to work properly, NLP systems can resort to a shallower level of syntactic description, which although underspecified, still provides enough syntactic information as the basis for higher-level processing tasks».

This study proceeds with the idea that a shallow parsing approach can help to provide enough detailed linguistic information even for syntactically complex texts such as legal ones. Taking into account an unambiguous syntactic representation such the one provided by chunking, it would like to figure out the main morpho-syntactic features of Italian legal language with respect to Italian ordinary language.

4. Analysis and identification of syntactic peculiarities of legal texts

This section reports on the results obtained by inspecting the syntactic chunked output of CHUG-IT (Federici et al., 1996), the *AnIta* chunking module. In CHUG-IT chunking is carried out through a finite state automaton which takes as input a morpho-syntactically tagged text. Under Federici et al.’s interpretation, «a *chunk* is a textual unit of adjacent word tokens: accordingly, discontinuous chunks are not allowed. Word tokens internal to a chunk share the property of being

mutually linked through those dependency chains which can be identified unambiguously with no recourse to lexical information other than part of speech and lemma». To be more concrete, a sentence such as *Le stesse disposizioni si applicano ad un prodotto importato* “The same provisions are applied to an imported product” will be chunked as follows:

- A. [Le stesse disposizioni] *The same provisions*
- B. [si applicano] *are applied*
- C. [ad un prodotto] *to a product*
- D. [importato] *imported*

A sample output of CHUG-IT is given in Figure 1, where it can be noted that each chunk contains information about its type (e.g. noun chunk, N_C, finite verb chunk, FV_C, prepositional chunk, P_C, etc.), its lexical head (identified by the label POTGOV) and any occurring modifier and preposition. It should be noted moreover that a chunked sentence does not contain information about the nature and the scope of inter-chunk dependencies. They are left to be parsed at further levels of analysis.

In the chunked sentence in Figure 1 below, use of underspecification is exemplified. The chunking process resorts to underspecified analyses in cases of systematic ambiguity, as adjectival modification. In fact, in Italian, post-nominal adjectives can be ambiguously interpreted either as restrictive modifiers or as secondary predicates. When a pre-nominal adjective such as *stesse* “the same” occur between the determiner (*le* “the”) and the noun (*disposizioni* “provisions”) it becomes part of a wider (nominal in this example) chunk. Post-nominal adjectives are instead regarded as independent chunks. It should be noted that in the case of the post-nominal reported in the example (*importato* “imported”) a second ambiguity type occurs, i.e. the one between adjective and past participle. This ambiguity is captured through the underspecified chunk category ADJPART_C, subsuming both an adjectival chunk and a participial chunk interpretation.

| |
|---|
| <p>“Le stesse disposizioni si applicano ad un prodotto importato” (“The same provisions are applied to an imported product”)</p> <p>[[CC:N_C][DET:LO#RD][PREMODIF:STESSO#A][POTGOV:DISPOSIZIONE#S]]</p> <p>[[CC:FV_C][CLIT:SI#PQ][POTGOV:APPLICARE#V]]</p> <p>[[CC:P_C][PREP:AD#E][DET:UN#RI][POTGOV:PRODOTT#S]]</p> <p>[[CC:ADJPART_C][POTGOV:IMPORTARE#V@IMPORTATO#A]]</p> |
|---|

Figure 1: CHUG-IT output

This underspecified approach to robust syntactic analysis of Italian texts has been proved to be fairly reliable. Lenci et al. (2001) provided a detailed evaluation of CHUG-IT parsing performance drawn on a corpus

of financial newspapers articles. Results of automatic chunking were evaluated against a version of the same texts chunked by hand; they give a recall of 90.65% and a precision of 91.62%.

4.1. A comparative syntactic analysis

The analysis of chunked legal texts is mainly focussed on:

- the distribution of chunk types in the legislative corpus;
- the depth of chains of prepositional chunks.

For this purpose, a comparative perspective of analysis was adopted: the percentage distribution of chunk types within the Italian Legislative Corpus (i.e. ENV and CONS) was compared with the analysis of an Italian reference corpus, the PAROLE corpus (Marinelli et al., 2003), made up of about 3 million words including texts of different types (newspapers, books, etc.).

4.1.1. Distribution of chunk types

In what follows, we will focus on the legal language peculiarities which are worthy of being discussed. Chi-squared test applied on Table 1 and 2 confirms the existence of a significant correlation between corpus variation and chunk type distribution.

| Chunk types | Italian Legislative Corpus | | | | PAROLE corpus | |
|---------------------|----------------------------|-------|---------------------|-------|---------------|-------|
| | Environmental Corpus | | Consumer Law Corpus | | | |
| | Count | % | Count | % | Count | % |
| Adj/Participial_C | 38607 | 3.56 | 1689 | 2.74 | 29218 | 1.90 |
| Adjectival_C | 126267 | 11.66 | 6146 | 10.00 | 65740 | 4.27 |
| Adverbial_C | 13021 | 1.20 | 1006 | 1.63 | 49038 | 3.19 |
| Coordinating_C | 59585 | 5.50 | 3095 | 5.03 | 73073 | 4.75 |
| Finite Verbal_C | 36838 | 3.40 | 3007 | 4.89 | 140604 | 9.14 |
| Nominal_C | 226529 | 20.92 | 13062 | 21.25 | 413821 | 26.92 |
| Non finite verbal_C | 19569 | 1.80 | 5867 | 9.54 | 41674 | 2.71 |
| Predicative_C | 13047 | 1.20 | 843 | 1.37 | 21772 | 1.41 |
| Prepositional_C | 321167 | 29.66 | 14152 | 23.03 | 338037 | 21.99 |
| Punctuation_C | 192419 | 17.77 | 9756 | 15.87 | 278897 | 18.14 |
| Subordinating_C | 22026 | 2.03 | 2288 | 3.72 | 70226 | 4.56 |
| Unknown_C | 13439 | 1.24 | 535 | 0.87 | 14964 | 0.97 |

Table 1: Comparative distribution of chunk types.

4.1.1.1. Prepositional and Nominal Chunks

Looking at Table 1, it can be noticed that prepositional chunks (Prepositional_C) are the most frequent chunk type within the whole legislative Corpus. On the contrary, nominal chunks (Nominal_C) are the most recurring chunk type within the reference corpus. However, it

should be appreciated that prepositional as well as nominal chunks are differently distributed between ENV and CONS. Namely, in ENV prepositional chunks constitute 29.66% while the nominal chunks are 20.92%; in CONS the former ones are 23.03% while the latter ones are the 21.25%.

In-depth results have been figured out by carrying out further analysis of different distributions of prepositional and nominal chunks between legislative and ordinary language corpora. Table 2 shows that the heterogeneous composition of ENV affects the distribution of chunk types. Namely, the “regional” as well as the “state” ENV sub-corpora show the highest occurrence of prepositional chunks (i.e. respectively 29.46% and 30.87%) and, on the contrary, the lowest frequency of nominal chunks (i.e. 21.17% and 20.18%).

Interestingly, it seems that the Italian European legal language has linguistic features which are more similar to those of ordinary language ones than the “regional” and “state” legal language. Table 2 shows in particular that prepositional chunks have lower occurrences, with respect to “regional” and “state” cases, both in the European ENV sub-corpus (27.61%) and in the European directives making up CONS (23.03%). Nominal chunks as well have a higher frequency in both the European corpora (respectively, 22.10% in the European ENV sub-corpus and 21.25% in CONS). Still, it is worth noting that the different regulated domains may have affected legal language, i.e. linguistic peculiarities specific to a given-regulated domain may have been assimilated.

| Chunk Types | Italian Legislative Corpus | | | | | | | | PAROLE Corpus | |
|------------------------|----------------------------|-------|--------|-------|--------|-------|------------------------|-------|------------------|-------|
| | Environmental Corpus | | | | | | Consumer Law Corpus | | | |
| | Region | | State | | Europe | | | | | |
| | Count | % | Count | % | Count | % | Count | % | Count | % |
| Adj/Participial_C | 7247 | 3.58 | 20305 | 3.58 | 11055 | 3.52 | 1689 | 2.74 | 29218 | 1.90 |
| Adjectival_C | 24949 | 12.33 | 68931 | 12.16 | 32387 | 10.33 | 6146 | 10.00 | 65740 | 4.27 |
| Adverbial_C | 2149 | 1.06 | 5944 | 1.04 | 4928 | 1.57 | 1006 | 1.63 | 49038 | 3.19 |
| Coordinating_C | 10315 | 5.09 | 31930 | 5.63 | 17340 | 5.53 | 3095 | 5.03 | 73073 | 4.75 |
| Finite Verbal_C | 5857 | 2.89 | 16601 | 2.92 | 14380 | 4.58 | 3007 | 4.89 | 140604 | 9.14 |
| Nominal_C | 42850 | 21.17 | 114404 | 20.18 | 69275 | 22.10 | 13062 | 21.25 | 413821 | 26.92 |
| Non finite verbal_C | 3509 | 1.73 | 7927 | 1.39 | 8133 | 2.59 | 5867 | 9.54 | 41674 | 2.71 |
| Predicative_C | 1850 | 0.91 | 6467 | 1.14 | 4730 | 1.50 | 843 | 1.37 | 21772 | 1.41 |
| Prepositional_C | 59615 | 29.46 | 175011 | 30.87 | 86541 | 27.61 | 14152 | 23.03 | 338037 | 21.99 |
| Punctuation_C | 36373 | 17.97 | 103696 | 18.29 | 52350 | 16.70 | 9756 | 15.87 | 278897 | 18.14 |
| Subordinating_C | 3348 | 1.65 | 10068 | 1.77 | 8610 | 2.74 | 2288 | 3.72 | 70226 | 4.56 |
| Unknown_C | 4279 | 2.11 | 5496 | 0.96 | 3664 | 1.16 | 535 | 0.87 | 14964 | 0.97 |

Table 2: Comparative distribution of chunk types accounting for three different releasing agencies

4.1.1.2. Verbal Chunks

The fairly low percentage of verbal chunks results to be one of the main specific features of law texts. Whereas the Italian reference corpus has 9.14% of the finite verbal chunks, they appear to be about a third within the “regional” and “state” law texts (2.89% and 2.92% respectively); the Italian European law texts show a halved percentage of occurrences (i.e. the finite verbal chunks are 4.58% in the ENV European texts and 4.89% in CONS).

This morpho-syntactic feature of legal texts represents a quite crucial issue both from a theoretical and an applicative points of view. From the theoretical point of view, it points to the linguistic realisation of events within legal texts. It may suggest that very few events are expressed through verbal constructions; rather they can be expressed through deverbal nouns typically embedded in PP-attachment chains. It could be the case that, for example, the event *accertare* “to verify” is expressed through:

- a verbal construction (i.e. *accertare* “to verify”), as in *l'autorità amministrativa competente **accerta** la compatibilità paesaggistica* “the relevant administrative authority verifies the landscape compatibility”;
- a nominal construction (i.e. *accertamento* “verification”), as in the following PP-attachment chain *il Comune è preposto alla gestione del vincolo ai fini dell'**accertamento** della compatibilità paesaggistica* “the Municipality is in charge of the management of the obligation to the verification of the landscape compatibility”.

The low occurrence of finite verbal chunks obtained by inspecting the output of the chunking module of analysis can help to investigate how events are typically expressed within legal texts. It seems to suggest that nominalisations typically embedded in PP-attachment chains should be studied in order to figure out some specific morpho-syntactic features of linguistic realisation of events within legal language with respect to ordinary language.

Moreover, from an applicative point of view, since finite verbs have a central role as connecting elements between concepts, in principle their low frequency may negatively affect the performance of an Event Extraction task within any content (semantic) analysis of legal texts.

4.1.2. PP-attachment chains

In section 4.1.1.1., a higher occurrence of prepositional chunks within law texts was reported with respect to ordinary language. This may be due to deep PP-attachment chains which include a high number of embedded prepositional chunks. In order to test this hypothesis, occurring PP-chains have been automatically computed². The following typology of cases has been considered:

- chains of consecutive prepositional chunks, such as *presentazione delle domande di contributo ai Comuni per l'attivazione dei distributori per la vendita di metano* “submission of contribution requests to Municipalities for the activation of distributors for the sale of natural gas”, which is chunked as follows [P_C delle domande] [P_C di contributo] [P_C ai Comuni] [P_C per l'attivazione] [P_C di distributori] [P_C per la vendita] [P_C di metano];
- sequences of prepositional chunks with possibly embedded adjectival chunks, such as *disciplina del canone regionale per l'uso di acqua pubblica* “regulation of the regional fee for public water usage”, which is chunked as follows [P_C del canone] [ADJ_C regionale] [P_C per l'uso] [P_C di acqua] [ADJ_C pubblica];
- sequences of prepositional chunks with possibly embedded adjectival chunks, coordinative conjunctions and/or “light” punctuation marks (i.e. comma), such as *acqua destinata all'uso igienico e potabile, all'innaffiamento degli orti* “water devoted to sanitary and drinkable usage, to garden watering”, which is chunked as follows [P_C all'uso] [ADJ_C igienico] [COORD_C e] [ADJ_C potabile] [PUNC_C,] [P_C all'innaffiamento] [P_C degli orti].

| PP-chains depth | Italian Legislative Corpus | | | | | | | | PAROLE Corpus | |
|-----------------|----------------------------|-------|-------|-------|--------|-------|---------------------|-------|---------------|-------|
| | Environmental Corpus | | | | | | Consumer Law Corpus | | | |
| | Region | | State | | Europe | | | | | |
| | Count | % | Count | % | Count | % | Count | % | Count | % |
| 4 | 2822 | 38.48 | 8924 | 37.42 | 4164 | 43.19 | 611 | 45.32 | 10240 | 54.72 |
| 5 | 1723 | 23.71 | 5366 | 22.50 | 2258 | 23.42 | 356 | 26.40 | 4621 | 24.68 |
| 6 | 1043 | 14.35 | 3505 | 14.69 | 1380 | 14.31 | 139 | 10.31 | 1999 | 10.68 |
| 7 | 612 | 8.42 | 2103 | 8.81 | 725 | 7.52 | 104 | 7.75 | 910 | 4.85 |
| 8 | 420 | 5.78 | 1318 | 5.57 | 409 | 4.24 | 44 | 3.26 | 464 | 2.47 |
| 9 | 248 | 3.41 | 813 | 3.40 | 237 | 2.45 | 28 | 2.07 | 206 | 1.09 |
| 10 | 151 | 2.13 | 652 | 2.73 | 161 | 1.67 | 23 | 1.70 | 112 | 0.59 |
| 11 | 91 | 1.35 | 350 | 1.46 | 92 | 0.95 | 10 | 0.74 | 74 | 0.39 |
| 12 | 63 | 0.88 | 244 | 1.02 | 69 | 0.71 | 7 | 0.51 | 39 | 0.20 |
| 13 | 30 | 0.42 | 167 | 0.70 | 39 | 0.40 | 9 | 0.66 | 28 | 0.14 |
| 14 | 19 | 0.32 | 147 | 0.61 | 37 | 0.38 | 5 | 0.37 | 17 | 0.09 |

² It should be noticed that the head chunk of a PP-attachment chain can be any chunk type.

| | | | | | | | | | | |
|----|----|------|----|------|----|------|---|------|---|------|
| 15 | 18 | 0.28 | 79 | 0.33 | 27 | 0.28 | 1 | 0.07 | 6 | 0.03 |
| 16 | 11 | 0.25 | 62 | 0.25 | 26 | 0.27 | 6 | 0.44 | 5 | 0.02 |
| 17 | 6 | 0.09 | 40 | 0.16 | 5 | 0.05 | 1 | 0.07 | 3 | 0.01 |
| 18 | 3 | 0.05 | 31 | 0.12 | 4 | 0.04 | 3 | 0.22 | 2 | 0.01 |
| 19 | 3 | 0.04 | 24 | 0.10 | 3 | 0.03 | 0 | 0.00 | 1 | 0.00 |
| 20 | 2 | 0.02 | 23 | 0.09 | 4 | 0.04 | 1 | 0.07 | 3 | 0.00 |

Table 3: Comparative distribution of PP-attachment chains

The results obtained by counting how many embedded PP-attachments could occur within a sentence of legal texts with respect to an ordinary language sentence show that the occurrence of deep PP-chains is not a special syntactic feature of legal language. Rather, is the different distribution of deep PP-chains in the different kinds of texts a crucial distinguishing characteristic of this register. As Table 3 shows, legal texts appear to have a higher percentage of deep PP-chains with respect to the reference corpus. It should be noticed that chains including from 5 to 11 embedded chunks are mainly involved. For example, chains of 8 PP-attachments are 5.78% of the total amount of PP-chains occurring within the “regional” texts and 5.52% in the “state” texts. Yet, they are only 2.47% in the ordinary language texts. As already observed, the Italian European law texts have a midway behaviour between legal language and the ordinary one.

5. Conclusion and future work

An analysis of some main syntactic features of legal language detected within Italian legal corpora has been presented. For this purpose, NLP techniques have been used, mainly exploiting a shallow parsing approach, i.e. chunking. A comparative approach has been followed as well, in order to investigate to what extent legal language differs from ordinary language. The results obtained by inspecting the output of the *AnIta* parsing system mainly suggest that:

- legal texts are characterised by a quite high occurrence of prepositional chunks, with respect to nominal chunks, and by a fairly low presence of finite verbs;
- the presence of deverbal nouns typically embedded in deep PP-attachment chains is peculiar of legal texts with respect to ordinary language;
- “regional” and “state” legal texts differ from ordinary language more than Italian European law texts.

Further directions of research include the investigation of the distribution of PP-attachment chains within legal texts and of deverbal nouns typically embedded in PP-chains. Following an NLP-based approach, still open issues concern the inspection of some different typologies of

PP-attachment chains which seem to be typical of legal texts, such as chains of embedded cross-reference to other texts, or to single parts of them, and chains of deverbal nouns typically expressing events through nominal constructions. It would be interesting from a perspective of studying the legal language transparency. As a matter of facts, the recurrence of complex and ambiguous syntactic constructions is widely acknowledged to be responsible for the lack of understandability of legal language. According to Garavelli (2001), it is not the occurrence of abstract nominalisations which may affect the whole legal text comprehension; rather, it is the complex syntactic patterns in which they are typically embedded that makes legal texts hardly comprehensible. That is in line with some findings in studies on linguistic complexity, mainly in the cognitive and psycholinguistic field (see Fiorentino, 2007 for a survey of the state-of-the-art). It was figured out that our *short term memory* is able to receive, process and remember an average of 7 linguistic units. In processing a given input sentence the language user attempts to obtain closure on the linguistic units contained in it as early as possible. Thus, it is perceptually “costly” to carry on analysing deep chains of embedded sentence constituents. Moreover, studies on syntactic complexities responsible for difficult processing of natural language sentences can open up further applicative directions of research.

An other main result figured out is the fact that “regional” and “state” legal texts differ from ordinary language more than Italian European law texts. Interestingly, that means that the Italian European legal language has linguistic features which are more similar to those of ordinary language. Conversely, the register of regional and national legislative drafting differs more significantly from ordinary language.

A last issue which is worth exploiting here is whether and to what extent observed peculiarities on Italian legal language are also found in other languages as well. In a previous study reported in Venturi 2008, a comparative case-study on a corpus of English European Union Directives in consumer law with respect to a sub-corpus of the Wall Street Journal is carried out. Results obtained by inspecting the output of an English NLP tool and by exploiting *chunking* as the same shallow parsing level of analysis interestingly show that the main morpho-syntactic peculiarities of legal texts detected in the Italian European legal texts (i.e. a quite high occurrence of prepositional chunks and a fairly low presence of finite verbs) are shared by the English European legal texts.

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Syntactic Features of Inalienable Possession in the French and the Bulgarian Simple Predicative Structure “Il lève LA main” vs. “Toi vdiga ø raka”

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1. Introduction

The aim of this paper is to try to account for the contrast between French and Bulgarian in the Inalienable simple predicative structure (ISPS) in (1):

- (1) Jean lève **la** main (French) / Ivan vdiga **ø** rāka (Bulgarian)
John raises the hand John raises ø hand
 ‘John raises his hand’

In this structure, the possessor is denoted by the subject and the body part by the direct object. What is obvious here for the difference between the two languages is the presence of the definite article in the French structure and the lack of determiner in the Bulgarian equivalent in front of the noun within the direct object.

Although Bulgarian has a definite article, it cannot have a possessive reading unlike in French, but only a reading where the body part is distinct from the person denoted by the subject:

- (2) Ivan vdiga rākata
John raises hand-the
'John raises the hand'

In (2), Ivan cannot be interpreted as the possessor of *rākata* (the hand).

For the French ISPS, Guéron (1985, 2005) proposed that the definite article in the NP denoting the possessed object is A-bound by the NP or pronoun denoting the possessor. The latter behaves as an antecedent that c-commands the anaphor.

We will first examine the morphological and interpretive features of the French and Bulgarian definite articles in order to try to explain why the former can be A-bound but not the latter. We will then present the binding hypothesis of Guéron (1985) for the French ISPS and Vergnaud and Zubizarreta's (1992) condition for an article to be A-bound, and propose that in the Bulgarian ISPS there is binding as well, but the bound element is the null determiner in the body part NP:

- (3) Toy vdiga ø rǎka
He raises ø hand

2. Morphological and interpretive features of French vs Bulgarian definite articles

2.1. French definite article

2.1.1. Morphology

The French definite article *le*, *la* or *les* is marked for number and gender (i.e. it has phi-features or contains AGR):

- (4) LE livre, LA rose, LES roses¹ (the book, the rose, the roses)

As Guéron points it out, it is homophonous with third person pronominal accusative clitics marked for number, gender and person:

- (5) Je LE vois, je LA vois, je LES vois (I see him/it, I see her/it, I see them)

Etymologically, it derives from latin “ille” that means “this one”.

2.1.2. Interpretation

- The French definite article generally functions as an iota operator, i.e. as a head of a DP which denotes a token (an R-expression). In other words, it denotes a unique object in the discourse:

- (6) *le livre* = the only x, such that x is a book (Guéron 1983)

- It can also have generic (7-9) and expletive (10-13) uses:

- (7) *Le chien* est un mammifère (= A dog is a mammal)

- (8) J’aime *le vin* (= I like wine)

- (9) Elle aime *les hommes musclés* (= She likes muscular men)

- (10) Ses vêtements sentent *la cigarette* (= His clothes smells of cigarette smoke)

- (11) Une tarte *aux fraises* (= Strawberry tart)

- (12) Je vais à *la plage* (= I’m going to the beach)

- (13) Je ne travaille pas *le matin* (= I don’t work in the morning)

¹ This example is from Guéron (1983)

That “le” is expletive (and not generic) in the examples (10-13) is confirmed by (14) and (15) from Van de Velde (2008):

(14) *Je voudrais faire une tarte aux fraises que j'ai achetées hier

I would like to make a tart of the strawberries which I bought yesterday

(15) *Je voudrais faire une tarte aux fraises, qui sont le premier fruit du printemps

I would like to make a tart of the strawberries, which are the first fruit of the spring

(14) shows that in *tarte aux fraises*, the noun *fraises* is not referential ; (15) shows moreover that in this nominal expression, *fraises* has not the generic reading. It follows that « le » is expletive here.

The generic interpretation of the French definite article has led Vergnaud & Zubizarreta (1992) to conclude that it can have an expletive use², forming NPs denoting types (and not tokens). Furthermore, Déchaine and Wiltschko (2002) claim that it “does not have a fixed interpretation” or “fixed referential value”. Observe that in (8), “le” is ambiguous between a generic and a definite construal.

- It can have a possessive use in the inalienable possession construal:

(16) Jean lève ^I*la* main

2.2. Bulgarian definite article

2.2.1. Morphology

The Bulgarian definite article is a morphological suffix (enclitic), which is attached to the first linear element in the NP:

- (17) a. kolata b. novata kola c. golyamata nova kola
car-the new-the car big-the new car
- d. *golyama novata kola
big new-the car³

Y. Penchev (1993) considers that the Bulgarian definite article is base-generated in D, and later a morphological rule agglutinates it to X – an adjective or a noun. We give a simplified structure of a Bulgarian DP containing an adjective modifier, where the adjective moves to SPEC-DP:

(18) [DP Nova_i [ta [NP *t_i* shapka]]]

² V & Z make no distinction between *generic* use and *expletive* use.

³ These examples are from Moskovsky (2002).

new-the hat

It means that in deep structure, the order is *ta-nova-shapka* (the-new-hat).

Like its French counterpart, the Bulgarian definite article bears features of number and gender:

(19) *chovek*ĀT (man-the [sg. masc.]), *kniga*TA (book-the [sg. fem.]),
*selo*TO (village-the [sing. neuter]), *chovetsi*TE (men-the [pl.])

Etymologically, it derives from the old demonstrative pronoun *tă, ta, to* in a weak position, i.e. after the first element in the DP: *zhena ta* > *zhenata* (woman this > woman-the).

Nowadays, it has lost the demonstrative meaning but is formally related to the modern demonstrative determiner used for close standing objects, which derives from the same old demonstrative pronoun, reinforced with specific particles –*zi*, –*va*, etc:

(20) *Ta-zi zhena* (this woman)

(21) *zhenata* (woman-the)

Thus, in modern Bulgarian, the relation between the definite article and the demonstrative determiner can be clearly established in synchrony and in consequence is relatively motivated for native speakers. We will see that this fact is very important in order to account for the impossibility for the Bulgarian definite article to be A-bound.

2.2.2. Interpretation

- Like its French counterpart, it is generally used as an iota operator:

(22) *Eto knigata*, *koyato mi dade* (= This is the book you gave me)

- It has also generic uses:

(23) *Kucheto e bozaynik* (A dog is a mammal)

(24) *Mrazya poshlostta* (I hate banality)

But contrary to its French equivalent, it cannot have *expletive* uses. For example, it is impossible to use the definite article in Bulgarian in examples as (10) and (11) with the expletive reading. The only way to obtain this

reading in these two examples is to use the nouns *cigarette* and *fraises* determinerless:

- (25) Drehte i mirishat na ø tsigari
 Clothes to her smell of ø cigarettes = (10)
 (26) Torta s ø yagodi
 tart with ø strawberries = (11)

The same restriction is valid for (12) and (13). The expletive reading with most of the deictic nouns (denoting places or time) is only reached when these nouns are determinerless:

- (27) Otivam na plazh
 Go-I to beach = (12)
 (28) Ne rabotya sutrin
 Don't work-I morning = (13)

If the definite article is used, only the specific reading of the DP is available. *Otivam na plazha* means that I'm going to a concrete beach, known by the speakers. *Rabotya sutrinta* means that I'm working *this* morning (with respect to the moment of the enunciation). The French equivalent of the last example is *Je travaille ce matin*, with the demonstrative determiner.

The Bulgarian data seems to reinforce the hypothesis that generic and expletive uses are not the same thing. Whether the generic reading is referential, the expletive one is non-referential.

- It has not a possessive use, at least as far as the ISPS is concerned:

- (29) Toy vdiga rāka (= He raises his hand)
 (30) Toy vdiga rākata (= He raises the hand)

Rākata in (30) is an R-expression, i.e. it is understood to be distinct from the person denoted by the subject.

In the next table, we summarize the morphological and interpretive features of the French and the Bulgarian definite articles:

| | Phi-features | Iota operator | Generic uses | Expletive uses |
|-------------------------|--------------|---------------|--------------|----------------|
| French definite article | + | + | + | + |
| Bulgarian | + | + | + | - |

| | | | | |
|------------------|--|--|--|--|
| definite article | | | | |
|------------------|--|--|--|--|

3. The analysis of the French Inalienable simple predicative structure “Il lève la main”: Guéron’s binding hypothesis (1983, 1985)

Guéron reduces the principles governing the Inalienable possession construal in ISPS to the principles governing Anaphoric binding.

According to Guéron, the possessive use of the French definite article depends on the possibility to assimilate it to a pronoun, more exactly to a pronominal anaphor with no independent reference. The antecedent and the body part NP (BP NP) constitute a lexical chain, i.e. a single argument in LF, with a single primary theta-role: the referents of the two links of the chain are non-distinct.

The definition of pronoun used by Guéron is the one proposed by Chomsky (1981) in connection with the analysis of PRO-drop phenomena:

- (31) *The complex of features α number, β gender, and γ person is interpreted as AGR, AGR a pronominal (1985:46)*

Assimilating the French definite determiner to a pronoun is possible because it has phi-features (number, gender). Furthermore, as we have seen, *le*, *la* and *les* are morphologically identical with the forms of the clitic pronoun *le*, *la* and *les* which have a third person feature. Guéron concludes that the French definite article is marked for person too and thus satisfies (31).

As soon as the definite article is identified as a pronoun, it can be subject to the binding theory. Guéron establishes a relation between anaphoric binding and the IP construal in ISPS, reducing the latter to the former. Evidence to support this relation is given by “the identity of the structural constraints on anaphora and on the IP construal of disjoint nominals” (Guéron 2005:596):

- The antecedent/the possessor is obligatory:

- (32) AB (anaphoric binding) : John hates himself
IP (inalienable possession) : Jean lève la main

- Locality (the antecedent/POSS DP must be in the same minimal sentential domain as the anaphor/BP NP):

- (33) AB : Jean_j a persuadé Mary_i de [PRO_i se_i laver]
IP : Jean_j a persuadé Mary_i de [PRO_i lever la_i main]

- The antecedent/the possessor must c-command the anaphor/the BP nominal

- (34) AB : John perjured himself
 *John’s mother perjured himself (*John* is embedded in the
 subject DP and therefore cannot c-command *himself*)
 IP : Jean lève la main
 *La mère de Jean_i lève la_i main

But anaphoric binding is not sufficient to identify IP in ISPS. As Guéron points it out, “lexical choice plays a crucial role” (2005:598). For example, *Il lave la main* (He washes the hand) cannot have the IP reading. Then, she proposes that in acceptable inalienable structures, “verb and direct object are reanalyzed in syntax as a single verb (...) the case and theta-features of the DO are absorbed by the verb” (2005:599). Predicates that allow reanalysis are those who denote a natural physical gesture:

- (35) Jean a levé les yeux, bougé la tête, froncé les sourcils
 John has raised his eyes, moved his head, frowned his brows⁴

On the other hand, verbs like *chatouiller*, *rincer*, *laver* (to tickle, to rinse, to wash) and their complements denote a complex activity and do not allow reanalysis. These verbs assign primary theta-role both to their subject (AGENT) and to their object (THEME).

4. The condition for the definite article to be used in IP structures : Vergnaud & Zubizarreta (1992)

For V & Z, the main condition for an article to be used in IP structures is not its morphology but its semantics. They claim that the French definite article can be used in IP structures because it has expletive uses. They further distinguish NPs with expletive determiner and DPs with meaningful determiner. NPs denote types while DPs denote tokens.

V & Z treat expletive use and generic use as equals. Among others, they give the next “type-denoting expression”:

- (36) Les baleines sont en train de disparaître (Whales are becoming extinct)

In IP structures (at least in ISPS), the determiner is expletive because it has to be bound by the POSS DP (the BP NP being referentially dependent). If it were referential, it would obey the c principle of the binding theory (R-expressions must be free everywhere).

⁴ These examples are from Guéron (1983).

Because the BP nominal is an NP with an expletive determiner, it has a type interpretation which allows (i) distributivity effect (37 a) and does not allow (ii) non-restrictive modifiers (37 b):

- (37) a. Ils lèvent la main
They raise the hand
'They raise their hands'
b. *Ils lèvent la belle main
They raise the beautiful hand
c. Ils lèvent la main droite (restrictive modifier)
They raise the right hand

5. The binding hypothesis and the expletive determiner together

We summarize the two analyses (Guéron 1985/V&Z 1992):

In order to be bound in ISPS:

A) The determiner must be identified as a pronoun, i.e. it must have phi-features (Guéron)

B) The determiner must be interpreted as an expletive (V & Z)

Guéron's binding hypothesis makes the prediction that the IP construal exists in ISPS only in languages in which the determiner is variable and that it is lacking in languages in which the determiner is invariable. This hypothesis accounts for the contrast between French and English:

- (38) a. Jean a levé la main
b. John raised the hand

In (38 b), the inalienable reading is not available, the English definite determiner being invariable.

V & Z's analysis accounts for the same contrast but on semantic grounds: "the definite determiner may function as an expletive (...) in French but not in English" (635).

While these two analyses independently account for the contrast between French and English in ISPS, they must be used conjointly to account for the contrast between French and Bulgarian in this structure:

- (39) a. Jean a levé la main

b. Ivan vdigna rākata
 Ivan raised hand-the

In (39 b), *rākata* is an R-expression, i.e. it cannot be the hand of Ivan, but a distinct object with a primary theta-role.

Thus, at least for Bulgarian, Guéron’s analysis does not suffice, because the Bulgarian definite article has phi-features. Then, the only possible analysis remains V&Z’s: the Bulgarian definite article does not have expletive uses (see 25-28). But on the other hand, we can find expletive uses of the English definite article:

(40) I’m going to the cinema / to the beach

(41) I only work in the morning

(40) and (41) seem to go against V&Z’s analysis. Guéron’s analysis on the other hand successfully deals with the contrast between English and French in (38): (38b) does not yield the IP reading, because the English definite article does not have phi-features and as a consequence cannot be bound.

All this data seems to show that the two analyses A) and B) above are complementary. We make the prediction that:

42) A determiner must have both phi-features and expletive uses in order to function as an A-bound pronominal in the ISPS

Between the three definite articles: French, English and Bulgarian, only the French one compiles with (42). It follows that it can have a possessive interpretation in the ISPS. This is not the case for the two other articles, which consequently cannot have a possessive interpretation. We summarize this in the next table:

| | A) phi-features | B) Expletive uses | ISPS |
|--------------------------|-----------------|-------------------|---|
| French definite article | + | + | Jean _i lève la _i main |
| English definite article | - | + | *John _i raises the _i hand |

| | | | |
|-------------------------------|---|---|---|
| Bulgarian definite article | + | - <i>*Ivan otiva na plazha</i> John is going to the beach | *Ivan _i vdiga răkata _i |
|-------------------------------|---|---|---|

It follows that what blocks the possessive use of the Bulgarian definite article in ISPS is not its morphology but its semantics. As we showed in 2.2.1, the relation between the definite article and the demonstrative determiner can be clearly established in synchrony – they are formally related to each other. It follows that the Bulgarian definite article has a strong reference power, forming R-expressions (DPs). It does not have expletive uses.

On the other hand, as Déchaine et Wiltschko (2002) point it out, the French definite article « does not have a fixed interpretation » or « fixed referential value » which explains, together with its morphology, why it can have a possessive use.

6. The bound null determiner in the Bulgarian ISPS

We have proposed an explanation why the Bulgarian definite article cannot be bound. We will now propose that in the Bulgarian ISPS, binding also takes place, but the bound element is the null determiner of the BP nominal. Guéron's analysis (see A above) predicts that the IP construal exists in languages where determiners have phi-features and thus can be assimilated to pronouns. She proposes to extend the analysis to languages like Russian "which has both null pronouns with abstract phi-features and null determiners" (2005:597). In Bulgarian, there is a null determiner and PRO-drop phenomena exists:

(43) [e]Gledam øfilm
Watch-I film

If we accept that ø has abstract phi-features, then it can be bound. On the other hand, ø, but not the definite article, can have an expletive use (see 25-28). Thus, ø satisfies (42) which combines A) and B):

| | A) phi-features | B) Expletive uses | ISPS |
|----------------------------------|-----------------|-------------------|---|
| Bulgarian null determiner (ø) | + | + | Ivan _i vdiga ø _i rāka John raises hand |

In Russian, there is a null determiner A-bound in the ISPS (*on podnimaet ruku* – he raises hand) probably because there is no definite article in this language; in Bulgarian, the same element is A-bound because the semantic interpretation of the existing definite determiner does not allow A-binding.

That \emptyset is expletive and therefore is A-bound in the Bulgarian ISPS is reinforced by the facts that (i) the NP has a type interpretation which does not allow appositive modifiers (44) and (ii) generally the distributivity effect is observed⁵ (45):

- (44) a. Ivan zatvori ochi
 John closed eyes
 b. ??Ivan zatvori umoreni ochi
 John closed tired eyes
- (45) a. Taksidzhiite nadigat glava
 The taxi drivers raise head (in order to revolt)
 b. ?Taksidzhiite nadigat glavi
 The taxi drivers raise heads

7. Conclusion

On the basis of empirical data from French, English and Bulgarian, we have proposed that in the ISPS, in order to be A-bound, a determiner must have both phi-features and expletive uses. The French definite article satisfies these two conditions. Therefore, it can be A-bound. On the other hand, the Bulgarian definite article satisfies only one of these two conditions: it has phi-features but does not have expletive uses. Therefore it cannot be A-bound.

We have proposed that in the Bulgarian ISPS, there is A-binding as well, but the A-bound element is the null determiner of the body part denoting the direct object. \emptyset has both abstract phi-features and expletive uses. Thus, it satisfies both of the two conditions for a determiner to be A-bound in ISPS.

⁵ The distributivity effect is obligatory in French and to me more natural than number agreement of the DO in Bulgarian. However, Bulgarian native speakers accept equally (46) *a* and *b*:

- (46) a. Te poklatiha glava (sg.)
 They nodded head
 b. Te poklatiha glavi (pl.)
 They nodded heads

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What Does the Person-Case Constraint Tell Us about the Licensing of Dative Arguments?¹

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1. Introduction

The aim of this paper is to explore the Agree relations in ditransitive vPs from the perspective of a well-known person restriction to which most argument structures with dative arguments are subject, the so-called Person-Case Constraint. While arguing that the phenomenon calls for a purely syntactic account, it is claimed that what gives rise to the constraint is not a dative argument blocking 1st/2nd person agreement between v* and the direct object, as has been commonly assumed (Anagnostopoulou 2003 i.a.), but rather the licensing needs of the dative argument itself, which can potentially be hindered by the presence of a 1st/2nd person direct object.

2.1. The syntactic status of the constraint

It has been observed (Perlmutter 1971, Bonet 1991; 1994) that in many languages (or, possibly, universally) agreement with a dative argument in various forms (agreement affixes on the verb form, clitics or other weak pronominal elements) blocks 1st/2nd person agreement with the theme. In most Romance languages as well as in Greek, this restriction is usually thought of as a ban on clusters of IO and DO clitics, in which the DO clitic is 1st or 2nd person (this is why it is also known as the “me-lui constraint”), cf. (1)-(2). It has been termed as the “Person-Case Constraint” by Bonet (1991) and her original formulation is given in (3).

- (1) Paul le/*me/*te lui présentera
(French)
Paul Cl-3SG.ACC/*1SG/*2SG Cl-3SG.DAT will-introduce
‘Paul will introduce me to him’
- (2) O Pavlos tu ton/*me/*se sinestise
(Greek)
The Paul.NOM Cl-3SG.DAT Cl-3SG.ACC/*1SG/*2SG
introduced
‘Paul introduced me to him’

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- (3) **The Person-Case Constraint (PCC):** “In combinations of a direct and indirect object, both of which are phonologically weak, the direct object may not be 1st or 2nd person” (Bonet 1991:177).

The first obvious question that arises is whether the PCC constitutes a morphological or syntactic constraint. The earlier approaches to the phenomenon (Perlmutter 1971; Bonet 1994) treated it as a restriction of the morphological component, mainly because it appears to affect only clusters of agreement morphemes (if clitics are to be analysed as such) in double object constructions (DOCs), while strong pronouns fail to trigger any such constraint, cf. (4-5)..

- (4) Paul m’ a présenté à lui
 Paul Cl-1SG.ACC will-introduce to him
- (5) O Pavlos tu sistise emena
 The Paul.NOM Cl-3SG.DAT introduced me.ACC
 ‘Paul introduced me to him’

Therefore, as stated in Harris (1981) and Bonet (1991), the constraint only applies to “contexts that involve both an accusative AND a dative [agreement] marker” (Ormazabal & Romero 2001:217), where “accusative” may correspond to “absolutive” in ergative languages. The syntactic contexts that can involve such agreement clusters are, according to Bonet: a) ditransitives, b) causative constructions², c) benefactive (or applicative) constructions, d) inherent reflexives, e) inalienable possession.

However, similar person restrictions (or, rather, *exactly the same restriction*, as far as the interplay between person and dative case is concerned) seem to apply to many other constructions, without agreement clusters, e.g. (i) unaccusative predicates in Spanish with a locative dative argument (6), (ii) impersonal reflexive psych-predicates in Italian (7), or even (iii) cases without any overt agreement morphology, e.g. the well-known Person Restriction on Nominative Objects in Icelandic (Sigurðsson 1996, which applies to full (pronominal and/or lexical) DPs (8).

- (6) *Tú me llegaste tarde
 (Spanish)³
 You.NOM Cl-1SG.DAT arrived late
 ‘You came late to me’
- (7) *si ammiriamo troppo noi
 (Italian)⁴

² Ormazabal & Romero quote an ungrammatical example with 1st person absolutive from Basque, see 2.3 for equivalent examples from Italian.

³ from Ormazabal and Romero (2001).

⁴ from Taraldsen (1995:313).

- cl.refl.**DAT** admire-1pl too-much we.**1PL.NOM**
 ‘One admires us too much’
 (8) *Henni leiddumst við
 (Icelandic)⁵
 She.**DAT** was bored-by.1PL us.NOM
 ‘She was bored by us’

Furthermore, even if the PCC only applied to IO-DO clitic clusters and (6)-(8) were examples of some other restriction(s), then “it is not at all obvious why the morphological component should be sensitive to some scale of referentiality of the type introduced in this constraint”, as Ormazabal (2000) noted.

On the other hand, there are also cases that involve person restrictions applying to clitic clusters, which however don’t comprise an IO and a DO clitic, but two dative clitics, an *ethic* and an IO one. In these cases, it seems that the presence of an ethic clitic blocks 1st or 2nd person IO clitics (9-10).

- (9) Il *te lui* / **m*’ envoie une dépêche (French, adapted from J.C.Smith 2000:4)

He Cl-2SG.DAT(eth) Cl-3SG/*1SG.DAT(goal) send one telegram
 ‘So he goes and sends him/*me a telegram “if you please”’

- (10) a. % Na mi mu tis/*su agorazun
 pagota (Greek)

Subj. not Cl-1SG.DAT(eth) Cl-3SG/*2SG.DAT(goal) buy.3Pl ice-creams

“...that they do not buy her ice-creams, for my sake”

Therefore, given the existence of all these diverse instances of person restrictions in the presence of a dative argument, we may conclude that the phenomenon calls for a uniform syntactic account, rather than attributing it to some morphological rule or some incompatibility of morpho(phono)logical features –in fact, as will be shown in 2.3.1, there are constructions that do permit clitic clusters of the “me-lui” type.

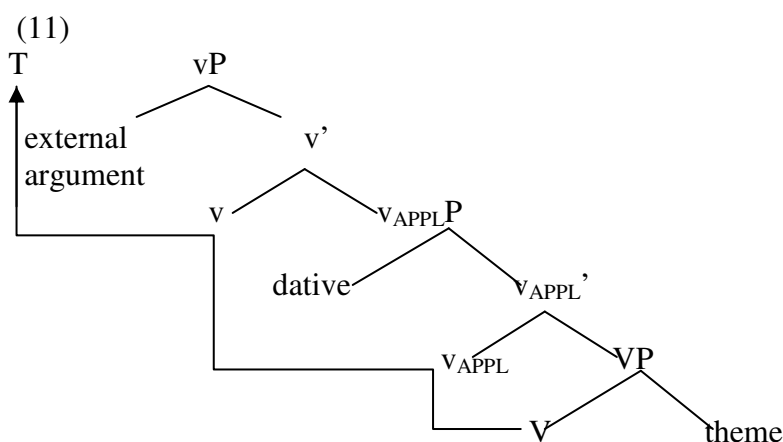
2.2. The PCC and (clitic) movement

Among the first syntactic accounts of the PCC within minimalism, we may single out Ormazabal’s (2000) movement-based analysis, which postulates that arguments only move outside VP to check an animacy feature, rather than Case: therefore, in the case of two [+animate] internal arguments, i.e. a

⁵ From Sigurðsson (1996:25, 28).

dative, which is by definition [+animate], and a [+animate]⁶ direct object, PCC-effects would arise as it would be impossible for both to move, because of the MLC.

According to Anagnostopoulou (2003, 2003a), the PCC arises from “the order of checking operations” (Anagnostopoulou 2003:276), that is, the order of movement of the interacting arguments and therefore the order of their subsequent feature checking relations with the head that attracts them. First of all, on her analysis, the dative argument is merged as the specifier of a $v_{APPL}P$ which dominates VP and is dominated by $v(-TR)P$, while the direct object is the sister of V:

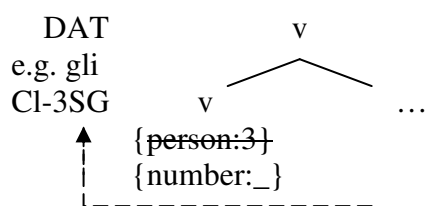


She then postulates a split phi-feature checking mechanism, following Chomsky's (2000, 2001) assumptions about “multiple Agree”, in two steps: (i) dative object clitics are attracted first and check (only) [person] against v-TR, since they “have an active [Participant/person] feature, related to the fact that they are typically animate, affected, etc” (Anagnostopoulou 2003a:286, following Adger & Harbour 2003/2007), even when they are 3rd person⁷.

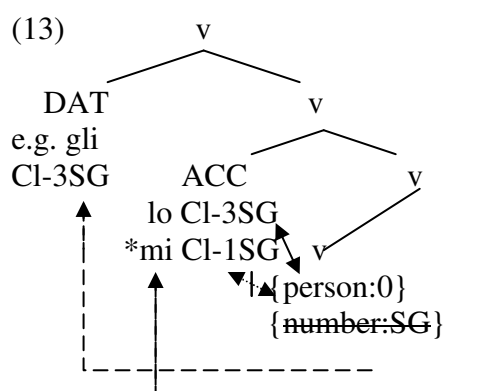


⁶ thus extending his analysis to the ungrammaticality of ditransitives with animate accusative strong pronouns in Spanish, which according to him are [+animate], as opposed to the respective clitics.

⁷ Conversely, “they do not have a number feature accessible for checking by v-TR (*ibid.*), since the dative cannot trigger number agreement in e.g. Romance participle agreement⁷: ‘Gli ho telefonato/*i: Cl.dat.3SG have.1SG called.masc.sg/*pl’. However, do we have to assume that this necessarily reflects some sort of defective agreement between the dative and v-TR? It seems to me that it could simply result from the defective agreement or even the absence of any agreement between the dative and Prt (if e.g. the dative –and vAPPL –is merged higher than Prt).



(ii) direct object clitics are attracted by v^* after the dative has moved; so, since the dative clitic has already checked person, accusative clitics have to match with v {0, N}, that is, **they have to be 3rd person**, as “3rd person direct objects lack a person feature entirely” (Anagnostopoulou 2003b:11, based on an idea going back to Benveniste: Benveniste 1966, Kayne 1989, Taraldsen 1995, Adger & Harbour 2003/2007, among others); this is how the dative clitic bans 1st/2nd person agreement on the direct object clitic.



Although Anagnostopoulou's proposal provides an elegant and uniform account for the set of data she discusses, i.e. Person-Case restrictions in double object clitics and the Person restriction in Icelandic, it faces various theoretical problems and leaves a number of similar cases unaccounted for. First of all, it is apparently counter-cyclic: movement of the (higher, on her analysis) dative precedes that of the accusative, given that it enters a checking relationship first, but the accusative clitic moves below the dative one, thus violating the Extension Condition, as it is currently conceived⁸. Moreover, as Panagiotidis (2005) pointed out, a key assumption of this proposal is that the (interpretable!) phi-features of the internal arguments require checking, contrary to current assumptions that it is uninterpretable features that require checking, that is, valuation and deletion. In the same spirit, Bejar & Rezac (2003) resorted to the rather stipulative '*Person Licensing Condition* (PLC): An interpretable 1st/2nd person feature must be licensed by entering into an Agree relation with a functional category'.

⁸ In fact, her proposal relies on the older idea of “tucking-in” (Richards 1997 and, indirectly, Chomsky 2000).

Although the above can be considered as theory-internal conjectures followed consistently in her analysis, what seems more problematic is her assumption that “when there is no clitic on the verb, as in [5], Move / Agree has not been established between the accusative and v-TR, and the accusative can be 1st and 2nd person”, and that “accusative pronouns in Dat>Acc constructions can be specified for person under the condition that they do not enter Move / Agree” (Anagnostopoulou 2003:315). While this statement, if true, would explain why strong pronouns in (4) and (5) do not cause PCC violations, it clearly contradicts with any current definition of Agree and her own explicit assumption that “accusative, absolutive and nominative arguments must check the complete set of their phi-features” and that “complete checking of phi-features of DPs is required for structural Case checking to take place as a result of Move or Agree” (*ibid.*:274). Therefore, it is not clear how/if this analysis can work within a probe-goal system, i.e. within the current theory about feature checking. If we try to translate the “split phi-feature checking” mechanism in terms of Agree (i.e. of a head probing its c-commanding domain, instead of checking the features of the moved clitics in a Spec-Head configuration), then our system would also rule out cases with strong 1st/2nd direct object pronouns (as in 4 and 5). In fact, any Agree-based account of the PCC would always rule out *in situ* 1st/2nd person direct object pronouns.

Turning to the empirical coverage of the analysis, it is worth pointing out a challenge posed by examples such as (9) and (10), i.e. constructions with two dative clitics, a goal and an *ethic(al)* one –while clitic clusters with two dative clitics will also be shown to be possible in faire-infinitive constructions with ditransitive infinitives (see next section). In these cases, both clitics should be able to check a [person/participant] feature against v*, given their animate/affected interpretation, but a split phi-feature checking system would not permit it.

2.3. Towards an Agree-based account

2.3.1. Evidence from causatives

At this point, I will introduce some Italian data, which challenge the view that PCC effects arise when the interacting arguments are in derived positions, as implied in the movement-based analyses presented above. Person restrictions similar to the PCC also arise in causative constructions of Romance languages permitting clitic climbing (e.g. French and Italian), i.e. in the so-called faire-infinitive (FI) constructions (Kayne 1975). What is interesting is that the person restriction in these constructions only affects the internal argument of the embedded vP when the transitive causee cliticises as a dative:

(14) a. Maria glielo ha fatto lavare

- Mary 3SG.DAT-3SG.ACC made/let.3SG wash.INF
 ‘Mary made/let him wash it’
 b. *Maria mi gli / gli mi ha fatto lavare
 Mary 1SG.ACC-3SG.DAT made/let.3SG wash.INF
 ‘Mary made/let him wash me’

By contrast –and quite interestingly –the PCC (a.k.a. the “*me-lui*” constraint) *does not arise* when the indirect object cliticises⁹:

- (15) Mi gli hai fatto dare un libro / Mi gliel’ hai fatto
 dare a Gianni
 1SG.DAT 3SG.DAT let.2SG give.INF a book
 ‘You made/let me give him/her a book’

A preliminary conclusion inspired by these data is that the PCC seems to be relevant to thematic hierarchy or, at least, to the order in which the interacting arguments are (available to be) probed by the same v-head rather than their surface placement/the order in which they are attracted by this v-head. In arguing so, I will adopt Roberts’s (2008) analysis of FI constructions: the VP of the embedded vP raises to the specifier of a VoiceP dominating the vP, thus “stranding” the causee, i.e. the “a-phrase”:

- (16) EA v* [_{VP} fare [_{VoiceP} [_{VP} V DO] [_{Voice} (a)] [_{VP} causee v (IO v_{APPL}) t_{VP}]]]
 a. (=14) 3/*1/*2 DAT
 --PCC
 b. (=15) (3) 1/2/3 DAT
 --No PCC

In (16a=14), the raised DO is probed first by the matrix v*, preceding agreement¹⁰ with the causee. However, 1st/2nd person DO clitics are banned. Instead, in (16b=15), where the causee is probed first, it can be 1st/2nd person, although there is also a dative which eventually cliticises/moves to matrix v* (and, on Anagnostopoulou’s analysis, should check and “absorb” v*’s [person] feature). It then seems quite reasonable to assume that it is the 1st/2nd person agreement of the (raised here) DO that prevents an Agree operation between the probe and the dative, rather than the reverse, i.e. that the dative blocks checking of some feature of a lower argument, e.g. the DO in DOCs, as assumed in analyses in the spirit of Anagnostopoulou (2003). If the latter were correct, it should rule out any other lower argument that (i) cliticises to v* and (ii) has an “active” (in the sense of Anagnostopoulou

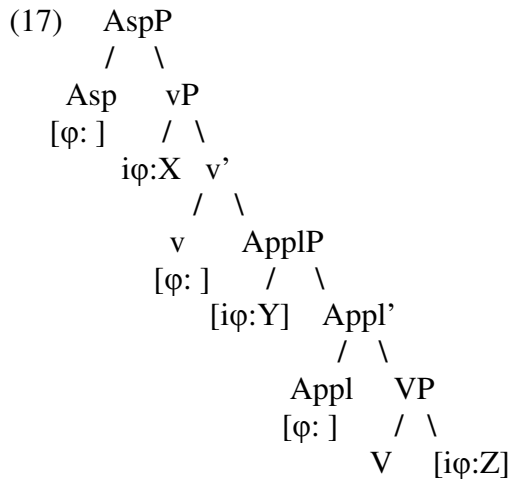
⁹ IOs cannot, generally, cliticise in FI constructions (Kayne 1975), but it seems that this is possible when the causee cliticises too).

¹⁰ I take it for granted that, since the transitive causee potentially cliticises to v*, it has to enter an Agree relation with it.

2003) [person] feature, such as the dative argument in the embedded infinitival clause of the causative construction in (15), which in fact is grammatical. Therefore, a purely Agree-based account is to be preferred, especially if it employs some notion of minimality.

2.3.2. Adger & Harbour (2007) on DOCs:

A recent Agree-based account is the one put forward by Adger & Harbour (2007), who focus on the agreement restrictions in ditransitive predicates in Kiowa. In the spirit of Marantz (1993), they propose the following derivation for double object constructions and they postulate a tri-partite distinction of the possible phi-sets that arguments can bear, as summarized in (18):



- (18)
- (a) [participant:1/2, number:Sg/Pl]=1st/2nd person pronominals
 - (b) [participant:, number:Sg/Pl]= “semantically animate 3rd person pronouns” (and, I assume, DPs in general; Adger & Harbour focus on the “pronominal” prefixes of verbs in Kiowa)
 - (c) [number:Sg/Pl]=3rd person pronouns/DPs, “no entailment as to semantic animacy”

Feature valuation in DOCs then proceeds as follows: the direct object values the phi-features of Appl, the indirect object values the phi-features of v and the external argument values the phi-features of Asp (so, we have to conclude that all these heads are –structural –Case assigners!). So, the PCC is derived by the following generalization: “The features which a functional head requires its Specifier to bear cannot be used as probes in the head’s complement domain” and, therefore, “Appl cannot enter into an Agree relation with a [participant:] argument in its complement domain” (Adger and Harbour 2007:21). That is, if Appl is present, the direct object must be

third person, as “any argument lacking the feature [participant:] is automatically 3rd person”.

To me, it is still unclear whether Appl bears [uparticipant:] or not, according to their analysis. They say: “suppose that Appl bears a full complement of phi-features, just like Asp and v. If Appl’s participant features match and are valued by participant features on a lower DP (a 1st or 2nd person object), then Appl will be unable to select a specifier. The resulting syntactic structure will have no semantic interpretation, since Appl requires an argument (Pylkkänen 2002)”.

If Appl bears only an unvalued number feature which probes the direct object (as illustrated in (78), p. 22), then it seems again as if the direct object needs to check its *interpretable* features in order to be licensed. A more plausible interpretation of their proposal would be that Appl bears both [uparticipant:] and [number:] and that it values its number feature against the direct object while its [uparticipant:] feature must probe its specifier (which is always specified for [participant:]) in order to get valued. So, it *must* be unable to find a suitable goal in its complement domain, which is why the direct object cannot be 1st/2nd person in double object constructions.

This analysis succeeds in several respects, since it obeys strict cyclicity and can possibly account for the respective constraint in combinations of ethical-indirect object clitics (ex. 9, 10), if Appl is iterative. However, some of the problems mentioned above still remain (e.g. can the feature make-up of the direct object (clitic) comprise no more than [number]?), while a new problem arises: we are forced to accept Appl as a potential (Accusative) Case assigner, while the indirect object is also predicted to bear structural Case, assigned by v. Furthermore, cases with a 1st/2nd person strong pronoun as direct object, such as (4) and (5), should again be ruled out.

2.3.3. [participant] vs [person]

As implied so far, both Anagnostopoulou (2003) and Adger & Harbour (2007) –among others in fact –rely on the assumption that 3rd person DOs do not actually bear a person feature. Nonetheless, there are quite a few pieces of evidence that third person *is* a person after all. To begin with, as Nevins recently showed, there are numerous cases of person restrictions, e.g. the *le lo dissimilation rule in Spanish, that require “reference to a set of features exclusively borne by third person” (Nevins 2007:274) and involve interaction of third person with other persons.

Moreover, if we are to adopt a theory that construes clitic movement as copying of bundles of phi-features to a functional head (as in Roberts 2006), then we need matching of *full* phi-sets, i.e. of *real* person features for the accusative clitic and number features for the indirect object clitic. Finally, the assumption that third-person arguments lack a [person] feature would

have the undesirable entailment that 3rd person objects in monotransitive predicates should always fail to value the unvalued [Person] feature of v*.

My proposal would be to treat [uninterpretable person] and [uninterpretable participant] as distinct features, although they can/must both be valued by interpretable [person] features. In fact, [uParticipant] can rather be construed as a pragmatic/discourse feature, which might or might not be present on a functional head and can be valued as follows:

(18')

- (a) [+participant] = matches 1st/2nd person pronouns (and, perhaps, 3P logophoric pronouns, i.e. everything that can be interpreted as speaker or addressee)
- (b) [-participant] = matches 3rd person goals/benefactives/experiencers, entails semantic animacy and [+mental state] (as defined in Reinhart's (2002) theta-system).
- (c) No specification = 3rd person direct objects

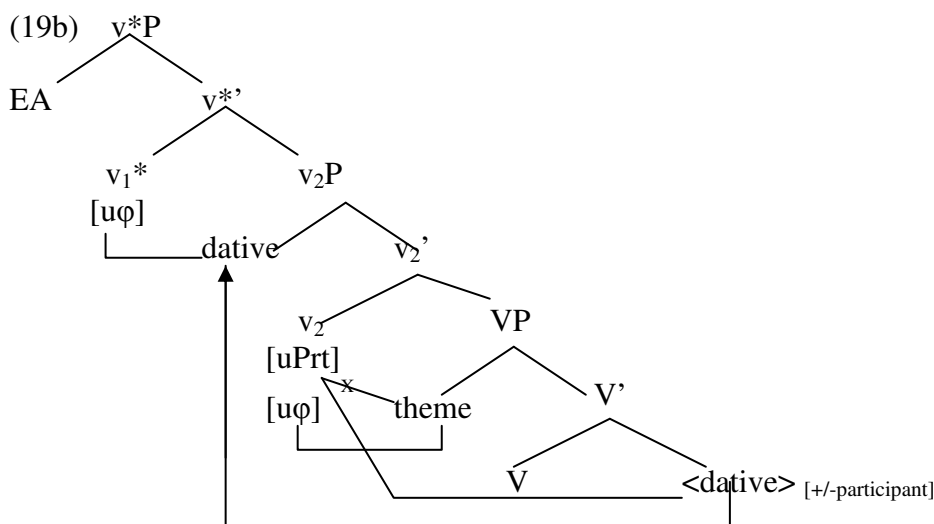
Instead, [uPerson] might be a feature with only morphological implications and with three possible values [1,2,3]; so, we avoid the undesirable stipulation that 3rd person DOs lack [person], and the v-head that Agrees with the accusative argument, whichever this head is, can match a full phi-set, thus valuing its [Case] feature and potentially incorporating it as a clitic, in the way Roberts (2006) assumes that clitics incorporate into v under Agree.

On the other hand, following for the time being the more or less identical structural analyses of Anagnostopoulou (2003) and Adger & Harbour (2007), the (v)APPL head may only bear an uninterpretable/unvalued [participant feature] which can probe (and *must* probe and match) its specifier, provided that “the head’s complement domain lacks a goal that matches the probing feature”. So, under this structural analysis, we are forced to adopt Agree under m-command (Rezac 2003), but only on the condition that there is no appropriate goal in the c-command domain of the probe. It then follows that, in order for vAPPL to match its specifier, which is by definition marked as [+/-participant], as already assumed in Anagnostopoulou and Adger & Harbour, vAPPL’s complement domain must lack any such feature, i.e. any lower argument, e.g. the DO, cannot be 1st or 2nd person:

(19a) [_{v*P} EA v* [_{vAPPLP} dative v_{APPL}[uParticipant] [_{VP} V DO]

Alternatively, one may adopt Baker's (1997) thematic hierarchy and assume that the IO is first-merged as the complement of V and moves to [Spec, vAPPL], as the result of their Agree relation, thus deriving the V-IO-DO order of the Double Object Construction, while it remains in situ when

realised as a PP, in which case vAPPL seems to be absent (cf. Anagnostopoulou 2003; 2005, i.a.). On such a structural analysis, a 1st/2nd person, i.e. [+participant] accusative intervening between vAPPL and IO would be ruled out by Relativized Minimality (Rizzi 2001):



At this point, it is worth pointing out that, given that [animacy] is a superset of [participant] in e.g. Harley & Ritter's (2002) feature-geometry, it follows that a valued / specified [participant] feature always entails animacy; in other words, the presence of an [uParticipant] feature on the applicative head may signify the requirement that the argument introduced be animate. On the other hand, as mentioned earlier, there is also the case of Spanish which bans [+animate] accusative pronouns altogether, not only 1st/2nd person ones; therefore, it might be the case that in Spanish vAPPL bears an [uAnimate] feature or that, in general, the precise feature specification of the head licensing datives is subject to parametric variation. It might even turn out that what triggers the PCC universally is another, certain set of features, which may result from a more fine-grained distinction of nominal features than the current, perhaps mistaken, standard conception of phi-features. So, perhaps the only sound conclusion of this section is that the PCC arises from the requirement that no other argument be matched by (and value) some specific feature of the head licensing a dative, before the dative itself and, therefore, that a purely Agree-based account with locality considerations is needed.

Finally, it must be clear that this account does not really distinguish between dative clitics and full dative DPs. Both should be able to match the feature(s) in question on vAPPL and, therefore, both can in principle trigger the PCC. Indeed, if we consider the data in (20), there is a clear contrast, at least of markedness if not of grammaticality, between (20a) and (20c).

Anagnostopoulou (2003), according to whom the PCC only involves clitics in Greek, explains this contrast by the fact that “an animacy / gender feature on the dative DP prevents animate accusative clitics from crossing over them” (Panagiotidis 2005:7), thus ruling out examples like (20b) as well. For me, (20b) is licit or at least as marked as (20a) (similar reactions of native speakers are reported by Panagiotidis as well)¹¹.

- (20) a. To edose tis Marias.
Cl.3SGNEUT.ACC gave.3SG the Mary.GEN
'(S)he gave it to Mary'
- b. (?) Ton estile tis manas tis.
Cl.3SGMASC.ACC sent.3SG the mother.GEN her
'(S)he sent him (e.g. her son) to her mother'
- c. ?* Me/se estile tis manas tis.
Cl.1/2SG.ACC sent.3SG the mother.GEN his
'She sent me/you to her mother'

Consider also the following contrast:

- (21) a. (?) Pjanu/tinos to edikses?
who.DAT.SG Cl.ACC.3SG-NEUT showed.2SG?
“Who did you show it to?”
- b. (?) Pjanu/tinos ton/tin sistises?
Who.DAT him/her.Cl.ACC.3SG introduced.2SG?
“Who did you introduce him/her to?”
- c. ?* Pjanu/ ?tinos me/se sistise?
Who.DAT me/you.Cl.ACC.1/2SG introduced.3SG
“Who did (s)he introduce me/you to?”

2.4. Implications for Dative Case

In this section, I will attempt to discuss the possible consequences that the argumentation sketched above may have for the licensing of dative arguments in these constructions. To summarise the conclusions so far, a PCC-violation arises when the dative argument fails to match the [uParticipant] feature of the probe because of a closer 1st/2nd person goal. However, it still needs to be explained why the derivation should crash in this case; even if the probe Agrees with an “undesirable” goal, it still

¹¹ In my opinion, the contrasts in (20) and (21) also reflect a PCC effect. The fact that this contrast is not as sharp and clear as the respective contrast in examples with clitic clusters does constitute a challenge; a plausible scenario could be that at least for some speakers there is also the possibility for a (perhaps residual) V-ACC-DAT basic order, which does not involve a vAPPL, which would trigger the PCC. This order is not available in double object clitic constructions, as the standard order of clitics shows, and this is why these constructions are always subject to the PCC.

manages to delete its uninterpretable feature, as required by Full Interpretation (FI, Chomsky 2000). According to Adger & Harbour (2007), “if Appl’s participant features match and are valued by participant features on a lower DP (a 1st or 2nd person object), then Appl will be unable to select a specifier. The resulting syntactic structure will have no semantic interpretation, since Appl requires an argument (Pylkkanen 2002)”. However, this argument clearly departs from the standard assumption that a derivation crashes at LF only if there are any uninterpretable/unvalued formal features left. Furthermore, I can’t see why a head is unable to select a specifier, if its unvalued features are deleted by a lower DP; *v**, for instance, selects an external argument in its Spec although all its phi-features are deleted by the internal argument(s).

Instead, I will adopt the standard assumption that convergence at the vP-level largely depends on the deletion of uninterpretable Case features. So, it seems plausible to claim that the Agree relation between *v_{APPL}* and the dative argument results in the valuation and deletion of an uninterpretable Case feature and it can be blocked only by Agree between *v_{APPL}* and a “closer goal” in 1st/2nd person. Therefore, the PCC amounts to the requirement that an uninterpretable dative case feature be deleted. If this is true, then it seems that dative/inherent case is the reflex of a kind of defective Agree (since I assumed that *v_{APPL}* contains an incomplete phi-set, i.e. just an [uParticipant] feature).

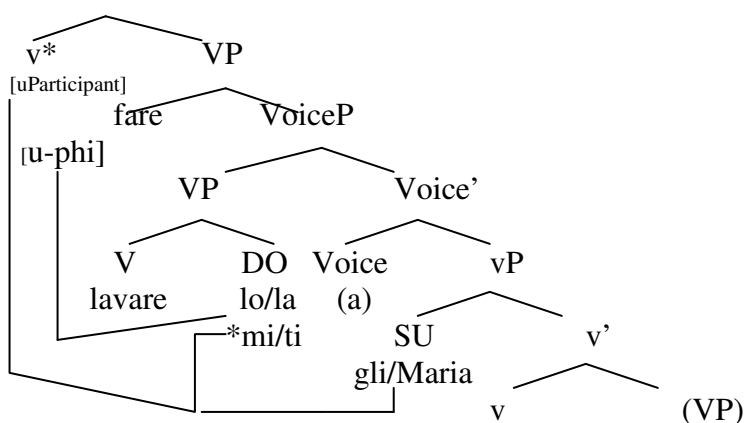
Further evidence in favour of such an assumption can be drawn from the respective restrictions in the FI constructions considered above. Interestingly, it seems that 1st/2nd person accusative clitics in FIs are blocked even when the transitive causee does not cliticise, while the grammaticality of the sentence is restored if the *a*-phrase is replaced by a *da*-phrase, as in (22’):

- (22) ?*Ti faccio lavare a Maria
 2SG.ACC make/let.1SG wash.INF a Maria
 ‘I make Mary wash you’
 (22’) Ti faccio lavare *da Maria*

The fact that causatives with *da*, such as (22’), escape any person constraint may not be irrelevant to what Kayne (1975) argued about the respective phrases (“*par*-phrases”) in French, i.e. that they are actually adjuncts, while *a/à*-phrases have a clearer argumental status. So, what triggers the person restriction in (21) might be exactly what differentiates “a Maria” from “da Maria”; Roberts (2008) assumes that “matrix *v** [...] Agrees with the transitive causee and has the “oblique” feature associated with the appearance of *a* on the transitive causee”, which also “gives rise to a dative clitic”, while such an Agree relation wouldn’t be necessary for *da*-adjuncts.

Therefore, what differentiates the two constructions is the requirement for checking of an “oblique” feature and, given the person restrictions that arise in its presence, this “oblique” feature might in fact be identical to the [uParticipant] feature I postulated above. In the case of FI-constructions, it is responsible for the “dativisation” of the transitive causee; likewise, in DOCs, its valuation may be necessary for the valuation and deletion of the [uCase] feature of the dative argument. Moreover, as said above, this feature entails semantic animacy, which also happens to be an intrinsic property of the transitive causee. If the parallel is correct, then the possible Agree relations in a FI-construction should be as follows (following again Roberts 2008):

(23) v^{*} '



2.5. Apparent exceptions to the PCC

Before concluding, I will briefly comment on the apparently exceptional behaviour of strong/tonic accusative pronouns, whose immunity to any person restrictions has often led to the conclusion that the PCC only applies to clitics. However, in fact, the use of a full pronominal DP in place of the respective clitic is not just an escape strategy, as argued in Anagnostopoulou (2003); at least in Greek, it is definitely not the unmarked option and would sound unnatural if uttered in vacuo and without any special intonation. On the contrary, it is quite clear that, when strong pronouns are used in ditransitives, they carry some kind of focus, either new information focus (24), serving e.g. as answering strategies (cf. Belletti 2007), or contrastive focus (25).

(24) –Pjon sistise ston Pavlo?

‘Who(m) did (s)he introduce to Paul?’

| | | | | |
|-------------------------------------|------------|----------------|---------------|----------------|
| –Tu | sistise | (*tu Pavlu) | <i>emena</i> | (tu Pavlu) |
| Cl-3SG.DAT | introduced | (the Paul.DAT) | me.ACC | (the Paul.DAT) |
| ‘(s)he introduced me to him (Paul)’ | | | | |

(25) *tu sistise (*tu Pavlu) emena (?tu Pavlu),
oxi ti Maria*

Cl-3SG.DAT introduced (the Paul.DAT) **me**.ACC (the Paul.DAT) not the Mary.ACC

‘It was me that (s)he introduced to him (Paul), not Mary’

In either case, the pronominal DO undergoes some sort of focalisation, which probably amounts to focus movement into the low (vP-) periphery, along the lines of Belletti (2005, 2007), as shown by the obligatory preposing of the DO, while the V-IO_{dat}-DO is otherwise the unmarked/basic order. My assumption would be that this movement may in fact circumvent a defective intervention effect (DIE): a 1st/2nd person accusative argument in [Spec, V], which is a defective intervener in that it has its Case feature valued by v_{APPL} before Agree for [uPrt] takes place, will only be part of a chain, if focalised, since the head of the chain will be in the low periphery, i.e. outside the Agree domain of v_{APPL}, thus cancelling any DIE, following Chomsky (2000).

Finally, on the analysis sketched so far, the PCC should arise in every construction in which a theme intervenes between the dative and its licenser; therefore, the apparently exceptional behaviour of ditransitive unaccusatives, such as *piacere* psych-predicates, should probably be attributed to a different thematic hierarchy (*at merge*).

2.6. Conclusions

This paper argued for a purely syntactic treatment of the PCC, but contrary to other approaches it was argued that a PCC-violating construction crashes before the interacting arguments move to their surface positions; instead, what is crucial is the order in which they are probed by the head licensing the dative argument. Dative Case might then be the reflex of a sort of “defective” agreement with the [uParticipant] feature of the applicative head; moreover, it might be related to the requirement that a dative argument be semantically animate, rather than to any specific semantic/thematic role. Finally, no account based on Agree can account for the fact that tonic 1st/2nd person accusative pronouns can co-occur with dative clitics in Italian and in Greek, unless they are in a position which prevents v_{APPL} from probing them.

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Copies at the Interfaces¹

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1. Introduction

In this paper we will show that current formulations of the Copy Theory of Movement make wrong predictions about the interpretation copies get at the interfaces. This problem however doesn't stem from the idea of movement being copying but from the minimalist conception of unvalued features. Modifying this conception, coupling it with standard assumptions about structure building and with the idea of movement being copying gives the desired results. The benefits of our modified CTM will be exemplified by showing that spelled-out and non-spelled-out copies can be uniformly described.

2. The Copy Theory of Movement

Chomsky (1993) revives an idea of Chomsky (1975) that movement is a complex operation, consisting of a copy operation followed by a merge operation. This is also known as the *Copy Theory of Movement* (henceforth CTM). Accordingly, a simple constituent question as in (1a) no longer has a structure with a trace (Chomsky 1973) in the base position of the moved wh-phrase (1b), but a structure with a copy of the wh-phrase in the base position.

- (1) a. *Who does Mary love?*
 b. Who_i does Mary love t_i?
 c. Who does Mary love who?

The difference between a trace and a copy is that the trace is a separate element whose connection to the wh-phrase is mediated by an index, whereas the connection between the copy and the wh-phrase is simply one of identity. The CTM is preferable both on theoretical and on empirical grounds: it avoids the introduction of non-lexical material, like indices and traces, and reconstruction effects are naturally explained (Sportiche 2006).

Apart from these general considerations, what is more specifically assumed is that the several copies of a lexical item do not differ in their feature specification, i.e. that they are identical with respect to the valued features

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they contain. Consider the following quotations from Chomsky (1995) and Epstein & Seely (2002):

"Though α and its trace are identical, the two positions are distinct"

"... if one [member of the chain] is affected by an operation, all are."

(Chomsky 1995, p. 252; p. 381 fn. 12)

"Under copy theory, it is assumed that the Case feature on the *identical* copy is also valued, otherwise movement would never yield convergence."

(Epstein & Seely 2002, p. 79)

The general idea of movement as copying coupled with this specific assumption predicts that all copies of a lexical item have the same properties. However, looking at movement structures reveals that this prediction is not borne out.

3. Problems with the Copy Theory of Movement

The idea of copies being identical leads to three problems. Firstly, not all copies are spelled-out. Secondly, the copies are interpreted non-identically at the interfaces. Thirdly, the direction of the non-identity is fixed. We will now turn to each problem in detail.

The problem of the non-spellout of certain copies (let's call it the *trace-problem*) is well-known and doesn't require much explication; the problem is illustrated in (2).

- (2) a. Who does Mary love *who*?
- b. [√]*Who does Mary love?*
- c. **Who does Mary love who?*

Although the structure of a wh-question contains two copies (2a), only one of them is pronounced (2b); pronouncing both leads to ungrammaticality (2c). Since the trace-problem arose immediately with the adoption of the CTM, Chomsky proposed the operation DELETE which deletes the phonological content (and only the phonological content) of all but the highest copy (Chomsky 1995, p. 202).² This indeed gives the desired result for (2). Equipping UG with this operation predicts that in movement structures it is always the case that only the highest copy will be spelled-out. However, this prediction is not borne out: there are cases in which more than the highest copy is spelled-out.

- (3) **Wen** glaubst du *(**wen**) sie (***wen**) liebt?
- whom think you whom she loves
- Who do you think that she loves?*

² Chomsky originally proposed that DELETE comes for free, given the existence of ellipsis; Nunes (2004) convincingly argues that this parallel is misguided. In later writings, Chomsky refers to "computational efficiency" as the factor responsible for the deletion; however, as he himself notices (Chomsky 2007, p.12), this is only true for the PF interface.

(3) illustrates wh-copying in German.³ Apart from providing evidence against the universal application of DELETE, the example additionally highlights the problem that the spellout of several copies is regulated by non-trivial constraints: the intermediate copy must be spelled-out, the one in the base position cannot be. Another problem can be observed by looking at true resumption constructions⁴; consider the examples from Swedish.

- (4) a. **Vilken fånge** var det läkarna inte kunde avgöra om **han**
 which prisoner was it the-doctors not could decide if he
 verkligen var sjuk utan att tala med **pg** personligen?
 really was ill without to talk with *pg* personally
Which prisoner was it the doctors couldn't determine if he
really was ill without talking to in person?
 (Engdahl 1982, p. 164)
- b. ***Vilken king** hänger många porträtt av **honom** på Gripsholm
 which king hang many portraits of him at Gripsholm
Which king hang many portraits of at Gripsholm?
 (Engdahl 1985, p. 8)

(4a) merely shows that resumptive pronouns in Swedish truly behave like elements generated through wh-movement – i.e. like A'-traces – given their ability to license parasitic gaps (abbreviated as *pg* in the example); this property is not shared by resumptive pronouns that are not generated through movement, as in English (cf. fn. 4). (4b) illustrates the problem: the spellout of several copies is not necessarily accomplished by some output effect, as often suggested.⁵ The sentence in (4b) with a true resumptive pronoun is as ungrammatical as without it. This in turn means that the application of DELETE cannot be guided by some interface conditions.

The second problem is that although the two copies are identical in the sense of being the same lexical item, they don't behave identically, i.e. they are differently interpreted at the interfaces. Let's call it the *non-identity-problem*. Consider again a wh-question. The interpretation it should get is displayed in (5b) and the interpretation it does get in (5b').

- (5) a. **Who** does Mary love **who**?
 b. *[for which x], Mary loves [for which x]
 b'. [√][for which x], Mary loves [x]

³ An account of wh-copying in terms of complementizer agreement (Thronton & Crain 1994, Kampen 1997) faces at least two problems. Firstly, PPs can appear in these constructions; PPs therefore have to be heads, which they however aren't. Secondly, some speakers have wh-copying optionally; this is unexpected given that agreement usually isn't an optional process.

⁴ Cf. Sells (1984) for the difference between resumption and intrusion. According to this distinction, Ross' (1967) resumptive pronouns in English are actually intrusive pronouns.

⁵ Beginning with Ross (1967), spelling out elements in the base position was argued to take place to rescue otherwise illicit movement structures.

The reason why (5b) is the expected as the interpretation of a wh-question is that it involves identical copies. The observed interpretation however involves featurally distinct elements, viz. an operator and a variable. Although the conversion of the two identical copies into an operator-variable structure is generally assumed in the literature (e.g. Chomsky 1976, 2007), it is never made explicit how it can be achieved, given that they are assumed to be featurally identical.^{6,7} The same effect can be observed at the phonological side of grammar. When more than one copy is spelled-out, the spelled-out copies often get different phonological interpretations. Consider Vata, another language with true resumption:

- (6) **àló** [√]**ò** / ***àló** lē sâká lá
 who he/ who eat rice Q
 Who is eating rice?

(Koopman 1983, p. 167)

Repeating the wh-phrase leads to ungrammaticality; instead, a pronoun must appear. Again: given that the two copies are featurally identical, it is unexpected that they are spelled-out by non-identical elements.

The last problem is related to the second one, but differs slightly. What we've seen so far is that copies are interpreted as non-identical elements, even though they are assumed to be featurally identical. Looking closely at movement structures reveals the third property of copies. The copies higher in a structure contain more valued features than those lower in a structure.⁸ Let's call this problem the *fixed-direction-problem*. This problem was already illustrated in previous examples. The feature specification of the resumptive pronouns in (4) and (6) is a proper subset of the feature specification of the moved wh-phrase: whereas the pronouns spell out only valued ϕ -features, the wh-phrase spells out valued ϕ -features plus at least a valued wh- and – in the case of Swedish – a valued D-linkedness-feature. The same subset-superset-relation gives the described semantic differences for (5): since no valued operator-feature is present in the lower copy, no operator interpretation arises for that copy. What about (3)? It seems to involve identical copies. However, consider the contrast in (7).

- (7) a. *Ich glaube_[-wh] [wen sie liebt].
 I believe whom she loves
 I believe whom she loves.

⁶ More generally, this means that the CTM is incompatible with compositionality, as already noted by Cormack & Smith (2002).

⁷ Notable exceptions are represented by the work of Danny Fox (1999) and Uli Sauerland (1998).

⁸ Barbiers (2006) arrives at a generalization that states exactly the opposite; however, it is questionable whether the cases he considers are really instances of movement.

- b. [√] **Wen** glaubst_[-wh] du [**wen** sie liebt]?
 whom think you whom she loves
Who do you think that she loves?

As can be seen from (7a), *glauben* prohibits an interrogatively marked complement clause, i.e. a [+wh]-marked clause. In wh-copying (7b) this selectional requirement seems to be overridden, as a clause introduced by a wh-element (*wen*) appears in the complement position of *glauben*. However, it's quite unlikely that selectional requirements can be overridden. What seems more likely is that the intermediate copy doesn't bear a [+wh]-feature.⁹ Then no violation of the selectional requirements arises. Given that the [+wh]-marking of *wen* arises under a local relation with a relevant matrix C°-head, this in turn means that the highest copy contains one more valued feature compared to the intermediate copy, viz. the [+wh]-feature. Verb copying structures are even more telling. Consider an example from Hebrew, with the fronted verb receiving a topic interpretation:

- (8) **Liknot**, hi **kanta** et ha-praxim.
 buy she bought acc the-flowers
As for buying, she bought flowers.

(Landau 2006, p. 37)

Although two verbs appear in the sentence, they differ in one crucial aspect: the verb in initial position is rid of its selectional requirements (9).

- (9) ***Le'exol** dagim, Rina xoševet še'ani **oxel** salmon
 to-eat fish, Rina thinks that-I ate salmon
As for eating fish, Rina thinks that I ate salmon.

(Landau 2006, p. 45)

Given that the impossibility of furthermore selecting arguments is encoded via feature valuation (otherwise verbs would infinitely go on selecting arguments), this means that the higher copy has more valued features than the copies lower in the structure.¹⁰

Concluding so far, the CTM is empirically not well-supported. This seems to require giving up the CTM. In the next section, we show that this conclusion is premature and that the problematic data can be easily made compatible with the CTM.

4. Deriving the Non-Identity Effects

4.1. The Mechanism

⁹ *wen* can be used also in non-interrogative contexts; cf. section 5. In addition, semantic interpretation supports this idea: the embedded clause in (7b) is not interpreted as an embedded question.

¹⁰ We so far have no account as to what determines the form of the spelled-out verb in first position.

In this section, we will show that with standard assumptions about structure building, one can easily explain two of the three problems, viz. the fixed-direction-problem and the non-identity-problem. We will then argue that the trace-problem is just a special case, and can be subsumed under the non-identity-problem. Lastly, we will show that the data presented so far require rethinking the role the interfaces play for syntax.

Consider the following syntactic standard assumptions:

- (i) Syntax manipulates syntactic objects; syntactic objects are lexical items¹¹ or elements build up from lexical items, i.e. phrases
- (ii) COPY targets only syntactic objects (Lexical Integrity)
- (iii) Different feature-types are valued in different domains; thematic features in the V-domain, wh-features in the C-domain, etc.
- (iv) Feature valuation is strictly local, with local = under sisterhood
- (v) Features of the head determine the label of a phrase
- (vi) Once a structure is built, it cannot be altered afterwards (no backtracking)
- (vii) Feature specification determines interpretation at the interfaces

Incorporating these assumptions, consider now a sample derivation for a lexical item $w \{x, y\}$, with x and y being unvalued features. Valuation will be indicated as ~~struck-through~~; subscripted α on X is to be read as " X provides a value for α on some Z , $Z \neq X$ "¹²; subscripts on left brackets indicate the label of the bracketed string.

- (10) a. $\text{Merge}(\{x\ y\}, B_y^\circ)$
b. $[_{By}\{x\ y\} B_y^\circ] \rightarrow \text{Value}(y)$
c. $[_{By}\{x\ \cancel{y}\} B_y^\circ]$
d. $[_{Ax} A_x^\circ \dots [_{By}\{x\ \cancel{y}\} B_y^\circ]] \rightarrow \text{Copy}(\{x\ \cancel{y}\});$
 $\text{Merge}(\{x\ \cancel{y}\}, A_x)$
e. $[_{Ax}\{x\ \cancel{y}\} [_{Ax} A_x^\circ \dots [_{By}\{x\ \cancel{y}\} B_y^\circ]] \rightarrow \text{Value}(x)$
f. $[_{Ax}\{\ast\ \cancel{y}\} [_{Ax} A_x^\circ \dots [_{By}\{x\ \cancel{y}\} B_y^\circ]]$

Step (10a) follows from (i): Merge applies to syntactic objects, in this case B_y° and $\{x\ y\}$, resulting in the structure (10b); by (v), the head B_y° determines the label of the resulting syntactic object. Given (iv), the relevant context for feature valuation is now available. By (iii), only one feature can be valued, in that case y , resulting in (10c). Omitting some steps in the

¹¹ This idea is not uncontroversial; it is not shared by syntactic proposals inspired by Distributed Morphology (Harley & Noyer 1999).

¹² For brevity, we abstract away from the features that make the attraction of Z to X possible in the first place. The idea that X provides a value for Z is not incompatible with a probe-goal system, given that Merge seems to always involve mutual feature exchange: Merge(V, DP) allows V to value its c-selectional requirements, DP values its thematic feature; Merge(T, DP) allows T to value its ϕ -features, DP values its case-feature; (Merge C, wh-DP) allows C to value its clause-type feature, wh-DP values its wh-feature.

derivation, we arrive at (10d), with A°_x merged higher up in the structure. By (v), A°_x will determine the properties of the phrase. Since the phrase labeled A_x has the relevant feature, $\{x \text{ } \bar{y}\}$ gets copied and merged; by (ii), only the whole item can be copied and merged. Valuation in (10e) proceeds again according to (iii) and (iv). Crucially, from (iii) and especially from (vi) it follows that the valuation of x can only affect the copy that is sister to the phrase A_x . (vi) additionally explains why copies higher up will contain more valued features than the copies lower down. The final structure (10f) will now contain two copies of w which will differ in their feature specification. By (vii), they will be assigned different interpretations, as abstractly shown in (11):

$$(11) \quad \begin{array}{l} \{x \text{ } \bar{y}\} \leftrightarrow / \S / \\ \{\bar{x} \text{ } \bar{y}\} \leftrightarrow / \& / \end{array}$$

4.2. The Benefits

What we've done until now is to have shown that the data labeled as the fixed-direction-problem and the non-identity-problem are not problems for the CTM: they follow from independent properties of structure building. Firstly, copies differ in their feature specification because different features are valued in different positions, and feature valuation requires sisterhood. Therefore, the copies are non-identical, and the interpretative differences on the semantic and the phonological interface fall out naturally. (In the remainder of the paper, we will only deal with the PF-interface.) Secondly, the fixed-direction-problem is accounted for because backtracking is not possible. What about the trace-problem, how does it fit into this picture? Quite neatly, we'd like to suggest, given some reasonable ideas about lexical items. In most versions of minimalist syntactic theories it is assumed that a lexical item is triple of phonological, semantic, and formal features (Chomsky 1995, p. 230). We depart from that assumption. In our view, phonological features are not part of a lexical item. Why do we assume this? If phonological features were part of a lexical item, it is predicted that these features influence structure building. However, this prediction is not borne out; none of the following processes are attested among languages:

- a verb selects for elements beginning with /k/
- wh-movement is restricted to monosyllabic wh-words
- a preposition selects for elements with a trochaic stress pattern

All these effects, however, follow automatically from the idea that phonological features are not specified in lexical items, because under this assumption syntax then simply can never make reference to them.¹³ But

¹³ Cf. Miller et al. (1997), Pullum & Zwicky (1988), and Zwicky & Pullum (1983, 1986a, 1986b) for discussions of this principle and apparent counterexamples to it.

then how do elements get their phonological features? We assume that grammar invokes at least two lexica.¹⁴ One contains the lexical items with unvalued features; these enter the syntactic computation and get valued. The other one relates the lexical items with the now valued features with phonological features.¹⁵ Syntax has access only to the first lexicon (the syntax-lexicon), the phonological interface only to the second lexicon (the PF-lexicon). When syntax hands over a structure to the phonological interface, the interface scans the elements in the syntactic structure for corresponding elements in the PF-lexicon. If it finds one, it inserts the corresponding element.¹⁶ What if it doesn't find a corresponding element? Then it simply doesn't insert anything at this position. This is what we assume is happening in the case of traces: there is simply no corresponding element in the PF-lexicon for the element in the syntactic structure.¹⁷

This means that traces and spelled-out elements are not separate entities; they can be uniformly described. That some elements are not spelled-out basically follows from the arbitrary sound-meaning correspondence: zero phonological interpretation is simply a special case of differing phonological interpretation. Furthermore, copy spellout is syntactically guided; no post-syntactical PF decision procedure which copy to spell out is invoked (contra e.g. Bošković 2001). This not only reduces computational complexity – since no look-ahead is needed to determine which copy is spelled-out – but also predicts that PF cannot force additional copy spellout, it can only exploit it (we will come back to this point in the last paragraph of section 5).

¹⁴ We remain agnostic on whether semantic features are needed in lexical items or not, since we only deal with the PF interface here.

¹⁵ This means giving up the independence of PF and LF from each other because to correctly pair the elements of the two lexica, PF must be able to take non-phonological features as input. Regardless of whether this is a bad result or not, note that a condition like "recoverability of deletion" (which most syntacticians assume) points in the direction that this independence is dubious in the first place.

¹⁶ This idea is similar to the mechanism of lexical insertion in Chomsky (1965). In our view, the syntactic lexicon therefore is not only a list of idiosyncrasies but also a list of constant features in a lexical item (the type), whereas the PF-lexicon is a list of actual occurrences (the tokens). The task of syntax is therefore to assign values to underspecified lexical items.

¹⁷ Why elements in base positions happen to be not spelled-out so often might be related to the issue of ϕ -completeness, i.e. one can only spell out elements that have a full specification of ϕ -features (cf. Adger 2008 who shows that at least in some languages resumptive pronouns are elements stripped off their ϕ -feature specification). The semantic difference between a wh-phrase in base and final position results quite unproblematically: the wh-feature is unvalued in base position, so only a variable interpretation for the wh-phrase in that position will arise.

4.3. Reconsidering Unvalued Features

However, our argumentation so far can only work if we assume that the interfaces can ignore unvalued features. But this again is not a standard minimalist assumption: a structure with unvalued features crashes at the interfaces, because they are by definition not legible at the interfaces. This was also the reason for assuming that copies are not allowed to differ in their feature specification (cf. the quotation from Epstein & Seely in section 2). We will depart here from the minimalist concept of unvalued features. Firstly, unvalued features in our approach are much more like unvalued features in HPSG, i.e. feature-types that lack a certain specification. In the course of the derivation, the missing values will be assigned under sisterhood with elements providing the relevant values. Secondly, given this concept of unvalued feature, no crashing derivation results if an element lacks a value.^{18, 19} A missing value is then simply a missing feature specification in a feature bundle; but feature bundles are legitimate objects for the interfaces independent of the number of elements they contain. Now, under this perspective, it is not just the case that the existence of traces finds a natural explanation (those are elements in the syntactic structure that don't match an element in the PF-lexicon); it is also predicted that in the course of a derivation elements might get created whose feature bundles do match elements in the PF-lexicon, so that multiple copy spellout arises. In the next section, we will argue that wh-copying is just such a case. Additionally, we show that specific predictions of our proposal for this construction are borne out.

¹⁸ Giving up this idea amounts to giving up minimalism altogether. If syntax does not operate with features that are relevant only to the interfaces, but with a separate set of features that only partly match those of the interfaces, then the whole idea that language is an optimal system is untenable, because optimal means that syntax is shaped by and for the interfaces. If syntax employs interface independent features then syntax is obviously not shaped by the interfaces. That the minimalist conjecture seems to be wrong is not such a bad result, given that it is ungrounded in the first place. To turn it into an empirical hypothesis, one would need independently motivated properties of the interfaces. Otherwise, it is not clear what those interface conditions are that language has to satisfy. However, no such properties are known (Chomsky 1995, p. 222; Chomsky 2004, p. xii; Chomsky 2006, p. 121).

¹⁹ If unvalued features don't cause crashing, then as a consequence structures containing only valued features have no special status compared to structures with unvalued features. It might seem strange to assume that a phrase like *did Fred put on the table* – without wh-movement and an empty element after *put* – is as grammatical as a full sentence like *Susan left*. However, if the task of a grammar is to account for the speaker's knowledge of his language (Chomsky 1957, 1975), then our system does exactly this. A competent speaker knows that in *did Fred put on the table* a *what* in initial position is missing; accordingly, a competent speaker knows that *love Mary* is a property of some unexpressed subject. A grammar, however, that treats both cases as simply ungrammatical does not fully reflect the speaker's knowledge about these structures.

To conclude this section, we've shown that the non-identity of copies, the superset-subset relation between higher and lower copies, and the non-spellout of some copies follow from standard assumptions about structure building, coupled with specific assumptions about the lexicon and the concept of unvalued features as unspecified feature-types. The CTM itself can be sustained.

5. Wh-Copying in German

Consider again example (3), repeated as (12):

- (12) Wen glaubst du wen sie t liebt?
 whom think you whom she loves
Who do you think that she loves?

Given the proposal outlined in the last section, we suggest the following structure for (12), irrelevant details omitted:

(13)

[CP₂ wen_[wh Op Θ] C°_{wh} ... [CP₁ wen_[wh Op Θ] C°_{Op} ... [VP wen_[wh Op Θ] V_Θ ...]]

The wh-phrase first gets merged as sister to some verb and values its thematic feature in this position (we abstract away from case here). It then gets copied to the intermediate C° and values its operator-feature there. Finally, it gets copied to the matrix C° and values its wh-feature. By the spellout rules in (14), the copies will assume their phonological specification:

- (14) wen_[wh Op Θ] ↔ / Ø /
 wen_[wh Op Θ] ↔ / wen /
 wen_[wh Op Θ] ↔ / wen /

According to this analysis, we make two predictions. Firstly, the different feature specification of the three copies can lead to three phonologically different elements. Secondly, the intermediate elements will show up in other contexts, too. As for the first prediction, since the three copies each have different feature specifications, we expect that for some speakers, this difference shows up overtly by having three separate elements for the three copies. This is indeed the case: for some speakers, wh-copying is grammatical only with a d-pronoun appearing in intermediate position.

- (15) **Wen** glaubst du **den** ich gesehen habe?
 whom think you this I seen have
Who do you think that I have seen?

Turning to the second prediction, we expect that the element in the intermediate position shows up independently of this construction. This prediction is also borne out. Elements with the phonological shape of a wh-phrase show up also in non-[+wh]-contexts, viz. as indefinites (16a) and as pronouns in free relative clauses (16b):

- (16) a. Ich habe **wen** gesehen.
 I have whom seen
 I have seen someone.
 b. Ich glaube **wem** du vertraust.
 I believe whom you trust
 I believe who you trust.

According to our proposal, constructions like wh-copying can be explained without any additional assumptions about post-syntactic operations. We can also account for the asforementioned problem in the description of wh-copying as to why no special semantic or phonological effect can be detected in this construction. This is mysterious under post-syntactic accounts of copy spellout: to license a deviation from the general case of interpreting the highest copy, some additional interface effect is needed. However, there is neither a special intonational property related to wh-copying nor are there any semantic effects.²⁰ This, however, follows neatly from our purely syntactic account because copy spellout is only determined by the match between the elements appearing in a syntactic representation and elements appearing in the interface lexicon. Therefore, no additional interface effect to license multiple copy spellout is needed.

We do *not* deny that there are cases in which multiple copy spellout is accompanied by interface effects; we only deny that those effects *cause* it. Consider, for example, verb copying in Nupe (Kandybowicz 2007). Kandybowicz shows that the additional spellout of the verb is accompanied by the realization of a floating tone that otherwise would be unassociated (hence, a PF-effect). One might be tempted to conclude that this effect is therefore responsible for the multiple copy spellout. To do so, however, requires showing that *only* multiple copy spellout can achieve the interface effect, but no other option, like deleting the floating tone, associating it with following syllable, or associating it with a dummy element.²¹ Otherwise, no strong point can be made for assuming that multiple copy spellout is *caused* by an interface effect.

5. Conclusion

²⁰ Pafel (2000) reports special scopal effects related to wh-copying. However, the informants I consulted do not agree on these judgments. Moreover, even if they were true, wh-copying is also found with elements that do not induce scope relations, like relative pronouns in relative clauses.

²¹ Those processes are all attested: deletion of non-associated elements in phonology is discussed under the label of Stray Erasure (Steriade 1982), association of a floating tone to the following syllable occurs in Bambara (Leben 1973), insertion of a dummy element is exemplified by do-support in English (Chomsky 1957).

One conclusion of this article is that the Copy Theory of Movement can be sustained. The other one is that the minimalist conception of unvalued features is untenable. It leads to insurmountable problems for correctly describing the behaviour of the copies at the interfaces. Assuming a non-minimalist conception of unvalued features, coupling it with the CTM and standard syntactic assumptions allows one to account for the behaviour of the copies at the interfaces. More specifically, it allows one to account for (a) the existence of traces and spelled-out elements, (b) the difference in the interpretations copies are assigned at the interfaces, and (c) the peculiar fact that copies higher up in the structure are featurally richer than those lower down. The predictions of our approach were illustrated with wh-copying in German

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Το Ακρο- ως Αριστερό Συστατικό Σύνθετων Δομών στη Μεσαιωνική και Νεότερη Ελληνική

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0. Εισαγωγή

Ο χαρακτήρας και οι ιδιότητες των στοιχείων που βρίσκονται αριστερά στη δομή των σύνθετων μορφολογικά λέξεων έχει απασχολήσει πολύ τη διεθνή βιβλιογραφία. Η συζήτηση επικεντρώνεται κυρίως γύρω από το ερώτημα αν τα χαρακτηριστικά αυτά αποδεικνύουν ένα συγκεκριμένο είδος σχηματισμού. Οι δύο αντιτιθέμενες απόψεις είναι ότι η ταυτότητα του αριστερού στοιχείου καθορίζει το αν η παραγόμενη λέξη δημιουργείται στο επίπεδο της σύνθεσης ή στο επίπεδο της παραγωγής (βλ. Kiparsky 1982, Ralli 2004, 2007) ή αν απλώς καθορίζει τον τρόπο με τον οποίο συνδέονται τα δύο συστατικά (βλ. Siegel 1979, Di Sciullo & Williams 1987, Stekauer 2005).

Στο παρόν άρθρο προθηματοποίηση και σύνθεση θεωρούνται διακριτές διαδικασίες, των οποίων τα όρια όμως δεν είναι πάντοτε διακριτά. Οι ενδιάμεσες περιπτώσεις μαρτυρούν την ύπαρξη ενός συνεχούς. Η υπόθεση εργασίας είναι ότι τα στοιχεία αυτά μπορούν να μετακινηθούν από τον πόλο της σύνθεσης σ' αυτόν την προθηματοποίησης κάτω από ορισμένες προϋποθέσεις, όπως είναι η σημασιολογική αλλαγή, η απώλεια των δομικών σχέσεων μεταξύ των συνθετικών και η απουσία επιλογικών περιορισμών βάσης. Αν οι προϋποθέσεις αυτές πληρούνται, τότε το στοιχείο που βρίσκεται αριστερά στη δομή χάνει το λεξικό του χαρακτήρα και η μετάβαση στον πόλο της προθηματοποίησης συντελείται, αν όχι η διαδικασία παραμένει ανολοκλήρωτη. Η διαχρονική μελέτη του ακρο- σε πρώτο επίπεδο αποσκοπεί στο να καταδείξει τα στάδια τα οποία ευθύνονται για την απώλεια λεξικών ιδιοτήτων ενός στοιχείου. Σε δεύτερο επίπεδο, μέσα από την περιγραφή των σταδίων της γραμματικοποίησης του ακρο- επιχειρείται η ιεράρχηση των παραμέτρων που οδηγούν στην αλλαγής της γραμματικής ταυτότητας των αριστερών στοιχείων στη δομή των σύνθετων λέξεων. Ερωτήματα που θα μας απασχολήσουν είναι: α) υπάρχουν συγκεκριμένες παράμετροι που κινητοποιούν τη διαδικασία προθηματοποίησης; β) αν ναι είναι αυτές οι οποίες εγγυώνται τη μετάβαση στη νέα γραμματική κατηγορία;

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1. Θεωρητικό πλαίσιο

Η ειδοποιός διαφορά ανάμεσα στη σύνθεση και την προθηματοποίηση είναι ο λεξικός χαρακτήρας του συνθετικού που βρίσκεται αριστερά στη δομή. Αν το στοιχείο αυτό διέπεται από ακεραιότητα και αυτονομία (βλ. Horpper 1991, Lehman 1995), τότε διατηρεί το λεξικό του χαρακτήρα. Αντιστρόφως, το στοιχείο που δε διατηρεί την αυτονομία και την ακεραιότητά του χάνει το λεξικό του χαρακτήρα και αποκτά λειτουργίες προθήματος (Ράλλη 2005, Iacobini 2004).

Για τα κριτήρια βάσει των οποίων αποδεικνύεται ο λεξικός ή μη χαρακτήρας ενός συστατικού έχουν διατυπωθεί διάφορες απόψεις. Όλοι οι μελετητές που εξετάζουν οριακές περιπτώσεις ανάμεσα σε σύνθεση και προθηματοποίηση (Γιαννουλοπούλου 2000, Bauer 2005, Booij 2005, Iacobini 2004, Amiot 2005) διαπιστώνουν σημασιολογική μετατόπιση. Ωστόσο, αν κάποιο στοιχείο μεταβληθεί σημασιολογικά δε μεταβάλλει απαραίτητα τις γραμματικές και δομικές του λειτουργίες. Ο Iacobini (2004) σημειώνει πως τα προθήματα σε αντίθεση με τα λεξήματα δεν έχουν συντακτική κατηγορία και η Amiot (2005) θεωρεί πως ένα στοιχείο χάνει το λεξικό του χαρακτήρα όταν συνδυάζεται με πολύ περισσότερες βάσεις από αυτές που συνδυάζονταν ως λέξημα, όταν δηλαδή δεν εμφανίζει επιλογικούς περιορισμούς. Αυτές οι δύο δομικές διαπιστώσεις παίζουν πολύ σημαντικό ρόλο στον καθορισμό της γραμματικής ταυτότητας του στοιχείου που βρίσκεται στα αριστερά μιας σύνθετης μορφολογικά δομής.

Τα κριτήρια κατάδειξης του γραμματικού χαρακτήρα δεν είναι μόνο δομικά. Οι Dimela & Melissaropoulou (2007) παρατηρώντας ενδιάμεσες περιπτώσεις ανάμεσα σε σύνθεση και προθηματοποίηση διαπιστώνουν ότι πρόκειται για περιπτώσεις που υπόκεινται στη διαδικασία γραμματικής αλλαγής. Σύμφωνα με τους Heine & Kuteva (2005) ένα στοιχείο το οποίο περνά από ένα λεξικό στάδιο σε ένα γραμματικό στάδιο ή από ένα γραμματικό σε ένα περισσότερο γραμματικό στάδιο υφίσταται τις εξής αλλαγές: α) *αποσημασιοποίηση* (ή *σημασιολογικός αποχρωματισμός*), β) *επέκταση*, γ) *αποκατηγοριοποίηση*, και δ) *διάβρωση* (ή *φωνητική μείωση*).

Βασιζόμενες στις θεμελιώδεις αρχές της γραμματικοποίησης και στον καθοριστικό ρόλο των δομικών χαρακτηριστικών των τεμαχίων που βρίσκονται σε διαδικασία μεταβολής οι Dimela & Melissaropoulou (2007) προτείνουν τα παρακάτω κριτήρια για τον έλεγχο της λεξικής ταυτότητας των αριστερών συστατικών σε μία σύνθετη μορφολογικά δομή:

α) Φωνολογική αλλοίωση, κριτήριο το οποίο αντιστοιχεί σ' αυτό της *διάβρωσης*.

β) Σημασιολογική μετατόπιση, όταν το υπό εξέταση τεμάχιο δεν εμφανίζει την προβλεπόμενη σημασία ή δεν εμφανίζει μόνο αυτή, αλλά παρατηρείται διεύρυνση (*extension*) προς μία πιο γενική και αφηρημένη σημασία και συνήθως αυτής της ποσοτικής μεταβολής.

γ) Δομική σχέση των συνθετικών, σύμφωνα με το οποίο σε μία σύνθετη δομή υπάρχουν ορατές συντακτικές σχέσεις όταν και τα δύο συνθετικά είναι λεξήματα (θέματα ή λέξεις). Αν η δομική-συντακτική σχέση των συνθετικών δεν είναι ορατή, τότε δεν υφίσταται διαδικασία σύνθεσης (1α), αλλά διαδικασία παραγωγής (1β).

- (1) α. σφιχταγκαλιάζω > αγκαλιάζω σφιχτά [σχέση υπόταξης]
β. αποπαίρνω > παίρνω από κάποιον/κάτι ? [απουσία συντακτ. σχέσης]

Η αδιαφάνεια των δομικών σχέσεων είναι ένα κριτήριο το οποίο αποδεικνύει πως το αριστερό συστατικό μιας σύνθετης μορφολογικά δομής δεν έχει συντακτικές πληροφορίες, έχει χάσει το λεξικό του χαρακτήρα και επομένως έχει αποκατηγοριοποιηθεί.

Προκειμένου όμως να αποδειχθεί ότι ένα στοιχείο εγκαταλείπει τα λεξικά του χαρακτηριστικά για να υιοθετήσει χαρακτηριστικά περισσότερο λειτουργικά-γραμματικά, όπως είναι τα χαρακτηριστικά των προθημάτων, κρίνεται σκόπιμο να ελεγχθούν τα επιλογικά του χαρακτηριστικά. Σύμφωνα με τη Ράλλη (2005) τα ελληνικά προθήματα δεν ικανοποιούν την *Υπόθεση Μοναδικής Βάσης* (*Unitary Base Hypothesis*, Aronoff 1976), αφού όντας κατά κανόνα κατηγοριακά ουδέτερα δεν επιβάλλουν περιορισμούς επιλογής στη βάση με την οποία συνδυάζονται.

Στις ενότητες που ακολουθούν το στοιχείο που θα αναλυθεί διεξοδικά είναι το *ακρο-* το οποίο θα ελεγχθεί με βάση τα ανωτέρω κριτήρια προκειμένου να διαπιστωθεί η ταυτότητά του. Το *ακρο-* δε θα εξετασθεί στατικά σε ένα συγκεκριμένο συγχρονικό επίπεδο του παρόντος ή του παρελθόντος, αλλά διαχρονικά. Δεδομένου ότι η γραμματικοποίηση είναι μία σταδιακή διαδικασία, οι αλλαγές της οποίας δεν είναι απαραίτητο να επιτελούνται ταυτόχρονα, κρίνεται σκόπιμη η παρατήρηση όλων των φάσεων του *ακρο-* στη διαχρονία.

2. Ακρο-

2.1. Δημιουργία νέας σημασίας

Το *ακρο-* ως πρώτο συστατικό σύνθετων λέξεων υπάρχει ήδη από την αρχαία ελληνική. Δημιουργεί σύνθετες δομές οι οποίες προέρχονται είτε από το ουσιαστικό *ἄκρα* ('αρχή έκτασης, αρχή γεγονότος, άκρο αντικειμένου, τέλος χρονικής περιόδου') είτε από το επίθετο *ἄκρος* ('ευρισκόμενος εις το άκρο, ευρισκόμενος στο υψηλότερο σημείο') ανάλογα με τη δομική σχέση που αναπτύσσει με το β' συστατικό του συνθέτου.

- (2) α. ἀκροκυματοῶ > ἄκρα + κυματοῶ ‘πλέω στην άκρη των κυμάτων’
β. ἀκρόπολις > ἄκρα + πόλις ‘το ‘άκρο’, ανώτατο σημείο της πόλης’

Οι πρώτες περιπτώσεις σημασιολογικής μετατόπισης προς την έννοια της ποσοτικής μεταβολής απαντούν ήδη στους κλασσικούς χρόνους. Από το επίθετο *ἄκρος*, το οποίο ως αριστερό συστατικό σύνθετων μορφολογικά δομών (*ἀκρο-*) επιλέγει επιθετικές βάσεις για να συνδυαστεί, παράγονται δομές με τη νέα σημασία. Στον Ησίοδο υπάρχει το πρώτο παράδειγμα ποσοτικής αποδυνάμωσης (3α). Επίσης παραδείγματα απαντούν και στον Ηρόδοτο (3β) και τον Ιπποκράτη (3γ).

- (3) α. **ἀκροκνέφαιος** ‘λίγο συννεφιασμένος, συννεφιασμένος στην άκρη’
β. **ἀκρομανής** ‘με έντονο μένος, πολύ θυμωμένος’
γ. **ἀκροχλίσσον** ‘κάπως χλιαρός’

- (4) α. Ἀρκτοῦρος προλιπὼν ἱερὸν ῥόον Ὠκεανοῖο
πρῶτον παμφαίνων ἐπιτέλλεται **ἀκροκνέφαιος**.
τὸν δὲ μέτ’ ὀρθογόη Πανδιονίς ὦρτο χελιδὼν
Ἡσίοδος, Ἔργα καὶ Ἡμέραι. στ. 567

β. Ὁ μὲν δὴ Κλεομένης, ὡς λέγεται, ἦν τε οὐ φρενήρης
ἀκρομανής τε, ὁ δὲ Δωριεὺς ἦν τῶν ἡλίκων πάντων πρῶ-
τος, εὖ τε ἡπίστατο κατ’ ἀνδραγαθίην αὐτὸς σχήσων τὴν
Ἡρόδοτος, Ἱστορίαι. Βιβ. 5 § 42. 2

Στα παραδείγματα αυτά εμφανίζεται ποσοτική μεταβολή, όχι όμως ακριβώς με τον ίδιο τρόπο. Στο **ἀκροκνέφαιος** (4α) έχουμε ποσοτική αποδυνάμωση η οποία μπορεί να έχει προκύψει από την πρωτοτυπική σημασία τους επιθέτου *ἄκρος* (ο συννεφιασμένος στην άκρη, ο κάπως συννεφιασμένος). Αυτός ο τρόπος διεύρυνσης της σημασίας από την πρωτοτυπική κυριολεκτική στην πρωτοτυπική μεταφορική (βλ. Μπαμπινιώτης 1969) και έπειτα στη νέα σημασία φαίνεται να επιβεβαιώνεται και από τον τύπο *ἀκρομανής* (4β) (θυμωμένος εις το άκρον, το ανώτατο όριο). Αυτό που παρουσιάζει ιδιαίτερο ενδιαφέρον είναι ότι η μετατόπιση προς την σημασία της ποσοτικής μεταβολής επιτελείται ταυτόχρονα και προς τον ‘θετικό’ (επίταση) και προς τον ‘αρνητικό’ πόλο (ποσοτική αποδυνάμωση). Φαίνεται λοιπόν πως νέες σημασίες ξεκινούν με τον ίδιο τρόπο, την ίδια χρονική στιγμή και ‘συναγωνίζονται’ η μία την άλλη μέχρι κάποια να υποχωρήσει.

Στην Ελληνιστική περίοδο εμφανίζονται περισσότεροι σχηματισμοί οι οποίοι παράγονται με τον ίδιο τρόπο. Οι σχηματισμοί αυτοί είναι πάλι επιθετικοί, όπως και στην κλασσική περίοδο, και πολλοί από αυτούς μπορούν να χρησιμοποιηθούν ως παραδείγματα μετάβασης από την κυριολεκτική στη μεταφορική σημασία.

- (5) α. *ἀκροπόρφυρα* ‘κοκκινωπά’
β. *ἀκρόξεστος* ‘ζεστούτσικος’ (Diosc. Sophocles)
γ. *ἀκρόζυμος* (Galen.XIII, Isid.Hisp., Sophocles)
- (6) *ὑπόλευκα, ἀκανθώδη τοῖς πέρασι· τὸ δὲ ἄνωτάτω τοῦ κανυλοῦ περιφερές, δασύ, καὶ ἐπ’ αὐτοῦ κεφάλια ἀκροπόρφυρα*, ἐκπαπ-
πούμενα.
[Dioscorides Pedanius Med., *De materia medica*. Book 4 chapter 118](#)
section 1 line 5.

Από τους σχηματισμούς του *ακρο-* στην κλασσική και ελληνιστική περίοδο συνάγεται το συμπέρασμα ότι υπάρχει απλώς η τάση μεταβολής της γραμματικής ταυτότητας του *ακρο-*, το status του όμως παραμένει λεξικό, καθώς το μόνο κριτήριο μεταβολής που ικανοποιεί είναι αυτό της σημασιολογικής μετατόπισης, το οποίο μάλιστα δεν το ικανοποιεί ολοκληρωτικά. Απαντούν τύποι σημασιολογικά αλλοιωμένοι είναι όμως λιγοστοί για να υποστηρίξει κανείς εδραίωση νέας σημασίας. Δε θα ήταν ωστόσο παράτολμο να υποστηρίξει κανείς ότι το φαινόμενο αυτό στη συγκεκριμένη χρονική περίοδο βρίσκεται εν τη γενέσει του. Η ανάλυση αυτών των τύπων οπωσδήποτε δε μαρτυρά γραμματικοποίηση, δίνει όμως ένα στοιχείο για τον τρόπο με τον οποίο αυτή η διαδικασία κινητοποιείται, ειδικότερα για τον τρόπο με τον οποίο η νέα σημασία αναδύεται.

2.2. Σημασιολογικές και δομικές εξελίξεις στη μεσαιωνική περίοδο

Η νέα σημασία, η σημασία της ποσοτικής μεταβολής, εξακολουθεί να παράγει επιθετικές σε όλη τη διάρκεια της μεσαιωνικής περιόδου. Παραδείγματα τέτοιων δομών απαντούν στον Ησύχιο (5-6^{ος} μΧ, *ἀκρόκαυστος* ‘λίγο καυτός’) και στον Φώτιο (9^{ος} μΧ. *ἀκροπαχής* ‘λίγο παχής’). Την ίδια περίοδο ξεκινά και η παραγωγή ονοματικών δομών, η οποία όμως είναι εξαιρετικά σπάνια (Trapp, *ἀκροθώραξ* ‘πολύ μεθυσμένος’, *ἀκροκήρυξ* ‘ανώτατος κήρυκας’). Εδραίωση της σημασιολογικής μετατόπισης έχουμε στο μεσαίωνα, στην όψιμη μεσαιωνική περίοδο. Από τον 12ο αιώνα το *ακρο-* χρησιμοποιείται συστηματικά με τη σημασία της ποσοτικής μεταβολής και κυρίως με τη σημασία της ποσοτικής αποδυνάμωσης. Παραδείγματα απαντούν στον

Γλυκά, το Χρονικό του Μορέως, τον Διγενή Ακρίτα, και έπειτα στα βυζαντινά ιπποτικά μυθιστορήματα.

- (7) α. **ὁκάτι ὡς ἡκροεκσύσπαζε** καὶ συνετάρασσέ με
Γλυκάς Στίχοι στ.50
β. τὴν θύραν **ἄκριοχτύπησεν** διὰ νὰ τὸν ἀφκραστοῦσιν,
Chronicon Moreae. στ. 937
γ. μὴ κιντυνέψη ὁ τόπος του καὶ πάθη καὶ ζημίαν.
Κι ὁ ρῆγας, ὡς τὸ ἤκουσεν, **ἄκριοβλαστήμησέ το**.
κι ὡς ἔξευρεν κ' ἐγνώριζεν, ὡς ἦτον γὰρ κ' ἡ ἀλήθεια,
Chronicon Moreae. στ. 7137-9
δ. Καὶ ἐπῆρα τὸ λαβοῦτο μου καὶ θέλω νὰ **ἄκροπαίξω**
Διγενῆς Ακρίτας (Esc). Στ. 1145
ε. **ἄκροκαρτέρησε** λοιπόν νὰ πάγω 'ς τό καράβι
Βέλθανδρος & Χρυσάντζα στ. 1249

Από τα παραπάνω παραδείγματα προκύπτει πως η σημασία της ποσοτικής μεταβολής εδραιώνεται και εξαπλώνεται και σε ρηματικούς σχηματισμούς. Σύμφωνα με τις θεωρητικές επισημάνσεις που έγιναν προηγούμενα, αυτό σημαίνει πως το *ακρο-* δεν εμφανίζει επιλογικούς περιορισμούς και συνδυάζεται με οποιαδήποτε βάση (η μόνη βάση με την οποία δε συνδυάζεται σύμφωνα με τα δεδομένα είναι οι πρωτογενείς επιρρηματικές, παράγει όμως δευτερογενείς επιρρηματικές βάσεις, π.χ. *ἀκρόμακρο*).

Επιπρόσθετα, παρατηρείται πως και οι δύο κατευθύνσεις της ποσοτικής μεταβολής (επίταση και ποσοτική αποδυνάμωση) εξακολουθούν να δημιουργούν δομές. Αν και διαφαίνεται η τάση για υποχώρηση της σημασίας της επίτασης η διτυπία συχνά δημιουργεί αμφίσημους τύπους (7α,γ). Η ύπαρξη αμφίσημων τύπων είναι μία επιπλέον ένδειξη πως τα λεξικά χαρακτηριστικά του *ακρο-* δεν είναι πλέον διαφανή. Το ίδιο ισχύει και για τις δομικές σχέσεις ανάμεσα στα δύο συστατικά. Οι δομικές σχέσεις είναι αδιαφανείς αφού το *ακρο-* έχει χάσει τα συντακτικά του χαρακτηριστικά.

Χαρακτηριστικό παράδειγμα αποτελούν οι ρηματικές δομές του *ακρο-* οι οποίες δηλώνουν την ποσοτική αποδυνάμωση. Αν δοκιμάσει κανείς να εντοπίσει συντακτική σχέση ανάμεσα στα συνθετικά αντιμετωπίζει το εξής παράδοξο:

- (8) *ἄκροκαρτερῶ* 'περιμένω λίγο' > *ἄκρως καρτερῶ* 'περιμένω πολύ' ?

Η απώλεια των συντακτικών του χαρακτηριστικών επιβεβαιώνεται και από τον προβληματισμό των νεότερων μελετητών για την ιστορική

προέλευση του *ακρο-*. Ο Χατζιδάκις (1905) θεωρεί πως το *ακρο-* προέρχεται από το ουσιαστικό *ἄκρα*. Ο Μπαμπινιώτης (1969) υποστηρίζει πως η προέλευσή του είναι το επίθετο *ἄκρος*. Πράγματι ιστορικά, όπως αποδείχθηκε, η νέα σημασία και λειτουργία του *ακρο-* προήλθε από το επίθετο και όχι από το ουσιαστικό.

Όσον αφορά το ζήτημα της διεύρυνσης των βάσεων με τις οποίες συνδυάζεται το *ακρο-* - διεύρυνση η οποία ισοδυναμεί με την απώλεια των επιλογικών του περιορισμών-, μπορούν να διατυπωθούν οι εξής σκέψεις. Σε θεωρητικό επίπεδο, η μετάβαση στη νέα λειτουργία ενός στοιχείου και στην προκειμένη περίπτωση η μεταβολή των επιλογικών περιορισμών, είναι μία διαδικασία η οποία επιτελείται σταδιακά. Για να είναι δυνατός ο συνδυασμός ενός στοιχείου με μία καινούργια βάση είναι πιθανό να προηγούνται (χρονικά) δευτερογενείς σχηματισμοί των οποίων η πρωτογενής βάση ανήκει σ' αυτήν τη νέα κατηγορία. Η υπόθεση αυτή επιβεβαιώνεται στην περίπτωση του *ακρο-*.

Συγκεκριμένα, το *ακρο-* αρχικά συνδυαζόταν με επιθετικές βάσεις και αργότερα σπάνια με ονοματικές. Χάνει τους επιλογικούς του περιορισμούς όταν αρχίζει να συνδυάζεται με ρηματικές. Πριν από το συνδυασμό του με ρηματικές βάσεις έχουν προηγηθεί σχηματισμοί δευτερογενούς επιθετικής παραγωγής, όπως φαίνεται στο παράδειγμα (9).

- (9) α. ἄκροβαφής (Νόννος, 5ος μ.Χ.)
β. ἄκρόκαυστος (ΗΣύχιος, 5-6ος μ.Χ.)
γ. ἄκροφεγγία (Μιχαήλ Ψελλός, 11ος μ.Χ.)

Παραδείγματος χάρι το *ἄκροβαφής* είναι μία δευτερογενής επιθετική δομή η οποία χρησιμοποιεί μία ρηματική βάση για να παραχθεί:

- (10) [[[ακρο] [βαφ]P]P [-ης]επιθ]επιθ

Από την παραπάνω αναπαράσταση προκύπτει ότι το *ακρο-* σχηματίζει δομή με ρηματική βάση, η οποία όμως δεν είναι αποδεκτή συγχρονικά, καθώς δεν απαντά εκείνη την περίοδο το ρήμα **ἄκροβάφω*, αφού το *ακρο-* τον 5^ο αι. συνδυάζεται κυρίως με επιθετικές (ή και με ονοματικές βάσεις). Ακριβώς γι' αυτό το λόγο παράγεται ο δευτερογενής επιθετικός σχηματισμός. Παρ' όλα αυτά, το γεγονός ότι συνδυάζεται με ρήμα, ακόμα κι αν το αποτέλεσμα δεν είναι ρηματική δομή, όπως φαίνεται στο (10), αποδεικνύει την ύπαρξη τάσης διεύρυνσης των συνδυαζόμενων με το *ακρο-* βάσεων. Αυτή η τάση επιβεβαιώνεται το 12^ο αι., όποσ σύμφωνα με τις γραπτές πηγές μας, το *ακρο-* πλέον συνδυάζεται κανονικά με ρηματικές βάσεις (βλ. (7)).

Μία άλλη παρατήρηση, που αφορά στα χαρακτηριστικά του *ακρο-* την όψιμη μεσαιωνική περίοδο, είναι ότι στο Χρονικό του Μορέως διαπιστώνεται και φωνολογική αλλοίωση του τύπου (*ακρο-* > *ακριο-*). Η αλλοίωση αυτή, ακόμα κι αν δεχθεί κανείς ότι βασίζεται σε φωνολογικούς λόγους (συμφυρμός βλ. Μπαμπινιώτης 1969: 122), καθιστά τον τύπο περισσότερο αδιαφανή και συντελεί στην προθηματοποίησή του.

Η νέα σημασία - λειτουργία του *ακρο-* εξακολουθεί να είναι ιδιαίτερα παραγωγική σε όλη τη διάρκεια της όψιμης μεσαιωνικής περιόδου στα διαλεκτικά πλέον κείμενα των Νοτίων ιδιωμάτων και ιδιαίτερα σε κείμενα της Κρητικής (11) και Κυπριακής διαλέκτου (12). Από τα παραδείγματα αυτά είναι έκδηλη πλέον η υπερίσχυση της σημασίας της ποσοτικής αποδυνάμωσης (αποσημασιοποίηση ή σημασιολογική διεύρυνση), όσο και η φωνολογική αλλοίωση του τύπου (*ακρο-* > *κρο-*) στην Κυπριακή διάλεκτο.

- (11) α. νά 'κατσα, ν' ἀκροχάρηκα μέ τρόπον πλιά γλυκάκι
Φαλιέρου Ιστορία και Όνειρο στ. Ε698
β. κι ἄσι με ν' ἀκροσταθῶ λιγάκι
Θυσία του Αβραάμ στ. 916

- (12) ἔλεγέν μου τραγουδώντας
μέ χαράν καί κρογελώντα
Κυπριακά Ερωτικά Ποιήματα 116.36-37

Η παρουσία του *ακρο-* στις Νέες Ελληνικές Διαλέκτους

Το *ακρο-* εξακολουθεί να υπάρχει στις νεοελληνικές διαλέκτους. Στην Κρητική διάλεκτο είναι τόσο παραγωγικό, ώστε είναι δυνατή η ύπαρξη νεολογισμών, σχηματισμών δηλαδή οι οποίοι παράγονται από τους φυσικούς ομιλητές της διαλέκτου, αλλά δεν είναι καταχωρημένοι σε λεξικό. Παραδείγματα νεολογισμών παρατίθενται στο (13).

- (13) α. ακροσυνεφέρνω (αρχεία ΚΕΝΔΙ)
β. ακροπικρούτσικος (αρχεία ΚΕΝΔΙ)
γ. ακροποτίζω (αρχεία ΚΕΝΔΙ)

Στην Κύπρο συγχρονικά το φαινόμενο είναι υπαρκτό, δεν είναι όμως τόσο πολύ παραγωγικό. Τα λεξικά της διαλέκτου έχουν λίγες καταχωρήσεις (14) και το σύστημα δε φαίνεται να είναι ευνοϊκό στη δημιουργία νεολογισμών.

- (14) α. κροφούμαι 'φοβάμαι λίγο'

β. κρόννοιχτος ‘μισάνοιχτος’

Επίσης, εμφανίζεται και σε διαλέκτους που ακολούθησαν διαφορετική πορεία ανάπτυξης λόγω γλωσσικής επαφής, όπως είναι η διάλεκτος του Πόντου και οι διάλεκτοι της Κάτω Ιταλίας (Καλαβρία).

- (15) α. ακρανοίγω ‘μισανοίγω’ (Πόντος KENΔΙ, Καλαβρία Καραναστάσης)
β. ακρόσσυλος ‘πολύ δυστυχισμένος’ (Πόντος)
γ. ακράνοιχτο ‘ορθάνοιχτο’ (Καλαβρία Καραναστάσης)

Τύποι απαντούν και στη Θράκη και τη Θεσσαλία, αλλά και στην Κω, την Κάρπαθο και την Πελοπόννησο.

- (16) α. κρόγυρτος ‘μισογερμένος’ (Κω Σκανδαλίδης)
β. ακρολυπούμαι ‘λυπούμαι λιγάκι’ (Κάρπαθος KENΔΙ)
γ. ακροσκουντώ ‘μόλις που σκουντώ’ (Θράκη KENΔΙ)
δ. ακράνοιχτα ‘ορθάνοιχτα’ (Θεσσαλία KENΔΙ)
ε. ακριόκουτσος ‘αυτός που μόλις κουτσαίνει’ (Πελ/νησος)
στ. ακριοσκύφτω ‘σκύβω ελαφρώς’ (Πελ/νησος)

Από τα παραπάνω φαίνεται ότι η παρουσία σχηματισμών ανεξαρτήτως παραγωγικότητας αποτελεί ένδειξη ότι αυτό το στοιχείο πρέπει να πέρασε συλλογικά στις διαλέκτους της νέας ελληνικής. Σε μερικές από αυτές, κυρίως στις νότιες διαλέκτους ενδυναμώθηκε και εξελίχθηκε σε πρόθημα, και σε άλλες απορρίφθηκε.

3. Συζήτηση

Από όσα αναφέρθηκαν προηγουμένως προκύπτει πως το *ακρο-* είναι ένα στοιχείο του οποίου η γραμματική ταυτότητα μεταβλήθηκε, καθώς κινήθηκε από το επίπεδο της σύνθεσης στο επίπεδο της παραγωγής. Η περαιτέρω μορφολογικοποίησή του είναι μία διαδικασία η οποία εφαρμόστηκε σταδιακά. Τα πρώτα δείγματα κατεύθυνσης προς τη σημασία της ποσοτικής μεταβολής απαντούν στην αρχαία ελληνική. Η ποσοτική μεταβολή ενισχύεται περαιτέρω στην ελληνιστική και στα πρώτα στάδια της μεσαιωνικής, αλλά το στοιχείο αυτό γίνεται πρόθημα μόλις στην όψιμη μεσαιωνική περίοδο. Από την πορεία αυτή μπορεί κανείς να συμπεράνει πως η αλλαγή της σημασίας δεν είναι ικανή, αλλά αναγκαία συνθήκη για την αλλαγή γραμματικής κατηγορίας. Για την αποκατηγοριοποίηση ενός στοιχείου είναι απαραίτητη η απώλεια των λεξικών του χαρακτηριστικών γεγονός το οποίο αποδεικνύεται από την απώλεια των δομικών σχέσεων

μεταξύ των δύο συστατικών και την απώλεια επιλογικών περιορισμών βάσης.

Το ερώτημα που ανακύπτει είναι κατά πόσο τα κριτήρια αυτά είναι ισχυρές αποδείξεις προθηματοποίησης αν εξακολουθούν να απαντούν δομές με την πρωτοτυπική – λεξική σημασία. Στα δεδομένα μας, αν και η λεξική σημασία *ακρο-* βρίσκεται σε φθίνουσα πορεία, εξακολουθεί να υπάρχει (π.χ. *ἀκρόνυχον* ‘η άκρη του νυχιού’ μsn Trapp ή *ακρόδωμα* ‘η άκρη του δώματος’ Κρητική διάλεκτος Ξανθινάκης).

Μία πρώτη απάντηση δίνεται από τους Amiot & De Mulder (2002) οι οποίοι μελετώντας τις προθέσεις της γαλλικής σε αντιπαραβολή με τα αντίστοιχα προθήματα διαπιστώνουν πως αν οι σημασίες των προθέσεων και των αντίστοιχων προθημάτων δεν είναι αντιστοιχίζονται απόλυτα, τότε αποδεικνύεται η διακριτή λειτουργία των προθημάτων στη διαδικασία σχηματισμού λέξεων. Αρκεί λοιπόν μόνο μία σημασία διαφορετική για να μιλήσει κανείς για λειτουργική διαφοροποίηση;

Υποστηρίζοντας αυτήν την άποψη θα ήθελα να προσθέσω πως για να πιστοποιηθεί η λειτουργική αυτή διαφορά το στοιχείο που φέρει τη νέα σημασία θα πρέπει να χαρακτηρίζεται από *μορφολογική δημιουργικότητα* (*morphological creativity*). Σύμφωνα με τον Schultink (1961) ένα στοιχείο είναι μορφολογικά δημιουργικό όταν έχει τη δυνατότητα να κατασκευάζει συνειδητά νέες δομές, αντίθετα με τα παραγωγικά στοιχεία που σχηματίζουν ασυνείδητα νέες δομές. Οι σχηματισμοί των μορφολογικά δημιουργικών στοιχείων, σύμφωνα με τη Lieber (1992), ηχούν στα αυτιά των ομιλητών «παράξενοι», ακριβώς επειδή είναι μαρκαρισμένοι, και παράγονται σε επιφανειακό επίπεδο (Baeskow 2004). Επεκτείνοντας τη θέση αυτή οι Ralli & Dimela (in print) σημειώνουν ότι το μορφολογικά δημιουργικό στοιχείο δημιουργεί ένα περιβάλλον στο οποίο επιφανειακά λειτουργεί με άλλη ιδιότητα από αυτήν που κανονικά έχει. Αναφέρονται δηλαδή σε ένα στοιχείο (σα- στις διαλέκτους Α. Λέσβου, Αϊβαλιού & Μοσχονησίων) που βρίσκεται σε μεταβατικό στάδιο ανάμεσα σε σύνθεση και προθηματοποίηση και σε ένα συγκεκριμένο περιβάλλον αποκτά εικονικά ιδιότητες προθήματος. Όμοια και το *ακρο-* μέχρι την όψιμη μεσαιωνική δημιουργεί συστηματικά σχηματισμούς με τη νέα σημασία, οι οποίοι είναι μόνο επιθετικοί. Επομένως, ως μορφολογικά δημιουργικό στοιχείο έχει δημιουργήσει ένα νέο συγκεκριμένο μορφολογικό περιβάλλον στο οποίο λειτουργεί ως πρόθημα χωρίς όμως ακόμα να έχει χάσει τη λεξική του ακεραιότητα. Χάνει τη λεξική του ακεραιότητα μόνο όταν οι δομές που παράγονται είναι πια ασυνείδητες και συχνές και ως παραγωγικό πια στοιχείο διευρύνει τις βάσεις με τις οποίες συνδυάζεται.

Το συμπέρασμα που προκύπτει είναι πως η σημασιολογική μεταβολή κινητοποιεί τη διαδικασία γραμματικοποίησης, αλλά δεν μπορεί να τη φέρει εις πέρας. Για να περατωθεί η διαδικασία το στοιχείο πρέπει να

χαρακτηρίζεται από μορφολογική δημιουργικότητα και εν συνεχεία από παραγωγικότητα προκειμένου η νέα σημασία να εδραιωθεί. Όταν αυτό επιτευχθεί παρατηρείται απώλεια των δομικών σχέσεων μεταξύ των συνθετικών και εξάπλωση των λειτουργιών του. Σ' αυτό λοιπόν το πλαίσιο η μορφολογική δημιουργικότητα μπορεί να ιδωθεί ως το τελευταίο «κάστρο» που πρέπει να πέσει για να φτάσει ένα στοιχείο στο τελευταίο στάδιο γραμματικοποίησής του.

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The Grammaticalization of Future in Greek and Bulgarian

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Summary: The grammaticalization of the future tense in Modern Greek and Modern Bulgarian was developed through a volitional verb. The large amount of common stages in the grammaticalization processes in both languages allows us to count on language contact in order to deal with this case. The main aim of this paper is to describe and compare the stages of the grammaticalization of future in both languages in order to reach conclusions regarding the role of language contact, the Balkan Sprachbund of which Modern Greek and Modern Bulgarian form parts and the characteristics of grammaticalization in the cases under examination.¹

1. The grammaticalization process of *tha* in Greek

The loss of the synthetic future of Ancient Greek resulted in the expression of future in many ways, like periphrases (*mellō* “about to be”, *opheilō* “owe”, *ekhō* “have”, *thelō* “want” + infinitive) or other verb forms (e.g. aorist subjunctive, present indicative) according to most researchers (Browning 1983, Horrocks 1997, Pappas 2001). Nevertheless, the volitional periphrasis with *thelo*² was the one that prevailed and underwent a number of grammaticalization processes.

The grammaticalization of *thelo* includes many stages which can be presented in the following way. First, the structure *thelo* + infinitive turns into *thelo* + finite verb, due to the loss of the final *n* which led to the homophony between the infinitive and the present tense third person singular: *thelo γράφειν* → *thelo γράφει* “I will write”. Consequently, the infinitive is reanalyzed as third person singular and is replaced by a finite verb in the other persons: *theli γράφει* → *thelo γράφο*. Moreover, as the infinitive becomes weaker, it is generally substituted by finite verb complementary clauses. In the case of *thelo* the complementary clauses are introduced by the complementizer *(i)na*, e.g. *thelo γράφει* → *thelo (i)na γράφο*.

¹ I would like to thank ms. Venelina Stavridopoulou, a phd student at the University of Athens, for her help with the Bulgarian examples in this paper.

² Regarding the transliteration of Greek words here, the Greek letter γ (gamma) is used for the IPA symbol /ɣ/, x is used for the IPA symbol /x/, the letter δ (delta) is used for the IPA symbol /ð/ and θ (theta) is used for the IPA symbol /θ/. Furthermore, the stress on vowels will not be used, unless a word is stressed in the antepenult or the ultimate syllable.

Second, the need for distinction between the lexical and the grammatical *thelo*, the reinforcement of the grammaticality of the latter and the restriction of the redundant person marking made the verb “freeze” in the third person singular (Pappas & Joseph 2002:252): *theli yrafo* / *theli na yrafo*.

Third, the invariant *theli* undergoes phonological reduction possibly due to its closer connection to the finite verb and to fast speech phenomena according to Joseph (2001:181): *the yrafo* / *the na yrafo*.

Fourth, the particle *the* becomes even more connected to the finite verb due to the fact that it gets fused with the complementizer *na* (Joseph 2001):

the na yrafo → *tha na yrafo* (assimilation)
 → *tha n' yrafo* (apocope and analogy to such forms as *tha n' ayorazo*)
 → *tha yrafo* (elision)

Simultaneously, the structure *the yrafo* that co-existed for some time with *the na yrafo*, is abandoned, most likely due to the fact that it still resembled the lexical *thelo* in its third person singular variant.

Schematically, we can view the grammaticalization of *thelo* in Medieval and Modern Greek in the following way:

| FORM | CHANGE |
|--|--|
| 1) <i>thelo yrafin</i> | auxiliation of <i>thelo</i> with future reference |
| 2) <i>thelo yrafi</i> / <i>theli yrafi</i> | loss of final <i>n</i> |
| 3) i) <i>thelo yrafo</i> | reanalysis of the infinitive as 3 rd person singular |
| ii) <i>thelo (i)na yrafo</i> | substitution of the infinitive by finite clause |
| 4) <i>theli yrafo</i> / <i>theli (i)na yrafo</i> | freezing of the 3 rd person singular, redundant marking restriction |
| 5) <i>the yrafo</i> / <i>the na yrafo</i> | phonological reduction |
| 6) <i>tha na yrafo</i> / <i>*than yrafo</i> | intermediate forms |
| <i>tha yrafo</i> | final stage: particle + finite verb |

Table 1: The grammaticalization process in Greek

2. The grammaticalization process of *šte* in Bulgarian

Like Ancient Greek, Proto-Bulgarian had a synthetic future (for perfective verbs; Ivanova-Mirčeva & Xaralampiev 1999, in Willis 2008). The loss of this verbal form led to marking future through the present tense (Heine & Kuteva 2005:191) and periphrastic structures with verbs and

infinitives. Similarly to Greek, the volitional periphrasis with *xotěti* prevailed and the other verbs were abandoned (e.g. *načati* “begin” and *iměti* “have”, Manova 2006), except for the case of the negative future which is still formed with the verb *iměti*, as the third person singular *njama* (literally “does not have”) is used with the particle *da* and a finite verb in the present tense, e.g. *njama da četa* = “I will not read” (Kramer 1998).

The grammaticalization process of *xotěti* includes the following stages. First, the volitional verb *xotěti* undergoes phonological reduction, as it loses its initial syllable due to its increased grammatical function which resulted in forming all the persons of the verb with the stem *št-*. E.g. *šta pišati* “I will write”:

| | OLD BULGARIAN | MODERN BULGARIAN |
|------------------------|---------------|------------------|
| 1 st sing. | xoštŏ | šta |
| 2 nd sing. | xošteši | šteš |
| 3 rd sing. | xošetŭ | šte |
| 1 st plural | xoštemŭ | štem |
| 2 nd plural | xoštete | štete |
| 3 rd plural | xotetŭ | štat |

Table 2: The phonological change of *xotěti*

Second, the infinitive undergoes phonological reduction as well, as it loses the ending *-ti*. Consequently, the infinitive, which already lies in decline, is now identical to some finite verb forms, e.g. *xoditi* (“go”) → *xodi* = *xodi*, third singular perfective (Joseph 1983:121)³. E.g. *šta piša*.

Third, this phonological weakness of the infinitive leads to its substitution by a finite clause introduced by the complementizer *da*. However, the structure *šta* + finite verb is also possible, e.g. *šta da piša* or *šta piša*.

Fourth, the volitional verb “freezes” in the third person singular due to its pure grammatical function and the elimination of redundant person marking: *šte (da) piša*.

Finally, the particle *da* is completely omitted and the future tense is formed by the structure *šte* + finite verb, e.g. *šte piša*.

Schematically, we can view the stages of the grammaticalization of the future tense in Bulgarian in the following way:

FORM

CHANGE

³ This change according to Mladenov (1929, in Joseph 1983) occurred due to the loss of the final *i*, e.g. *videti* (“see”) → *videt* and later the loss of the final *t*.

| | |
|---------------------------|---|
| 1) xotěti pišati | use of the volitional verb with future reference |
| 2) šta pišati | phonological reduction of the auxiliary verb |
| 3) šta piša infinitive | phonological reduction of the |
| 4) i) šta da piša | substitution of the short infinitive by a finite clause |
| ii) šta piša | omission of the finite clause conjunction |
| 5) šte da piša | the grammaticalized verb “freezes” in the 3 rd person singular |
| 6) šte piša | final stage: particle + finite verb |

Table 3: The grammaticalization process of xotěti

3. Comparison of the two cases

3.1 Comparison of the grammaticalization processes in Greek and Bulgarian

According to the above, there can be traced a few common points in the grammaticalization of the future in the two languages:

1. The volitional verb is used with future reference and displaces the “have” periphrasis
2. The structure verb + infinitive is substituted by the structure verb + verb or verb + particle + verb
3. The auxiliary verb “freezes” in the 3rd person singular
4. The grammaticalized verb/ particle undergoes phonological reduction
5. Final stage of grammaticalization: monosyllabic particle + verb

Simultaneously, a few more elements that we can point out are the following:

1. The future is initially marked by the present tense and various periphrases (*ekhō/ mellō/ opheilō* + infinitive, *načati/ iměti* + infinitive). The volitional periphrasis prevails.
2. Great variety of possible constructions: i) *šta* + short infinitive, short infinitive + *šta*, *šta* + (*da*) + finite verb, *šte* + *da* + finite verb in Bulgarian, ii) *thelo na γrafo, the na γrafo, tha na γrafo, thelo γrafo* in Greek (Tsangalidis 1999).

3. Strong dialectal variation: e.g. the forms *ša, šă, še, ši, ce, ke, za, sa, să, š* in the Bulgarian dialects (Heine & Kuteva 2005) and the contemporary use of *θe na* + verb in Greek dialects until the 20th c. (Tsangalidis 1999:148) or of the constructions *θelo* + verb/ *θe* + verb until the 19th c. (Joseph 1990).
4. The imperfective past form of the verb is used to express future in past, epistemic and counterfactual modalities: *íθela / xăštěaxă*
5. Regarding the syntactic relation between the particle and the verb, both languages are in the same level, as only object pronouns can be interpolated between the grammaticalized particle and the finite verb: *θa to đjavaso / šte go četa* “I will read it”.

Nevertheless, we can trace a few differences between the two cases as well:

1. Bulgarian maintained the “have” periphrasis in the negative future, while Greek has totally abandoned it, except for sporadic cases in which it is used for something imminent: e.g. *ti exi na ģini* “what is going to/ about to happen”.
2. In Bulgarian the volitional verb underwent phonological reduction before it “froze” in the third person singular, while in Greek this occurs only when it has already turned into an invariant particle. This can be explained by the fact that in Bulgarian the verb *xotěti* lost entirely its lexical meaning, while *θelo* maintained both meanings.
3. In Greek the invariant particle *θe* and the complementizer *na* are fused, while in Bulgarian it can be said that *da* is simply omitted. The lexical use of *θelo* seems to be the key factor in this, as *θe* maybe had to undergo further changes in order to be fully distinct from the lexical *θe* which co-existed as an alternate short form of *θeli*, just like *θes* and *θelis* in the second person singular (Markopoulos 2005), e.g. *θe na pao : θeli/ θe na pao*.
4. In Bulgarian the grammaticalization of the past form of the volitional verb is still in a primary stage, since a full finite verb form is used together with a finite verb clause: *stjax da četa* “I would read” / *šteše da četeš* “You would read” etc.

5. Bulgarian employs the present indicative as a complement of the grammaticalized particle in contrast to Greek, which uses the subjunctive. Thus, aspect is marked in the Bulgarian future tense differently from Greek, which has an imperfective and a perfective future: *θα γράφο* “I will write/ I will be writing (imperfective)” : *θα γράψω* “I will write (once)”.
6. In Greek *θelo* maintained its lexical meaning, while the lexical *xotēti* was substituted by *iska* in Bulgarian (Kramer 1994).

3.2 The functions of the Greek and Bulgarian future

In Greek and Bulgarian the future particles can be used for a number of modalities, mostly epistemic, apart from their pure temporal function. Thus, they can refer to something possible in the present, general truth, inference, iterative or command:

a) Epistemic modality in the present

G: O Janis *tha* ine spiti tora.

B: Ivan *šte* e u doma sega.

“John must be at home now”

b) Inference

G: *Tha* piyeni taksiðja sixná, ja na kseri tosa polá.

B: *Šte* pātuva često za da znae tolkova mnogo nešta.

“He must travel often, because he knows a lot”

c) Iterative

G: Opu ke na pai, *tha* ine evyēnikós.

B: Kădeto i da otide *šte* e učtiv.

“Wherever he goes, he is kind”

d) General truth

G: Enas kalós ánthropos poté ðen *tha* to kani aftó.

B: Edin dobăr čovek nikoga ne *šte* go napravi.

“A good man will never do that”

e) Command

G: *Tha* fiyis tora!

B: *Šte* trăgneš sega!

“Leave now!”

Regarding the past forms, the finite past form of *šte* expresses similar functions to Modern Greek, such as the counterfactual or the avertive (Kuteva 2001), e.g.:

f) Counterfactual

G: An ixes mini, *θα περνάγαμε καλά*.

B: Ako beše ostanal, *štjaxme da prekarame dobre*.

“If you had stayed, we would have had fun”

h) Avertive

G: *Θα έσπαζα το δodi mu!*

B: *Štjax da si izkărtja edin zăb!*

“I almost broke my tooth!”

4. Discussion

According to the above data, we can focus on a few important issues regarding the relationship between the two languages about the grammaticalization of future. Thus, it can be claimed that the Greek future tense is a more grammaticalized category. This can be shown in the survival of the negative “have” future in Bulgarian and the fact that the volitional verb has not been cliticized in the counterfactual structures of Bulgarian.

Moreover, the grammaticalization of the Greek future tense precedes chronologically the Bulgarian one. We can see that in the following table (Joseph 1990, Tsangalidis 1999, Heine & Kuteva 2005):

| | GREEK | BULGARIAN |
|---------------------------------------|--|--|
| V + infinitive | Byzantine period | Old Bulgarian period |
| V + (compl.) + V | 10 th c. | 14 th c. |
| 3 rd sing V + (compl.) + V | 12 th - 14 th c. | 14 th - 15 th c. |
| particle + V | 16 th c. | 16 th c. |

Table 4: Timeline of the grammaticalization processes in Greek and Bulgarian

We can also assume that there is constant contact between the two languages, given the fact that they undergo nearly the same stages. Moreover, there cannot be excluded a continuous interaction between them, as it is very hard to generally claim that the Balkan Sprachbund phenomena come from only one source (Sandfeld 1930, Joseph 1983).

The fact that Bulgarian maintains the negative future with *njama* allows us to assume that in Old Bulgarian the “have” periphrasis was the strongest and most common form of future reference. In later stages, under

the influence of language contact with Greek the volitional periphrasis overcame the periphrasis with *iměti* and restricted it in negative clauses.

This hypothesis can be supported by Kramer's claim (1994), according to which the Bulgarian future tense is transitional in the Balkan Sprachbund between Slavic Macedonian, Greek and Albanian on the one hand and Serbo-Croatian and Romanian on the other.

5. Conclusions

According to what has already been mentioned, we can reach the following conclusions. First, the Greek future tense is more grammaticalized than the Bulgarian one. This allows to consider that the grammaticalization of *thelo* began earlier than *xotěti* and that the former had a strong influence on the development of the latter.

Second, we can claim that the most important characteristic of the grammaticalization of the future tense in the Balkan Sprachbund is the replacement of the infinitive by finite clauses. Had this not happened, the change of the volitional verb to a particle would have been nearly impossible, due to the strong person marking in Balkan languages.

Third, the maintenance of the lexical *thelo* is a very important factor in the grammaticalization process of *θα*, as it gets clear that the presence of lexical *thelo* led the grammaticalized *thelo* to constant changes until the latter was fully distinguished from the former.

Concisely, the following table can show us the grammaticalization process in both languages:

| | GREEK | BULGARIAN |
|---|--|-----------------------------------|
| initial structure: volitional verb + infinitive | <i>thelo γrafin</i> | <i>xoštŏ videti</i> |
| phonological reduction of the auxiliary | - | <i>šta videti</i> |
| loss of the infinitive ending | <i>thelo γrafi / θeli γrafi</i> | <i>šta vide</i> |
| replacement of the infinitive by the structure verb + (particle) + verb | <i>thelo (i)na γrafo / thelo γrafo</i> | <i>šta da četa / šta četa</i> |
| the verb «freezes» in the 3 rd person singular | <i>theli γrafo / θeli na γrafo</i> | <i>šte da četa</i> |
| phonological reduction of the 3 rd person auxiliary | <i>θe γrafo / θe na γrafo</i> | - |
| final structure: particle + verb | <i>θα γrafo</i> | <i>šte četa</i> |

Table 5: The stages of the grammaticalization of future in Greek and Bulgarian:

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Pronunciation teaching to Greek EFL students: A pilot study

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Abstract

Second language phonological acquisition and its relation to the effectiveness of pronunciation instruction constitute fields scarcely researched within the area of second and foreign language (L2/ FL) acquisition, especially with regard to the Greek context. This paper reports the findings of a pilot study on the effectiveness of pronunciation teaching to twelve Greek state school students of three different ages (10, 13 and 15 years old). In particular it examines the production of selected durational parameters of stop voicing in English L2, i.e. VOT of word initial /p, t, k/ and /b, d, g/. The study is based on pre- and post-intervention recordings of students' speech samples and subsequent acoustic analyses. A control group of twelve students who received no particular pronunciation training and followed the regular school programme was also recorded. The study explores the following questions:

1. Is pronunciation teaching to children effective in a foreign language environment?
2. Does age play a role in the acquisition of pronunciation in a classroom environment?
3. Are some phonological features acquired more successfully than others?

The results suggest that there is a positive effect of strategically-planned pronunciation teaching to students' stop production. Pronunciation teaching seems to be applicable and effective and could be integrated into EFL curricula in Greece.

Key words: pronunciation teaching, phonological acquisition, English L2.

1. Introduction.

1.1. Review of research on pronunciation teaching.

This article presents part of the results of a pilot study on the effectiveness of pronunciation teaching to Greek EFL learners of ten, thirteen and fifteen years old by examining the production of aspirated /p, t, k/ and the devoicing of /b, d, g/.

Pronunciation instruction constitutes a field which has received interest only in the last few years. Goodwin, Brinton and Celce-Murcia (1994: 5) observe that 'the teaching of pronunciation has at times been considered almost a luxury in the ESL/ EFL curriculum, unlike reading, writing, listening and general speaking fluency'. Derwing and Murno (2005: 379) support that 'the study of pronunciation has been marginalized... as a result, teachers are often left to rely on their own intuitions with little direction'. This observation is confirmed by Pardo's (2004) review of studies on teachers' attitude to pronunciation teaching, in which he concludes that many teachers are unsure of the effectiveness of pronunciation for intelligibility and communication.

A central question is therefore whether pronunciation can be effectively taught. Pardo (2004) reviews 25 studies on the effect of pronunciation instruction and concludes with the following implications for teaching: first, there is a positive effect of well-planned, quality pronunciation training (out of the 25 studies reviewed, 23 reported improved pronunciation after instruction); second, use should be made of specific teaching techniques; pronunciation is not simply 'picked-up'. It is important to stress at this point that the vast majority of the studies reviewed by Pardo involved immigrant population and students who lived in a target-language community, since they examined phonological acquisition that occurs in an environment where the target-language is the main means of communication.

Empirical research on pronunciation instruction which occurs in a formal setting also seems to confirm the positive effect of pronunciation teaching (Ekstrand 1982, Olson and Samuels 1982, Thogmartin 1982). Regarding the role of learners' age, contrary to what appears to happen in naturalistic L2 settings, where younger learners have an advantage over older learners in terms of pronunciation ability, research on phonological acquisition that takes place in a foreign language environment tentatively suggests that older students are better at acquiring target-language pronunciation than younger students.

1.2. Theories of phonological acquisition.

A number of theoretical frameworks have attempted to explain the nature of second language acquisition and to shed light to the processes through which it is accomplished. The results of the present study will be interpreted in relation to two theoretical frameworks of phonological acquisition, namely the *Markedness Theory* and Flege's *Speech Learning Model* (SLM).

Theories of markedness employ a distinction between unmarked and marked phenomena. According to Eckman (1987: 60) a phenomenon A is more marked than B if the presence of A in a language implies the presence of B, but not necessarily vice versa. Such theoretical models suggest that

unmarked phenomena, for example the voiceless stops, will be easier to acquire and will appear earlier in the acquisition sequence than marked phenomena, such as aspiration.

Other theoretical models suggest that the process of acquisition of an L2 sound is determined by the degree of phonetic similarity the particular L2 sound bears to an L1 sound. A distinction employed by many linguists is that of ‘new’ versus ‘similar’ sounds; ‘new’ are the L2 sounds which are not found in the phonological repertoire of L1, whereas the L2 sounds which bear some degree of phonetic similarity to L1 sounds are considered ‘similar’ to them. Flege deals extensively with the new versus similar sounds in his *Speech Learning Model* (SLM). According to Flege (1986, 1997), *equivalence classification* is a cognitive mechanism, due to which learners fail to develop accurate perceptual targets for L2 sounds with a direct counterpart in L1 (Flege 1991: 251). This means that L2 learners can produce and perceive new sounds faster and more accurately than sounds similar to L1 ones. For the present study, we follow Flege and Hillenbrand’s (1987: 187-188) arguments and assume that the acquisition of word initial stops involves a similar contrast.

1.3. Differences between the Greek and English stop system.

The Greek consonant system comprises two series of plosives which differ according to voicing (there are fully voiced and voiceless plosives), as for example the initial segments in the words ‘παίζω’, ‘τέρμα’, ‘κάνω’, ‘μπάλα’, ‘ντύνω’, ‘γκάμα’. In Greek, stops occur word-initially and medially but not word finally.

The English consonant system comprises two series of plosives, however, VOT¹ distinguishes ‘voiced’ from ‘voiceless’ stops in word initial and final positions; voiceless stops are strongly aspirated² in stressed syllables before vowels, for example as in the words ‘take’, ‘puzzle’, ‘come’, whereas voiced stops are usually devoiced and unaspirated, as in the words ‘bag’, ‘game’, ‘daughter’.

It follows from the above description that in this study pronunciation teaching comprised practice on how students can a) produce aspiration and b) devoice word initial stops.

¹ VOT is the time interval between the articulatory release of the stop and the onset of vocal folds vibration (Abramson and Lisker 1970, Lisker and Abramson 1964). The onset of voicing may precede the release of stops, as in Greek /b, d, g/ sounds, or may follow the release, as in Greek and English /p, t, k/ sounds.

² Aspiration is a term which refers to the voiceless noise interval between the release of the stop and the onset of glottal vibration and it sounds like a puff of air, as for example in the English words: ‘pie’, ‘tale’, ‘cat’.

2. Questions of the study.

The present research aims at exploring the following questions:

1. Is pronunciation teaching to children effective in a foreign language (FL) environment?
2. Does age play a role in the acquisition of pronunciation in a foreign language environment? For example, are students of younger age more favourably predisposed to acquiring FL pronunciation, as happens in naturalistic second language settings?
3. Are some phonological features acquired more successfully than others? To what extent are the theoretical models discussed in the previous section confirmed?

3. Methodology.

3.1. Subjects.

In the present study two groups of subjects were recorded, an experimental group (n=12), which received pronunciation instruction, and a control group (n=12) which followed the regular English classes at school. Each group was subdivided into three subgroups comprising students of three different ages. In particular, the students who were recorded in each group were: 4 ten-year old students/ age group A (4th grade of the Primary School), 4 thirteen-year old students/ age group B (1st grade of Gymnasium), 4 fifteen-year old students/ age group C (3rd grade of Gymnasium). The particular ages have been selected so as to capture, as far as possible, the ages which have been claimed to represent the end of the critical or sensitive period for native-like mastery of pronunciation in naturalistic second-language settings (age 6 according to Long 1990, age 12 according to Scovel 1988, age 16 according to Patkowski 1990). It would be interesting to see if a similar effect of age is also observed in foreign-language contexts, in settings where students are not exposed to the target language in their everyday life but learn it in a formal environment, such as a school or a language institute; and this is the case examined in the present experiment. The youngest age examined in this study does not coincide with the earliest suggested end of the sensitive period, because under the Greek educational system the teaching of English begins at the age of 9 (3rd grade of primary school) and not earlier.

All students began learning English at around the age of 9. None of the 24 children examined reported having been taught the English pronunciation before the study. The students of the experimental group received 12 lessons of pronunciation instruction on English stops and speech rhythm. Each lesson lasted from 20-40 minutes. The pronunciation lessons were taught by

the researcher, who was also the main English teacher of the Gymnasium classes. The framework of pronunciation teaching which is used in the present study is adopted from Celce-Murcia, Brinton and Goodwin (1996), who propose five teaching stages for pronunciation teaching which move away from controlled to free activities.

Additional recordings were also made by six native Greek and six native English children (two children of each age group) on their L1 production.

3.2. Speech materials/ recording procedure/data analysis.

Recordings of students' speech samples were made twice, before and after the teaching intervention (Time 1 and Time 2 respectively). During the recordings, which took place in a quiet room in students' schools, the speakers were asked to read a list of words (for English: 'pack', 'tab', 'cab', 'bag', 'dab', 'gab'; for Greek : 'πάσα' /'pasa/, 'τάσα' /'tasa/, 'κάσα' /'kasa/, 'μπάλα' /'bala/, 'γκάμα' /'gama/, 'ντάμα' /'dama/) embedded in carrier phrases (' Say ____ again to John' and '____λέω πάλι'). Each sentence was repeated ten times and for the purposes of this study, three repetitions of each word were measured. The sentences were analysed acoustically with the use of waveforms and digital spectrograms generated by the speech analysis software *PRAAT* (Boersma and Weenink 2003).

4. Results.

4.1. Initial voiceless stops.

The following graph shows the results on the production of /p, t, k/ stops in Greek and English L1 by the native Greek and native English subjects respectively.

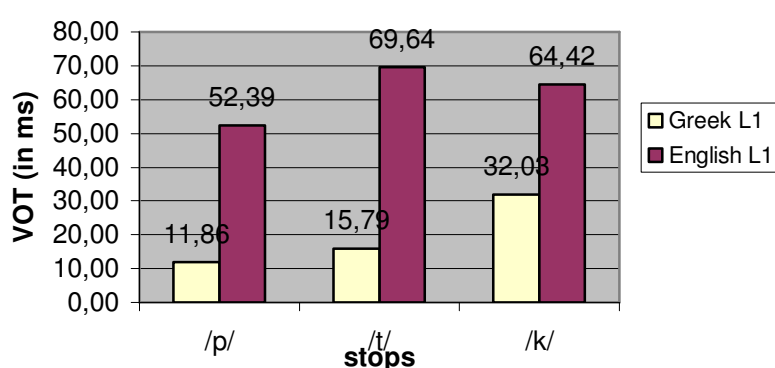


Figure 1. Mean VOT (in ms) for initial /p, t, k/ in Greek and English L1

Our results agree with previous descriptions of Greek and English, since it is clear that Greek displays unaspirated /p, t, k/ with very short VOT values, whereas English displays aspirated voiceless stops with long VOT. This observation is also confirmed by the paired-sample T-Test, which show that the difference in VOT between the Greek and English stops is statistically significant ($p < 0.05$) for all places of articulation and all age groups.

The following figures show the VOT results for the students of the control and the experimental groups before and after the teaching intervention.

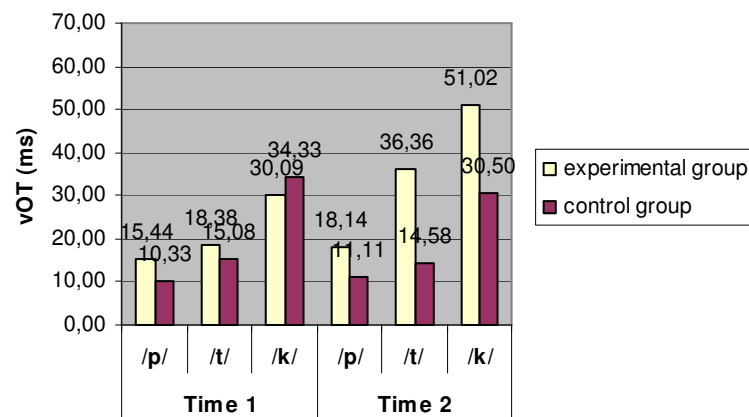


Figure 2. VOT for voiceless stops for Age Group A at Time 1 and 2

This graph displays the VOT for English voiceless stops produced by the 10-year old groups at Time 1, before the teaching intervention, and at Time 2, after the teaching intervention. It can be observed that before the teaching intervention, there is no big difference between the groups, since both groups produce unaspirated Greek-like /p, t, k/. After the teaching intervention, however, the experimental group, which is the group that received the teaching intervention, produced longer VOT values for /t/ and /k/ than the control group which received no pronunciation teaching. The T-Tests support these observations, since no statistically significant difference is found in the VOT values of the control group at times 1 and 2, however for the experimental group there is a statistically significant difference in the production of /k/ sound ($p < 0.00$).

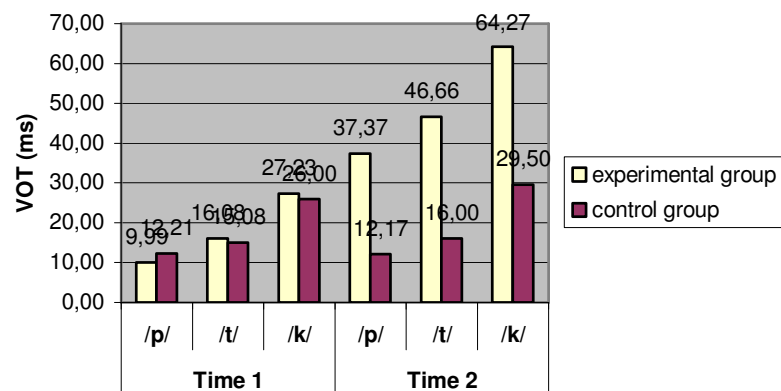


Figure 3. VOT for voiceless stops for Age Group B at Time 1 and 2. Figure 3 shows the results of the production of English /p, t, k/ by the 13-year old students before and after the teaching intervention. It is clear that at Time 1 both groups produce unaspirated stops for all places of articulation and the differences between the groups are very small. The results for Time 2 show that the group which received pronunciation instruction outperformed the control group and showed a considerable improvement in aspiration for all places of articulation. For this group the VOT values for /t/ and /p/ are intermediate between the Greek and English L1 values, whereas the VOT values for /k/ completely overlap with the English values. The T-tests show that the control group did not produce statistically significant VOT values at Time 1 and 2, however, for the experimental group there is a statistically significant difference for /k/ and also a marginal difference ($p < 0.1$) for /p/ and /t/.

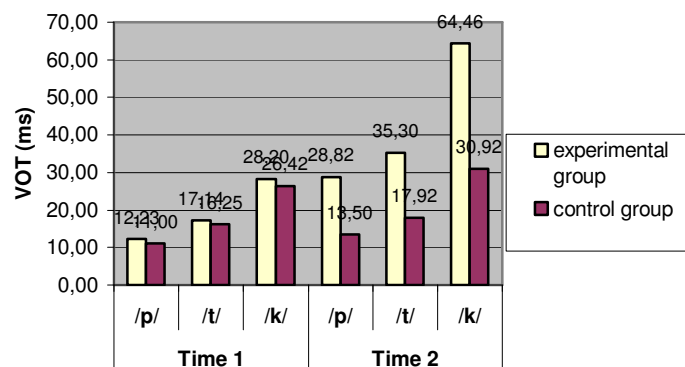


Figure 4. VOT for voiceless stops for Age Group C at Time 1 and 2

Figure 4 displays the results of the 15-year-old students. As happened with the younger groups, these age groups also produce unaspirated Greek-

like stops for all places of articulation before the teaching intervention. This is surprising, because despite the years of experience to the foreign language, as all subjects had been learning English since the age of 9, their VOT values are not different from the VOT values displayed by the younger groups prior to the teaching intervention. At Time 2 the group which received pronunciation teaching showed a statistically significant improvement in the production of voiceless stops ($p < 0.05$ for /t/ and /k/). As with group B, the experimental group C also produced native like VOT values for sound /k/.

Summarising the results for the production of English voiceless stops, it can be concluded that the experimental groups of all ages showed an improvement for stops of all places of articulation after the teaching intervention. The only exception is the sound /p/ of age group A where a big improvement was not observed. In all other cases, the values exhibited after the teaching intervention were intermediate between Greek and English. It is worth mentioning, too, that groups B and C displayed target-like VOT values for sound /k/ which is an important finding since it shows that native-like competence for similar sounds is an achievable goal contrary to Flege's *Speech Learning Model* that predicts imperfect realization of similar sounds due to equivalence classification.

In order to determine which age group showed the biggest improvement, we conducted a one-way ANOVA where we compared the differences in the VOT for all three stops across the three age groups at Time 1 and 2. The results of the ANOVA show that the age group B displays the biggest improvement in the production of all three stops compared to groups A and C. However, the post hoc analyses showed that the difference is not statistically significant ($p > 0.05$).

4.2. Initial voiced stops

This section presents the results on the production of word initial voiced stops. The following graph shows the VOT values displayed by the native Greek and native English group.

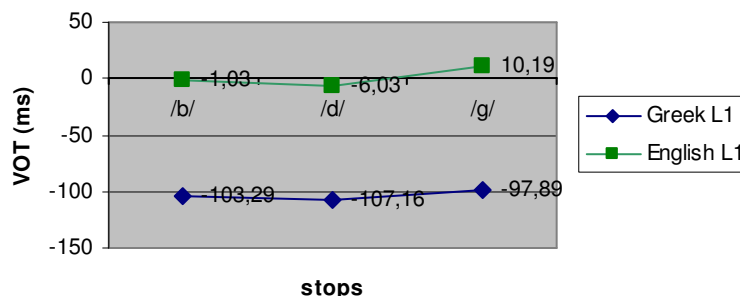


Figure 5. Greek and English L1: mean VOT for word initial voiced stops

In accordance with literature, Greek displays fully voiced /b, d, g/ at word initial position. In English, on the other hand, /b, d, g/, are produced weakly voiced or voiceless with short VOT.

The following table shows the English VOT values of the control and experimental groups for each age before and after the teaching intervention. It also displays the voiced part of partially voiced stops, as well as the number of subjects who produce partially voiced stops. The results indicate that for the production of voiced stops, there was no improvement for the control groups of all ages, since the subjects produced fully voiced Greek-like stops both at Time 1 and at Time 2.

| | | Control Group, Time 1 | Control Group, Time 2 | Experimental Group, Time 1 | Experimental Group, Time 2 |
|-------------|-----------------|-----------------------|-----------------------|----------------------------|----------------------------|
| | | | | | |
| Age Group A | /b/ | -138,4 | -128,5 | -124,4 | -99,6 |
| | /d/ | -124,2 | -111,1 | -119,8 | -87,3 |
| | Voiced part /d/ | | | | 58,5 (1 subject) |
| | /g/ | -127,9 | -96,8 | -119,8 | -87,3 |
| | Voiced part /g/ | | | | 78 (1 subject) |
| | | | | | |
| Age Group B | /b/ | -112,3 | -102,1 | -121,6 | -114,4 |
| | Voiced part /b/ | | | | 64,1 (3 out of 4 subjects) |
| | /d/ | -99,1 | -98,6 | -104 | -80,5 |
| | Voiced part /d/ | | | | 58 (1 out of 4 subjects) |
| | /g/ | -98,8 | -90,5 | -100,6 | -74,9 |
| | Voiced part /g/ | | | | 54 (2 out of 4 subjects) |
| Age Group C | /b/ | -105,6 | -85 | -115 | -41,1 |
| | Voiced part /b/ | | | | 64 (1 subject) |
| | /d/ | -104,4 | -105,8 | -105,6 | -68,6 |
| | /g/ | -86,4 | -102,3 | -51,9 | -49,8 |

Table 1. VOT for the voiced stops and the voiced part of stops before and after the teaching intervention

For the experimental group A, the mean values after the teaching intervention are negative, denoting voiced stops, however after the teaching intervention one of the four subjects partly devoiced 66% of the repetitions of /d/ and /g/, and also one of the subjects produced devoiced target-like /g/. This shows that some students began to show some improvement, even though this improvement is not depicted in the mean values of the group

results. In group B all four speakers showed some improvement; three out of four subjects partly devoiced /b/ in most repetitions, one out of four subjects partly devoiced /d/ at 33% of the repetitions and two out of four subjects produced partly voiced /g/ at 33% of the repetitions. As for the experimental age group C, after the instruction the VOT values were reduced, showing a tendency of students to control voicing and produce more target-like /b, d, g/. In particular, two out of four subjects produced voiceless target-like /b/, and one subject partly devoiced 33% of the repetitions for /b/. Also, one out of four subjects devoiced all three stops at initial position, which shows that this speaker has learned the target-like production for English /b, d, g/.

5. Discussion.

This section will be unfolded in relation to the questions posed at the beginning of the study. The first question refers to the effectiveness of pronunciation teaching in a FL environment. The results of the present study suggest that strategically planned pronunciation teaching seems to be effective with children and teenagers even in a FL environment, despite all the limitations that characterize it (for example, lack of interaction in the target language outside the classroom, non-native teachers, limited amount of exposure and practice). It has been shown that even though the teaching intervention was rather short (only 12 mini-lessons that lasted 20-40 minutes), students' pronunciation improved in both features that they were taught, namely the aspiration of /p, t, k/ and devoicing of /b, d, g/. On the other hand, as expected, the groups who did not receive specific pronunciation instruction showed no improvement at all in their pronunciation.

The second question is related to the role that student's age plays in the learning of English pronunciation. Our results show that contrary to what happens in naturalistic settings, the students of younger ages do not acquire English pronunciation easier or faster than older students. This study suggests that the 13-year-old students showed the biggest improvement in pronunciation. In particular, they displayed the biggest improvement of all groups in the production of aspirated stops and also all speakers of the group showed some tendency to produce target-like voiced stops. A possible explanation could be on the one hand the cognitive development of the 13-year-old students, which may explain the advantage over the younger group; on the other hand, we can hypothesize that fossilization has not occurred in their speech yet, therefore their pronunciation was subject to change as a result of the teaching intervention. Regarding the oldest group, the effect of fossilization possibly hindered them from displaying the biggest improvement in pronunciation, despite their greater cognitive development and maturity.

The third question asks if some phonological features are acquired more successfully than others. In the present research aspiration was the feature that showed the biggest improvement of the pronunciation features that were taught. With the exception of the bilabial voiceless plosive for group A, VOT increased at all groups for all places of articulation. Also, according to the teacher's diary, aspiration was the first feature to be learnt compared with stop devoicing. Some tentative explanations could be the perceptual salience of aspiration, or the fact that aspiration might be easier to demonstrate with visual aids while teaching, compared to devoicing.

The final question attempts to relate our results to the theoretical models of phonological acquisition. Our expectation that stop devoicing would be easier to acquire than aspiration due to markedness is not confirmed by our data. Even though aspiration is considered to be a marked feature, it appears easier to learn than an unmarked feature, namely the devoicing of stops. Also, for the majority of stops after the teaching intervention, speakers displayed VOT values which were intermediate between Greek and English, confirming Flege's *Speech Learning Model* which predicts imperfect realization for similar sounds due to the mechanism of equivalence classification. An exception for this, however, is found in the production of sound /k/ by the 13- and 15-year-old subjects, whose L2 production was within the VOT values displayed by the native English group.

6. Conclusion.

The conclusions of this study can be summarized as follows:

1. Aspiration was the first feature to be learnt and showed the biggest improvement compared to stop devoicing.
2. The 13-year-old group showed the biggest improvement in pronunciation, perhaps due to their cognitive maturation and lack of fossilization in their pronunciation.
3. The years of exposure did not result in better pronunciation. The results of the first recordings show that prior to pronunciation instruction, there was no difference in pronunciation among the age groups.
4. There was a considerable effect of pronunciation instruction, even after only 12 pronunciation mini-lessons. This shows that pronunciation teaching seems to be not only applicable but also very effective.
5. In FL contexts improvement in pronunciation appears to be a result of explicit and strategically planned pronunciation instruction. Contrary to what happens in naturalistic settings, the results of the present study suggest that pronunciation is difficult to be acquired in FL contexts unless it is taught; it is not simply 'picked up'.

These conclusions have important implications for planning language curricula and designing language lessons in foreign language contexts.

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Η Ονοματοποίηση στο Γραπτό Λόγο των Μαθητών Κοινωνιογλωσσολογική Προσέγγιση

Αίζα Παϊζή
Πανεπιστήμιο Αθηνών

1. Εισαγωγικά

Στην έρευνά μας μελετάμε μαθητικά γραπτά (εκθέσεις) και επιχειρούμε να καταγράψουμε τις κοινωνιογλωσσικές διαφοροποιήσεις ως προς τη χρήση ορισμένων γλωσσικών δομών που συνδέονται κατεξοχήν με το γραπτό λόγο (γραμματική μεταφορά-ονοματοποίηση, παθητική σύνταξη, λεξική πυκνότητα), με σκοπό να προσεγγίσουμε ερμηνευτικά τις κοινωνιογλωσσικές ανισότητες και τον τρόπο που αυτές αποτυπώνονται στο συγκεκριμένο είδος λόγου.

Στην παρούσα ανακοίνωση θα εστιάσουμε στο τρόπο που μαθητές και μαθήτριες της Α' και Γ' λυκείου, διαφορετικής κοινωνικής προέλευσης, χρησιμοποιούν την ονοματοποίηση (nominalization) στις εκθέσεις τους. Στηριγμένοι σ' ένα σώμα κειμένων, θα μελετήσουμε αν και σε ποιο βαθμό τα γραπτά μαθητών και μαθητριών διαφορετικής κοινωνικής προέλευσης διαφοροποιούνται ως προς τη συγκεκριμένη γλωσσική παράμετρο και θα παρουσιάσουμε τα σχετικά συμπεράσματα.

Με τον όρο ονοματοποίηση (nominalization) εννοούμε τη χρήση ουσιαστικού, προκειμένου να αποδοθεί στην πρόταση το λεξιλογικό περιεχόμενο που πρωτοτυπικά αποδίδεται από άλλη γραμματική κατηγορία, όπως ρήμα, επίθετο κλπ.

(1) «..η ταχύτατη *ανάπτυξη* της τεχνολογίας» (ΑΑ165)¹ αντί για το «η τεχνολογία *αναπτύσσεται* ταχύτατα»

Στην παρούσα έρευνα, βασιζόμαστε στην ανάλυση της ονοματοποίησης έτσι όπως αυτή γίνεται στα πλαίσια της Συστημικής Λειτουργικής Γλωσσολογίας (ΣΛΓ) του Halliday (Halliday & Matthiessen, 2004). Σύμφωνα με αυτήν, η ονοματοποίηση επιφέρει αλλαγές και στα τρία επίπεδα της γλωσσικής οργάνωσης. Στο ιδεοποιητικό-αναπαραστατικό επίπεδο (ideational), διαμορφώνει μια γραμματική ερμηνεία της φυσικής και κοινωνικής πραγματικότητας διαφορετική από αυτήν του προφορικού λόγου, καθώς εξυπηρετεί τη διαμόρφωση τεχνικής ορολογίας και ταξινομιών, τη δημιουργία ισχυρών λογικών συνδέσεων ανάμεσα σε αυτές, και την αφαίρεση. Στο κειμενικό επίπεδο (textual), διαμορφώνει

¹ Όλα τα σχετικά παραδείγματα είναι από το γλωσσικό υλικό της έρευνας. Το σύμβολο αφορά τον τρόπο που είναι αριθμημένα και ταξινομημένα τα κείμενα των μαθητών και των μαθητριών.

πληροφοριακά πυκνά κείμενα, συμπυκνώνοντας το περιεχόμενο σε πιο πυκνές προτάσεις, ενώ ενισχύει τη δυνατότητα θεματοποίησης στοιχείων που δύσκολα θα θεματοποιούνταν εκτός ονοματοποίησης. Στο διαπροσωπικό επίπεδο (interpersonal), συμβάλλει στη μεγιστοποίηση της απόστασης μεταξύ πομπού και δέκτη, καθώς διαμορφώνει ένα ύφος αντικειμενοποιημένο και απρόσωπο (Halliday 1998). Η ονοματοποίηση, σύμφωνα με την προσέγγιση αυτή, θεωρείται η πιο παραγωγική μορφή της γραμματικής μεταφοράς (Halliday 1996), ενώ συνιστά χαρακτηριστικό του λόγου των φυσικών και κοινωνικών επιστημών και του σχολικού λόγου (Halliday και Martin 2004). Παρά το γεγονός όμως ότι αποτελεί ουσιώδες χαρακτηριστικό του λόγου των σχολικών εγχειριδίων και ως εκ τούτου ζητούμενο του λόγου των σχολικών εργασιών, απουσιάζει από τη γλωσσική διδασκαλία. Διδάσκεται αποκλειστικά ως μηχανισμός παραγωγής νέων λέξεων, χωρίς καμιά αναφορά στις σημασιολογικές μεταβολές που επιφέρει στο λόγο η χρήση του (Νεοελληνική Γλώσσα για το γυμνάσιο, τ.Α).

Προκειμένου να ελέγξουμε κατά πόσο οι μαθητές και οι μαθήτριες διαφορετικής κοινωνικής προέλευσης διαφοροποιούνται ως προς τη χρήση του μηχανισμού της ονοματοποίησης στις γραπτές γλωσσικές τους εργασίες, μετρήσαμε τις εμφανίσεις των ουσιαστικών, όταν επρόκειτο για περιπτώσεις ονοματοποίησης. Σύμφωνα με τον ορισμό της γραμματικής μεταφοράς, για την ένταξη της χρήσης ενός ουσιαστικού στην κατηγορία αυτή θεωρήσαμε καθοριστική τη δυνατότητα να επιλεγεί μια ρηματική, επιθετική ή άλλη εκδοχή αντί για την ονοματική. Μετρήσαμε, λοιπόν, εκείνες τις περιπτώσεις όπου το ονοματικό σύνολο θα μπορούσε να αντικατασταθεί από:

α) ένα ρηματικό σύνολο. Στην περίπτωση αυτή έχουμε την ονοματοποίηση μιας διαδικασίας. Η *ενέργεια* (ρήμα) γίνεται *οντότητα* (ουσιαστικό). Π.χ.

(2) «η *προσπάθεια* των νέων για *ολοκλήρωση* μιας υγιούς προσωπικότητας» (AK10) αντί για το

«οι νέοι *προσπαθούν* να *ολοκληρώσουν* μια υγιή προσωπικότητα».

β) επιθετική φράση. Η *ποιότητα* (επίθετο) γίνεται *οντότητα* (ουσιαστικό). Π.χ.

(3) «κατηγορούν τους νέους για *ανευθυνότητα, ανηθικότητα...*» (AK24) αντί για

«κατηγορούν τους νέους ότι είναι *ανεύθυνοι, ανήθικοι...*».

και γ) επιρρηματική φράση ή σύνδεσμο:

(4) «Το τμήμα διδάσκεται την ύλη με *γρηγορότερους ρυθμούς*» (ΓΚ223) αντί για

«Το τμήμα διδάσκεται την ύλη *γρηγορότερα*».

2. Υποθέσεις της έρευνας

Η βασική μας υπόθεση είναι ότι οι μαθητές και οι μαθήτριες θα κάνουν χρήση των γλωσσικών δομών που συνδέονται με τη γραμματική μεταφορά. Με δεδομένο ότι η διδασκαλία της ονοματοποίησης δεν είναι ρητή και σύμφωνα με τη σχετική βιβλιογραφία (ενδεικτικά Bernstein 1971, Hasan & Cloran 1990, Painter 1999) υποθέτουμε ότι η αυξημένη χρήση της στις γραπτές σχολικές εργασίες εξαρτάται, σε μεγάλο βαθμό, από τις συνθήκες κοινωνικού γραμματισμού στις οποίες έχουν μεγαλώσει τα παιδιά. Για να ελέγξουμε την υπόθεση αυτή, χωρίσαμε τους μαθητές και τις μαθήτριες της έρευνας σε δύο κοινωνικές κατηγορίες, την ομάδα των Επαγγελματιών Υψηλής Αυτονομίας (EYA) και την ομάδα των Επαγγελματιών Χαμηλής Αυτονομίας (EXA) (Hasan 1989, Williams 1989). Τα βασικά κριτήρια που διέπουν την κατανομή των μαθητών στις δύο κοινωνικές ομάδες είναι α) ο βαθμός εξάρτησης των γονιών τους από την υλική βάση της εργασίας τους, β) η δυνατότητα συμμετοχής τους σε αποφάσεις καθοριστικές για το χώρο της εργασίας τους, γ) η δυνατότητα ν' ασκήσουν έλεγχο πάνω σε άλλους εργαζόμενους για την εκτέλεση των ειλημμένων αποφάσεων. Το βασικό κριτήριο χρησιμοποιήθηκε σε συνάρτηση με το οικονομικό, μορφωτικό και κοινωνικό στάτους της οικογένειας των παιδιών. Υποθέτουμε, λοιπόν, ότι τα παιδιά της ομάδας EYA χρησιμοποιούν σε μεγαλύτερο βαθμό το μηχανισμό της ονοματοποίησης στο γραπτό τους λόγο, σε σχέση με τα παιδιά που προέρχονται από την ομάδα των EXA.

3. Αποτελέσματα

3.1. Ανάλυση των ποσοτικών δεδομένων

Το γλωσσικό μας υλικό αποτελείται από 457 γραπτές εργασίες- εκθέσεις μαθητών και μαθητριών της Α' και Γ' λυκείου και είναι συνολικά 181.095 λέξεις. Τα θέματα που δώσαμε στους μαθητές ήταν: για την Α'Λ:

Το σχολείο σου πρόκειται να εκδώσει ένα μαθητικό περιοδικό. Η συντακτική ομάδα σου ζήτησε να γράψεις ένα κείμενο με τίτλο: «το χάσμα των γενεών» στο οποίο να προσδιορίζεις τις μορφές με τις οποίες εκδηλώνεται το φαινόμενο και τις αιτίες που, κατά τη γνώμη σου, το προκαλούν.

και για τη Γ' Λ:

Το σχολείο σου πρόκειται να εκδώσει ένα μαθητικό περιοδικό. Η συντακτική ομάδα σου ζήτησε να γράψεις ένα κείμενο με θέμα τη χρήση του Η/Υ στη διδασκαλία των σχολικών μαθημάτων. Στο άρθρο αυτό θα αναπτύσσεις την άποψή σου για τις δυνατότητες που μπορεί να προσφέρει η χρήση του Η/Υ αλλά και τα προβλήματα που ενδεχομένως να προκύψουν.

Για την ποσοτική επεξεργασία του υλικού χρησιμοποιήθηκε περιγραφική στατιστική ανάλυση.

Η κατανομή του γλωσσικού υλικού στις ομάδες υποκειμένων της έρευνας είναι η εξής:

| ΚΟΙΝΩΝΙΚΗ ΟΜΑΔΑ | Α' ΛΥΚΕΙΟΥ | | Γ' ΛΥΚΕΙΟΥ | | ΣΥΝΟΛΟ |
|--------------------|------------|--------|------------|--------|--------|
| | ΚΟΡΙΤΣΙΑ | ΑΓΟΡΙΑ | ΚΟΡΙΤΣΙΑ | ΑΓΟΡΙΑ | |
| ΕΥΑ | 78 | 47 | 44 | 44 | 213 |
| ΕΧΑ | 75 | 54 | 56 | 59 | 244 |
| ΣΥΝΟΛΟ | 153 | 101 | 100 | 103 | 457 |

Πίνακας 1

Από την ποσοτική μελέτη του γλωσσικού υλικού, φάνηκε καταρχήν ότι η ονοματοποίηση αποτελεί ένα βασικό χαρακτηριστικό του λόγου των γραπτών εργασιών -τουλάχιστον στα πλαίσια του γλωσσικού μαθήματος. Όλοι οι μαθητές και οι μαθήτριες, όλων των κοινωνικών ομάδων, και στις δύο σχολικές τάξεις, χρησιμοποίησαν ονοματοποιήσεις στα γραπτά τους. Επιπλέον, υπάρχει μεγάλη αύξηση των ονοματοποιήσεων στο γλωσσικό υλικό της Γ'Λ και στις δύο κοινωνικές ομάδες.

Παράλληλα όμως, η συγκεκριμένη παράμετρος λειτουργεί ως ισχυρός δείκτης κοινωνιογλωσσικής διαφοροποίησης, και στις δύο σχολικές τάξεις. Παρακάτω, θα εξετάσουμε πώς αποτυπώνεται αυτή η διαφοροποίηση στο γλωσσικό υλικό κάθε σχολικής τάξης. Σημειώνουμε, όμως, εκ των προτέρων ότι μια πιο ολοκληρωμένη θεώρηση της παραμέτρου απαιτεί να συνεξεταστεί με τις άλλες γλωσσικές παραμέτρους που συνδέονται με το μηχανισμό της γραμματικής μεταφοράς, πιο συγκεκριμένα αυτές που αφορούν τη λεξική πυκνότητα και τη δομή του ονοματικού συνόλου. Η συνεξέταση των παραμέτρων αυτών αποτυπώνει καλύτερα τον βαθμό στον οποίο οι μαθητές και οι μαθήτριες μπορούν να κάνουν ενεργητική χρήση των γλωσσικών δομών που διαφοροποιούν το γραπτό από τον προφορικό λόγο. Εδώ θα περιοριστούμε στην ονοματοποίηση γιατί, όπως αναφέραμε παραπάνω, είναι η πιο παραγωγική μορφή της γραμματικής μεταφοράς.

| ονοματοποιήσεις - Α' Λυκείου | | | | | |
|------------------------------|---------------------------|-------------------------|--------|---------------------------|-----------------|
| κοινωνική ομάδα | Επαγγέλματα Αυτονομίας | | Υψηλής | Επαγγέλματα Αυτονομίας | |
| | αρ. προτάσεων | ονοματοποιήσεις | | αρ. προτάσεων | ονοματοποιήσεις |
| αγόρια | 2109 | 1705 80,8% ² | | 3259 | 1979 60,72% |
| κορίτσια | 4347 | 4312 99,19% | | 3484 | 2067 59,32% |

² Ο αριθμός αφορά το ποσοστό των ονοματοποιήσεων επι του αριθμού των προτάσεων του γλωσσικού υλικού κάθε ομάδας υποκειμένων.

Η Ονοματοποίηση στο Γραπτό Λόγο των Μαθητών
Κοινωνιογλωσσολογική Προσέγγιση

| | | | | |
|--------|------|------------|------|----------|
| σύνολο | 6456 | 6017 93,2% | 6743 | 4046 60% |
|--------|------|------------|------|----------|

Πίνακας 2: Α' Λυκείου

Από τον πίνακα 2, φαίνεται ότι η χρήση της ονοματοποίησης είναι αρκετά εκτεταμένη στο γραπτό λόγο των μαθητών, ήδη από την Α' λυκείου. Επιπλέον, επιβεβαιώνεται, για την Α'Λ, η βασική υπόθεση της έρευνας, ότι η ονοματοποίηση στο γραπτό λόγο είναι μια γλωσσική παράμετρος που διαφοροποιεί κοινωνιογλωσσικά τους μαθητές, καθώς η σχετικά αυξημένη χρήση της στο κόρπους των παιδιών των ΕΥΑ είναι φανερή.

| ονοματοποιήσεις - Γ' Λυκείου | | | | |
|------------------------------|-------------------------------|-----------------|--------------------------------|-----------------|
| κοινωνική ομάδα | Επαγγέλματα Υψηλής Αυτονομίας | | Επαγγέλματα Χαμηλής Αυτονομίας | |
| | αρ. προτάσεων | ονοματοποιήσεις | αρ. προτάσεων | ονοματοποιήσεις |
| αγόρια | 2214 | 2779 125,51% | 2787 | 2054 73,69% |
| κορίτσια | 2497 | 3065 122,74% | 3025 | 2864 94,67% |
| σύνολο | 4711 | 5844 124,05% | 5812 | 4918 84,61% |

Πίνακας 3: Γ' Λυκείου

Σύμφωνα με τον πίνακα 3, η χρήση της ονοματοποίησης αυξάνεται ιδιαίτερα στο γλωσσικό υλικό των μαθητών και των μαθητριών της Γ'Λ. Όλες οι κοινωνικές ομάδες χρησιμοποιούν πολύ περισσότερες ονοματοποιήσεις απ' ό,τι στην Α'Λ. Φαίνεται, λοιπόν, ότι η γλωσσική διδασκαλία στο σχολείο επιδρά στην ικανότητα των παιδιών να χειρίζονται τις δομές του γραπτού λόγου. Παρόλο που δεν μπορούμε να μιλήσουμε για *πρόοδο* με την κυριολεκτική έννοια, νομίζουμε ότι η αύξηση του ποσοστού χρήσης των ονοματοποιήσεων είναι γενικότερα ενδεικτική της αυξημένης χρήσης των σχετικών γλωσσικών δομών στη Γ'Λ, σε σχέση με τις προηγούμενες τάξεις. Μας επιτρέπει, δηλαδή, να υποθέσουμε ότι και τα συγκεκριμένα παιδιά της έρευνας, όταν θα φοιτούν στη Γ'Λ, θα είναι σε θέση να χρησιμοποιούν, σε αντίστοιχα μεγαλύτερα ποσοστά, το μηχανισμό της ονοματοποίησης και τις γλωσσικές δομές που συνδέονται με αυτόν. Όμως οι κοινωνιογλωσσικές εντάσεις παραμένουν ιδιαίτερα ισχυρές και στη Γ'Λ.

| | Α' ΛΥΚΕΙΟΥ | | | Γ' ΛΥΚΕΙΟΥ | | |
|----------|------------|------|----------|------------|------|----------|
| | ΕΥΑ | ΕΧΑ | ΑΠΟΚΛΙΣΗ | ΕΥΑ | ΕΧΑ | ΑΠΟΚΛΙΣΗ |
| ΑΓΟΡΙ | 80,8 | 60,7 | 20,08 | 125,5 | 73,6 | 51,52 |
| Α | % | 2% | | 1% | 9% | |
| ΚΟΡΙΤΣΙΑ | 99,1 | 59,3 | 39,87 | 122,7 | 94,6 | 28,07 |
| ΣΙΑ | 9% | 2% | | 4% | 7% | |
| ΣΥΝΟΛΟ | 93,2 | 60% | 33,2 | 124,0 | 84,6 | 39,44 |
| ΛΟ | % | | | 5% | 1% | |

Πίνακας 4: Αποκλίσεις ανάμεσα σε κοινωνικές ομάδες

Μάλιστα, όπως φαίνεται από τον πίνακα 4, το ποσοστό που παρουσιάζουν οι ομάδες EXA στην Γ'Λ είναι χαμηλότερο από το ποσοστό των ομάδων ΕΥΑ της Α'Λ. Ενδιαφέρον παρουσιάζει το ότι στο γλωσσικό υλικό των αγοριών των δύο κοινωνικών ομάδων, η απόκλιση όχι μόνο παραμένει, αλλά ισχυροποιείται. Αντίθετα, στο γλωσσικό υλικό των κοριτσιών, η απόκλιση μειώνεται σε σχέση με την Α'Λ. Όσον αφορά τις κοινωνιογλωσσικές εντάσεις, φαίνεται λοιπόν ότι η γλωσσική διδασκαλία δεν είναι αποτελεσματική σε τέτοιο βαθμό ώστε να άρει την απόσταση που δημιουργούν οι άνισες κοινωνιογλωσσικές αφετηρίες.

3.2. Σύνδεση της ποσοτικής ανάλυσης με την ποιοτική προσέγγιση του γλωσσικού υλικού

Η σύνδεση της ποσοτικής με ανάλυσης με την ποιοτική προσέγγιση του γλωσσικού υλικού μας βοηθάει να αποκτήσουμε πιο ολοκληρωμένη εικόνα των κοινωνιογλωσσικών αποκλίσεων που αποτυπώνονται στο γλωσσικό μας υλικό.

Δύο είναι τα κύρια είναι τα κύρια σημεία όπου η ποσοτική ανάλυση αναδεικνύεται περιορισμένη:

Ένας πρώτος περιορισμός είναι ότι, στον αριθμό των ονοματοποιήσεων, δεν φαίνονται οι επαναλήψεις των ίδιων λέξεων. Για παράδειγμα, σε ένα κείμενο (ΑΑ59) από τις 15 ονοματοποιήσεις που καταγράφηκαν, οι 7 αναφέρονται στο *χάσμα*.

Ο δεύτερος και σημαντικότερος αφορά τη διαφορά ανάμεσα στην ενεργητική και τη μηχανιστική χρήση της ονοματοποίησης. Σε ορισμένα γραπτά, η αντιγραφή -και άρα η μηχανιστική χρήση- ορισμένων διατυπώσεων προδίδεται από την απότομη αλλαγή στον τρόπο γραφής, από τον επίσημο στον ανεπίσημο και με χαρακτηριστικά προφορικότητας.

Τέτοια διαφορά υπάρχει στα παρακάτω αποσπάσματα από το κείμενο ενός μαθητή της Α'Λ της ομάδας EXA:

(5α) «υπάρχει έλλειψη κοινού χρόνου υπάρχει τάση για ανεξαρτησία μεγαλώνουν σε διαφορετικές εποχές»

και αμέσως μετά (5β) «οι έφηβοι επηρεάζονται πολύ από τις παρέες τις καλές και τις κακές και είναι δύσκολο για τους μεγαλύτερους και είναι ένα μεγάλο πρόβλημα γι' αυτούς και αντιδρούν ανάλογα που κάνουν τους εφήβους ν' αντιδράσουν» (ΑΑ63).

Στο παράδειγμα, είναι χαρακτηριστική η απότομη μετάβαση από την ονοματική στη ρηματική σύνταξη. Στο α' απόσπασμα, ο μαθητής χρησιμοποιεί ονοματοποιήσεις, για να περιγράψει τις εκδηλώσεις του χάσματος των γενεών. Στην αμέσως επόμενη φράση (απόσπασμα 2α), στο οποίο επιχειρεί να αναπτύξει αυτά που έχει ήδη αναφέρει, η σύνταξη είναι

κατεξοχήν ρηματική, και μάλιστα θυμίζει μάλλον απομαγνητοφωνημένο προφορικό κείμενο παρά γραπτή έκθεση.

Σε πολλά από αυτά τα γραπτά, ο μαθητής ή η μαθήτρια χρησιμοποιούν διατυπώσεις που δεν τους είναι οικείες. Αυτό «προδίδεται» τόσο από το γεγονός ότι νιώθουν την ανάγκη να τις επεξηγήσουν όσο και από τη διαφορά στον τρόπο γραφής, που υπάρχει ανάμεσα στην αρχική διατύπωση και στην επεξήγησή της, την οποία επισημάναμε και στο προηγούμενο παράδειγμα. Ένα τέτοιο παράδειγμα είναι το παρακάτω:

(6) «μια άλλη μορφή (ενν. του χάσματος των γενεών) είναι οι εντάσεις και οι συγκρούσεις όπου τσακώνεσαι με άλλους... Μοναξιά γιατί είσαι μόνος και δε θα μπορείς να συζητάς τα προβλήματά σου με φίλους... και απογοήτευση γιατί θα έχεις μετανιώσει που τσακώθηκες με τους φίλους σου με αποτέλεσμα να σε διώξουν από την παρέα» (ΑΑ62).

Ο μαθητής χρησιμοποιεί ονοματοποιήσεις προκειμένου να περιγράψει ορισμένες μορφές εκδήλωσης του χάσματος των γενεών, το οποίο αποτελεί ζητούμενο από το θέμα της έκθεσης. Ενδεικτικό, όμως, της αμηχανίας που του προκαλεί η χρήση τους είναι το γεγονός ότι, μετά από κάθε ονοματοποίηση, ακολουθούν ορισμένες προτάσεις, με τις οποίες επεξηγεί το περιεχόμενο της ονοματοποίησης που προηγείται. Χαρακτηριστική είναι και η διαφορά στα εκφραστικά μέσα που υπάρχει ανάμεσα στον ορισμό του φαινομένου (*μια άλλη μορφή είναι οι εντάσεις και οι συγκρούσεις*) και στην επεξήγηση (*όπου τσακώνεσαι με άλλους*). Ενώ ο ορισμός χαρακτηρίζεται από τη χρήση ονοματοποιήσεων, στην επεξήγηση ο λόγος γίνεται πιο «προφορικός» με τη χρήση του β' ενικού προσώπου, τη χρήση ρημάτων αντί για ουσιαστικά, και τη χρήση παροντικών χρόνων, χαρακτηριστικών των περιγραφικών κειμένων.

Παρόμοιο είναι και το επόμενο παράδειγμα όπου, στο γραπτό του (ΑΑ44), ένας μαθητής της ΕΧΑ της Α'Λ αρχικά δίνει τον ορισμό του χάσματος των γενεών:

(7α) «χάσμα γενεών είναι η αποξένωση δύο ηλικιών και η αδυναμία στοιχειώδους συνεννόησης των ανθρώπων δύο διαφορετικών γενεών»

και αμέσως μετά επιχειρεί να διευκρινίσει το περιεχόμενο του ορισμού που μόλις έδωσε:

(7β) «Δηλαδή χάσμα γενεών είναι όταν οι γονείς μαλώνουν συνέχεια με τα παιδιά τους».

Ανάμεσα στις δύο διατυπώσεις, υπάρχει απότομη μετάβαση από την ονοματική στη ρηματική σύνταξη. Στη δεύτερη πρόταση (*όταν οι γονείς μαλώνουν συνέχεια με τα παιδιά τους*) έχουμε πάλι τα χαρακτηριστικά του περιγραφικού λόγου, ενεστώτα, συγκεκριμένα ουσιαστικά αντί για αφηρημένα. Επιπλέον, ο μαθητής όχι μόνο δεν καταφέρνει να επεξηγήσει, αλλά μάλλον περιορίζει τον αρχικό ορισμό. Στην πραγματικότητα, με τη διευκρίνιση που κάνει, αναιρεί την αφαίρεση που εμπεριέχει ο αρχικός

ορισμός. Φαίνεται, δηλαδή, ότι αναπαράγει μεν ορισμένες διατυπώσεις, αλλά δεν μπορεί να εκμεταλλευτεί το σημασιολογικό τους δυναμικό. Θα μπορούσαμε να πούμε μάλιστα ότι αυτό που δεν μπορεί να χειριστεί επιτυχώς δεν είναι τόσο το συντακτικό σχήμα, όσο οι σημασιολογικές συνέπειες που επιφέρει η χρήση του.

Από τα παραπάνω φαίνεται ότι η ποιοτική προσέγγιση του γλωσσικού υλικού όχι μόνο δεν αναιρεί αλλά αντίθετα συμπληρώνει και εξειδικεύει τα συμπεράσματα της ποσοτικής ανάλυσης. Οι κοινωνιογλωσσικές αποκλίσεις και ανισότητες, που αποτυπώνονται στη στατιστική ανάλυση, διαγράφονται πιο έντονα, αν συσχετιστούν με τις παραπάνω επισημάνσεις της ποιοτικής προσέγγισης των κειμένων. Είναι ενδεικτικό ότι η συντριπτική πλειοψηφία των σχετικών παραδειγμάτων που συναντήσαμε αφορούν γραπτά των παιδιών της ομάδας EXA, κυρίως της Α'Λ.

4. Προεκτάσεις

Από την έρευνα που κάναμε και σύμφωνα πάντα με τα δεδομένα του συγκεκριμένου γλωσσικού υλικού, διαπιστώσαμε καταρχήν ότι η ονοματοποίηση είναι ένας γλωσσικός μηχανισμός που συναντιέται στα μαθητικά γραπτά ήδη από την Α'Λ. Από αυτήν την άποψη, φαίνεται ότι το σχολείο επιδρά ομοιογενοποιητικά στο λόγο των μαθητών. Από την άλλη, όμως, διαπιστώσαμε ότι η ονοματοποίηση λειτουργεί ως ισχυρός κοινωνιογλωσσικός δείκτης. Από αυτήν την άποψη, το σχολείο δεν δρα εξισωτικά ως προς τις κοινωνικές ανισότητες που αφορούν τα γλωσσικά εφόδια των μαθητών και των μαθητριών και σε συνάρτηση με τις γλωσσικές απαιτήσεις που το ίδιο θέτει.

Το ζήτημα, κατά τη γνώμη μας, δεν είναι απλά ποσοτικό. Το πρόβλημα δεν είναι ότι κάποια παιδιά χρησιμοποιούν περισσότερες ονοματοποιήσεις από κάποια άλλα. Το ζήτημα είναι ότι κάποια παιδιά έχουν πιο ολοκληρωμένη πρόσβαση στο γραπτό λόγο, σε σχέση με κάποια άλλα. Επιπλέον, ότι αυτό το *κάποια* δεν αφορά ατομικές επιδόσεις, τυχαία κατανεμημένες στο μαθητικό πληθυσμό, αλλά κοινωνικές ομάδες. Φαίνεται ότι η πρόσβαση στην εγγραμματοσύνη είναι πιο ολοκληρωμένη για τα παιδιά των ανώτερων κοινωνικών στρωμάτων, ενώ μένει ατελής για τον μεγαλύτερο αριθμό των παιδιών των χαμηλότερων. Η διαφοροποίηση που εντοπίσαμε στο γλωσσικό μας υλικό αναφορικά με τη χρήση των ονοματοποιήσεων συνδέεται, κατά τη γνώμη μας, με το κατά πόσο οι μαθητές και οι μαθήτριες έχουν αφομοιώσει, μέσω της γλωσσικής διδασκαλίας, τα διαφοροποιητικά χαρακτηριστικά του γραπτού λόγου και, κατά συνέπεια, με το κατά πόσο μπορούν να τα αξιοποιήσουν δημιουργικά για την παραγωγή και την κατανόηση μιας μεγάλης κλίμακας γραπτών κειμένων. Εφόσον η ονοματοποίηση είναι η πιο παραγωγική μορφή γραμματικής μεταφοράς, τότε μπορούμε να υποθέσουμε ότι λειτουργεί ως

μηχανισμός-κλειδί για την εισαγωγή στον κόσμο των πιο απαιτητικών κειμένων.

Όταν όμως μια διαφορά αποκτά κοινωνικό χαρακτήρα, παύει να είναι απλώς διαφορά και γίνεται ανισότητα. Στα ειδικά πλαίσια του σχολείου, αυτό που μετατρέπει τη διαφορά σε ανισότητα είναι ο μηχανισμός της αξιολόγησης, στις ποικίλες εκφάνσεις του, καθώς η αφομοίωση των μηχανισμών του γραπτού λόγου είναι αναγκαία όχι μόνο για την επιτυχή παραγωγή κειμένων στα πλαίσια του γλωσσικού μαθήματος, αλλά και για την κατανόηση και απόδοση σε μαθήματα «άσχετα» προς το γλωσσικό, όπως η φυσική, τα μαθηματικά, η οικονομία, κ.λ.π.

Με βάση το γεγονός ότι η ονοματοποίηση, από τη μια, αποτελεί βασικό χαρακτηριστικό του σχολικού λόγου και από την άλλη λειτουργεί ως κοινωνιογλωσσικός δείκτης στο μαθητικό λόγο, όπως φάνηκε από την ανάλυση που προηγήθηκε, πιστεύουμε ότι θα έπρεπε να διδάσκεται ρητά και ολοκληρωμένα στα πλαίσια του γλωσσικού μαθήματος. Αυτό, γιατί το σχολείο οφείλει να καθιστά όλους τους μαθητές ικανούς να κατέχουν στο σύνολό του το φάσμα των δυνατοτήτων της γλώσσας, έτσι ώστε αυτοί, από τη μια, να είναι σε θέση να διαμορφώσουν το δικό τους λόγο, αλλά και, από την άλλη, να έχουν πρόσβαση σε όλες τις κοινωνικές δραστηριότητες που συνδέονται με αυτήν.

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Interpretation of Reflexives and Reciprocals with Mediopassive Morphology in Greek Agrammatism: Exploring the Syntax-Discourse Interface

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Abstract

In this paper we provide experimental evidence on the comprehension of verbal structures which indicate inherent reciprocity and reflexivity by means of mediopassive morphology. Six Greek-speaking agrammatic patients took part in the experiment. The verbs were examined: a) in contexts of inherent reciprocity and reflexivity, and b) in ‘passivised’ contexts. The results of the experiment suggest that extra-clausal/pragmatic knowledge is not effectively engaged by agrammatic subjects when reflexives and reciprocals are processed. Moreover, aphasics did not seem to pay attention to linguistic information, like the ‘*apo*-phrase/by-phrase’ implying the presence of an agent or to morphological cues like the [+plural] marking on the verb and on the complex syntactic subject usually characterizing reciprocal constructions. Aphasics’ erroneous performance is consistent with the predicted ambiguity caused by the underspecification of the mediopassive affix in Modern Greek.

Key words: Broca’s aphasia, reflexives, reciprocals, mediopassive morphology

1. Introduction

Voice morphology in Greek is expressed on the verb and can be distinguished between active (henceforth, ACT) and non-active (henceforth, NACT)¹. NACT voice occurs in middles, passives, anti-causatives, reflexives and reciprocals. The present paper investigates the interpretation of NACT verbal structures which typically indicate reciprocity and reflexivity due to the fact that these meanings are the most frequently occurring in subjects’ linguistic input.

Greek offers a great range of structural options expressing reciprocity. For example, apart from the cases in which reciprocity constitutes an

¹ The terms active and mediopassive, or active and passive, have also been used in previous literature (Joseph & Philippaki-Warbuton 1987, Tsimpli 1989). I opt for the term active / non-active morphology used in Embick (2004) and Alexiadou & Anagnostopoulou (2004), as more accurate in that it is compatible with the various structures in which the non-active morphology occurs.

inherent part of the semantics of some verbs of mediopassive morphology (see 1a), reciprocity can also be syntactically realized (i) by means of a singular or plural transitive verb followed by the ‘heavy’ reciprocal marker ‘*o enas ton alon*/each other’ (lit. the one the other) referentially bound to the subject antecedent (see 1b), (ii) by incorporation of the reciprocal pronoun ‘*alilo*’ to a NACT plural verbal predicate (see 1c), (iii) for emphatic purposes, by a structure consisting of a verb of mediopassive morphology followed by the adjunct prepositional phrase ‘*metaksi mas/sas/tus*/between (among) us/you/them’ (see 1d) or alternatively (iv) by a limited class of some morphologically active verbs that have an inherently reciprocal meaning (see 1e) (Tzartanos 1946: 246).

- (1) a. Agaliazondai.
hug-3pl.pres.non-act.
‘They hug each other.’
(Tzartanos 1946: 241)
- b. Plisiazun o enas ton allo.
approach-3pl.pres.act. the-nom.masc.sg. one the-acc.masc.sg. other
‘They are approaching one another.’
(Mackridge 1987: p.89)
- c. Alliloipostirizondai.
each other support-3pl.pres.non-act.
‘They support each other.’
(Tzartanos 1946: 246)
- d. Ta adherfakia aghapiondane metaksi tus.
the-nom.neut.pl. siblings love-3pl.past.non-act among them
‘The siblings loved one another.’
(Tzartanos 1946: 246)
- e. Dhosame xeria.
give-1pl.past.act. hands
‘We shook hands.’
(Tzartanos 1946: 247)

On the other hand, reflexivity in Modern Greek gets expressed by fewer options (Papangeli 2004: 44): (i) by means of verbs of mediopassive morphology or a few morphologically active verbs that encode reflexivity in an inherent manner (see 2a & 2b) (Tzartanos 1946: 244), (ii) by the prefixation of the reflexive pronoun ‘*afto*-/self’ to a verb that already carries the mediopassive affix (see 2c) (Mackridge 1987: 88), and finally (iii) by an active or passive verb followed by the full anaphoric pronoun ‘*o eaftos mu* /myself’ in accusative case or the adjunct adjectival phrase ‘*monos-monahos mu*/by myself’, respectively, that stands in a co-reference relation with its antecedent (see 2d & 2e) (Tzartanos 1946: 239). This last structure is

preferably used for emphatic purposes mainly (Papangeli 2004: 45, Tzartzanos 1946: 244).

- (2) a. Kitaxtike ston kathrefti.
look-3sg.past.non-act to the-acc.masc.sg. mirror
'S/he looked at herself/himself in the mirror.'
(Mackridge 1987: 88)
- b. Alakse o Nikos.
Change-3sg.past-act the-nom.masc.sg. Nikos
'Nikos has changed.'
- c. Aftokatastrefomai.
self destroy-1sg.pres.non-act
'I destroy myself.'
(Theophanopoulou-Kontou 1997: 117)
- d. Gimnazeis ton eafto su.
train-2sg.pres.act. the-acc.masc.sg. self your
'You train yourself.'
(Tzartzanos 1946: 239)
- e. Dhilitiriastike monos tu.
poison-3sg.past.non-act. own his
'He poisoned himself.'
(Tzartzanos 1946: 244)

According to Joseph & Philippaki-Warburton (1987), NACT morphology may cause ambiguity between reciprocal and passive interpretations, as well as between reflexive and passive interpretations. As already mentioned in the introduction, the systematic interpretation of specific NACT verbs as reflexives and reciprocals may be explained in terms of a very common principle of access, namely the probabilistic effects of frequency of occurrence encoded in the lexical entries of the specific verbal predicates. Borrowing much from findings in the word-recognition literature, once specific verbal predicates (like '*filao*/kiss') are processed at least two internal representations are constructed of their meaning (i.e. the passive and the reciprocal one) which are both briefly activated. The frequency (or probability) of occurrence of each representation in the language at large determines their relative degree of activation. Whichever verb-argument(s) association is the most frequent in the input, will be the more active. For instance, the reciprocal representation of '*filiude*/they kiss each other' in Greek is the one most frequently occurring in comprehenders' linguistic input; as such, it becomes activated to a greater degree in comparison to the passive one and the reciprocal reading is finally preferred.

Nevertheless, specific discourses exist in which successful engagement of lexical information strongly implies the existence of an agent, thus,

forcing a passive interpretation of the NACT verbal predicate. The present task focuses exactly on those NACT verbs which due to the syncretism of NACT morphology in Greek may acquire a reflexive/reciprocal or a passive meaning depending on the contextual information provided by the discourse as well as on the lexical preferences of the adult speaker who is influenced by the prototypicality of the subject in relation to the event described by the verb (Tsimpli 2005). For example, the meaning of the verbal predicate ‘*skotothikan/they were killed*’ in (3) is easily disambiguated towards the passive reading if the comprehender efficiently processes the lexical information encoded in the animate subject-DP ‘*amahi/combatants*’ that encodes an implicit external cause or agent that instigates the act of ‘killing’. Inability to use lexical and extra-linguistic information on NACT verbs would be taken as indication that frequency effects labeling a NACT verb as a reflexive or a reciprocal tend to override extra-clausal information that would impose the presence of an implicit agent, par consequence, a passive interpretation.

- (3) *Sto Deftero Pagosmio Polemo skotothikan poli amahi.*
 ‘During the Second World War, many combatants were killed’

2. The Study

2.1. Experimental Materials

The study included 14 inherent reflexive (see (4)) and 14 inherent reciprocal (see (5)) verbs of mediopassive morphology in structures such as:
 (4) *Kathe vradi to idhio skiniko: Ta pedhia den plenode sto banio meta to pehnidi ke i mama tus vazi tis fones.*

‘Every night we face the same scene: Children do not wash themselves in the bathroom after playing and mother yells at them.’
 (Reflexive reading)

- (5) *Etsi pu agaliazeste tha sas perasun gia zevgari!*

‘The way you hug each other gives one the impression that you are a couple!’
 (Reciprocal reading)

The very same verbs appeared in structures with a passive interpretation (see (6) & (7)). The reason for implementing the relevant verbs in such contexts was to examine whether their interpretation would be influenced by the ‘passivized’ linguistic environment.

(6) Ta mora prepi na plenode me idiko sapuni giati to derma tus ine evesthito.

‘Babies should be washed with a special soap because their complexion is sensitive.’

(Reflexive condition-Passive reading)

(7) Paratiro oti opu ki an pate gia na dosete parastasis agaliazeste apo ton kosmo. Nomizo oti iste poli dimofilis ithopii.

‘I observe that wherever you go to give a performance you are hugged by people. I think you are very popular actors.’

(Reciprocal condition-Passive reading)

Since reflexive and reciprocal meanings are only possible with animate subjects, while passive sentences can take either animate or inanimate entities as derived subjects, all the syntactic subjects across the experimental items were animate. As such, we eliminated any interpretation effect inflicted by the animacy-of-subject condition. The resulting 56 experimental sentences were intermingled with 56 fillers of various syntactic structures including only ACT voice verbs. The task was subsequently administered in the form of a questionnaire which was given to the experimental group that consisted of six Greek-speaking agrammatic subjects diagnosed as Broca’s aphasics. The questionnaire provided each subject with four choices which were constantly at the disposal of each patient in the form of typed instructions. The examiner read the sentences loudly one-by-one and the subject was asked to pick the interpretative choice that suited the verb’s meaning in each sentential item. The choices provided were the following:

Examiner: ‘*The action portrayed by the verb is instigated*’:

- (i) apo kapjion alon anthropo/kapia ali etia
(passive reading)
‘by somebody else/ by some other cause’
- (ii) metaksi mas/sas/tus
(reciprocal reading)
‘each other’
- (iii) monos tu/tis, moni tus
(reflexive reading)
‘by himself/herself/themselves’
- (iv) tipota apo ta parapano: eksigiste ti akriivos enoite
‘none of the above: explain what you mean’

3. Results-Discussion

The analysis of the data collected was done with SPSS. The subjects' responses are presented in Table 1 below:

| | Non-Target Interpretations | (%) |
|--------------------------------|----------------------------|-----|
| Reciprocals (RECIPR) | 14/84 | 17% |
| Passive Reciprocals (PASSIVE1) | 39/84 | 46% |
| Reflexives (REFLEX) | 9/84 | 11% |
| Passive Reflexives (PASSIVE2) | 29/84 | 36% |

Table 1: Non-target readings with reciprocal verbs (RECIPR), reflexive verbs (REFLEX) and their passive interpretations (PASSIVE1 & PASSIVE2) (raw data & %)

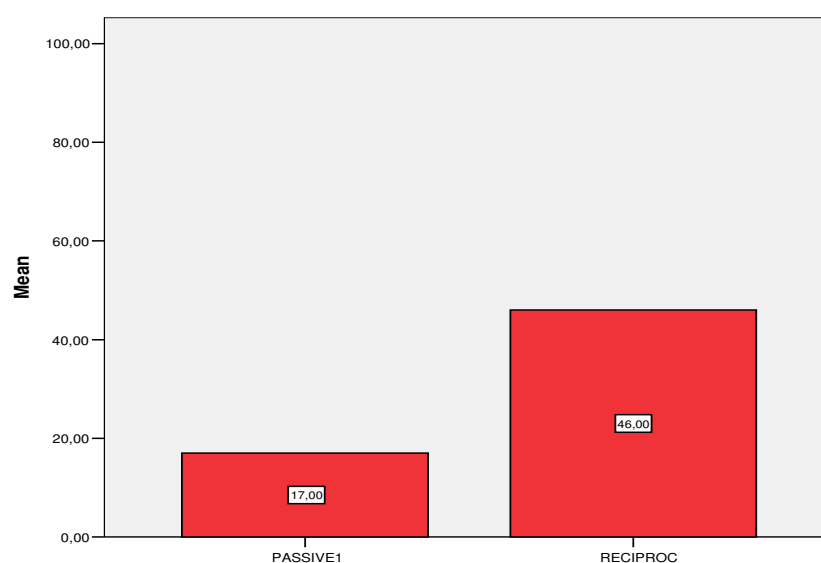


Figure 1: Non-target responses (%) in reciprocal verbs (RECIPROC) and reciprocals with a passive interpretation (PASSIVE1)

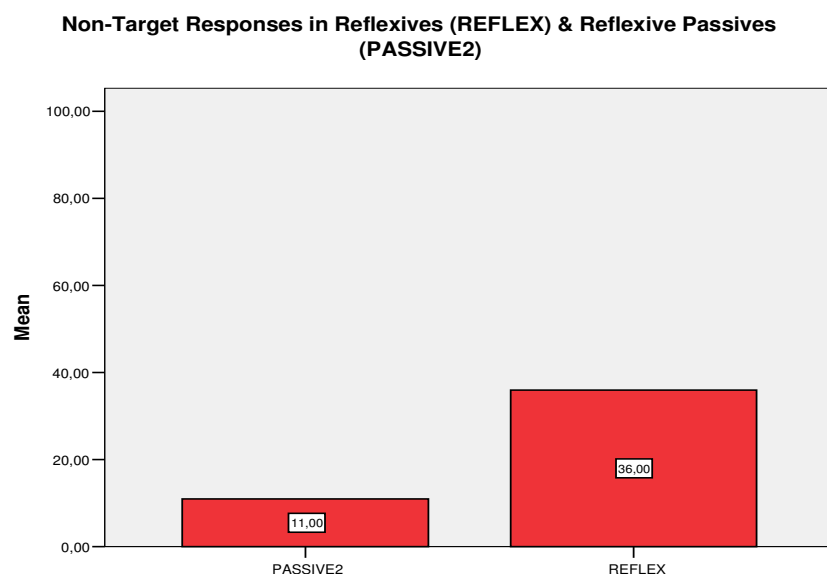


Figure 2: Non-target responses (%) in reflexive verbs (REFLEX) and reflexives with a passive interpretation (PASSIVE2)

The results revealed that in contexts where aphasic speakers had to resort to other information (contextual or pragmatic) in order to determine the passive meaning of reflexives and reciprocals, they didn't use this information efficiently. As such, the two classes of verbs were misinterpreted when they appeared in 'passivized' environments in which they continued to receive a reflexive and a reciprocal interpretation. For example, the structure *Στον πόλεμο άμαχοι σκοτώνονται άσκοπα*/In war combatants are killed to no purpose', the verb was also interpreted as a reciprocal, while the verb in the structure *Στο κομμωτήριο λούξεστε πριν το κούρεμα?*/Do you wash your hair at the hairdresser's before cutting your hair?' was also interpreted as a reflexive. The difference in meaning between the two environments (i.e. the inherent reciprocal/reflexive and the passive one) was statistically significant ($p < 0,001$). Furthermore, another interesting (though not statistically significant) finding of the study is that interpretation of inherent reflexives was more successful than interpretation of inherent reciprocals which is probably due to probabilistic effects, i.e. reflexive verbs are assumed to be more frequent in aphasic's linguistic input in comparison to reciprocals.

Finally, agrammatic patients' responses show that they could not adequately exploit linguistic information integrated within sentential items that could otherwise contribute to the disambiguation of the verbs' meaning.

A characteristic example is the sentential item (8) below, in which the ‘*apo*-phrase/since’ was misinterpreted by the majority of aphasic patients as a ‘by-phrase’ (instead of identifying it as a temporal prepositional expression), while the linguistic ‘*me ti Maria*/with Maria’ phrase was scarcely used as a reciprocal cue.

- (8) *Agapiomaste apo pedhia me ti Maria*
 ‘Maria and I love each other since childhood’

It should be pointed out that use of an overt agent ‘by-phrase’ is considered marked in Greek (Laskaratou 1984, Joseph & Philippaki-Warburton 1987, a.o.). The ‘*apo*-phrase/by-phrase’ in Greek has a variety of readings depending on the morphological and semantic properties of the predicate. The agent reading of the *apo*-phrase appears to be marginally acceptable in many cases, even where the passive reading is independently available. The markedness of an agent by-phrase is reduced when properties of the information structure, pragmatic salience of the agent and register differences are controlled for. The underspecification of *apo*-phrase in Greek with regards to its semantic content may be the reason why it increased rather than decreased as expected the ambiguity of the critical experimental items.

4. Conclusion

In this paper, an analysis of the interpretations assigned to reflexive and reciprocal verbs of mediopassive morphology by six Greek-speaking agrammatic patients was presented. The results from the study aimed to test the predictions of the theoretical analysis with regard to the underspecified readings of NACT morphology. The disparity attested between the passive and the reflexive/reciprocal interpretations assigned to the verbs was attributed to aphasics’ inability to exploit a range of lexical and pragmatic constraints on their interpretation.

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Interpretation of Reflexives and Reciprocals with Mediopassive Morphology in Greek
Agrammatism: Exploring the Syntax-Discourse Interface

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**Διαφορές στην Επίδοση κατά την Κατανόηση Καθημερινών
Γραπτών Κειμένων Ανάμεσα σε Μαθητές και Μαθήτριες που
Βρίσκονται στο Τέλος της Υποχρεωτικής Εκπαίδευσης**

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1. Επικοινωνία και επικοινωνιακή ικανότητα

Ο όρος “επικοινωνία” συναντάται πολύ συχνά στην καθημερινή μας ζωή. Οι άνθρωποι επικοινωνούν μεταξύ τους και θα μπορούσε κάποιος να ισχυρισθεί πως η ανθρώπινη κοινωνία βασίζεται σε μια αποτελεσματική και λειτουργική επικοινωνία.

Εξαιτίας της σχέσης επικοινωνίας-κοινωνίας είναι ανώφελο να διερευνηθεί η επικοινωνία μεμονωμένα και ανεξάρτητα από τους παράγοντες εκείνους που της δίνουν το χαρακτήρα της κοινωνικής διαδικασίας. Σε κάθε μορφή επικοινωνίας εκτός από την ύπαρξη ενός πομπού, ενός μηνύματος, ενός δέκτη, συμβάλλει και η κοινή εμπειρία, η γνώση πομπού-δέκτη, η γνώση του κώδικα, η ύπαρξη κάποιου σκοπού. Είναι σημαντικό λοιπόν όταν γίνεται προσπάθεια να αναλυθεί η επικοινωνιακή διαδικασία, να εξετάζεται παράλληλα με το φυσικό πλαίσιο, το κοινωνικό και το πολιτισμικό. Η μελέτη της επικοινωνίας, σύμφωνα με την Τοκατλίδου, ενδιαφέρεται για το ποιος επικοινωνεί με ποιόν, με ποια μέσα, για ποιο σκοπό, υπό ποιες συνθήκες, με ποια διαδικασία, με ποιο αποτέλεσμα¹ και εξετάζει τον τρόπο δόμησης μηνυμάτων, καθώς και τη σχέση τους με τα «συμφραζόμενα» και το πολιτισμικό περιβάλλον αναφοράς τους, που καθορίζουν και τη σημασία των συναλλαγών, καθώς και την εξέλιξη τους¹. Από τα παραπάνω γίνεται φανερό πως η επικοινωνία αποτελεί μια σύνθετη διαδικασία η οποία απαιτεί σκέψη και προγραμματισμό. Ο ομιλητής, έχοντας έναν στόχο, επιλέγει τις κατάλληλες λέξεις- προτάσεις τις οποίες συνδέει κατάλληλα για να μεταδώσει την πληροφορία που θέλει. Από την άλλη η πρόσκτηση και κατανόηση της πληροφορίας απαιτεί μια πολύπλοκη νοητική δραστηριότητα έτσι ώστε να γίνει επεξεργασία και ερμηνεία της σημασίας του μηνύματος.

Κατά καιρούς υπήρξαν διάφορες προσπάθειες να κατηγοριοποιηθούν οι διάφοροι παράγοντες που επηρεάζουν ένα επικοινωνιακό γεγονός. Ανάμεσα σε αυτές εξέχουσα θέση έχει η εθνογραφική προσέγγιση του

¹ Τοκατλίδου, 2002, σελ. 66

ανθρωπολόγου Dell Hymes ο οποίος ήταν και ο θεμελιωτής της επιστήμης που ονομάζεται εθνογραφία της επικοινωνίας. Για να περιγράψει αυτούς τους παράγοντες που θεωρούσε ότι εμπλέκονται σε ένα επικοινωνιακό γεγονός, ο Hymes χρησιμοποίησε τη λέξη SPEAKING ως ακρώνυμο. Αναλυτικά αυτοί οι παράγοντες είναι:

S: *Setting and Scene*: Ο χρόνος, ο χώρος και το πλαίσιο μέσα στα οποία πραγματώνεται η επικοινωνιακή πράξη είναι ιδιαίτερα σημαντικά.

P: *Participants*: Με τον όρο συμμετέχοντες εννοούνται όλα τα χαρακτηριστικά όσων είναι παρόντες στο επικοινωνιακό γεγονός², που μπορεί να επηρεάζουν ακόμη και με τη παρουσία τους τη διαδικασία. Έχει σημασία η ηλικία, το φύλο, η μόρφωση, ο ρόλος και η συσχέτιση μεταξύ τους. Όπως τονίζουν οι Αρχάκης και Κονδύλη οι έννοιες πομπού και δέκτη δεν θα πρέπει να χρησιμοποιούνται μηχανιστικά, εφόσον συχνά ο ομιλητής δεν είναι και ο αρχικός πομπός του μηνύματος, ενώ κάθε αποδέκτης δεν είναι πάντα και ο τελικός στόχος του μηνύματος³.

E: *Ends*: Οι σκοπιμότητες αναφέρονται στα συμβατικά αναγνωρισμένα και αναμενόμενα αποτελέσματα από μια επικοινωνιακή πράξη και σε κοινωνικό και σε προσωπικό επίπεδο, δηλαδή περιγράφονται οι προσωπικοί στόχοι, τους οποίους προσπαθούν να επιτύχουν σε συγκεκριμένες περιπτώσεις επικοινωνίας όσοι συμμετέχουν σ' αυτήν.

A: *Acts*: Οι λεκτικές πράξεις αναφέρονται στην πραγματική μορφή και το περιεχόμενο αυτού, του οποίου λέγεται (ποιες λέξεις – φράσεις χρησιμοποιούνται, σχέση του λεγομένου με τη κατάσταση). Μορφές λόγου υπάρχουν πολλές και διάφορες; Και στη κάθε μία αντιστοιχεί διαφορετικό είδος γλώσσας και θέματα συζήτησης.

K: *Key*: Με τον όρο 'κλειδί' περιγράφεται ο τόνος ή το πνεύμα με τα οποία μεταδίδεται ένα μήνυμα. Μπορεί λοιπόν ένα μήνυμα να είναι εγκάρδιο, φιλικό, σοβαρό, σαρκαστικό, ενθουσιώδες κ.τ.λ..

I: *Instrumentalities*: Με τον συγκεκριμένο όρο γίνεται αναφορά στα μέσα επικοινωνίας, δηλαδή τα κανάλια, τους κώδικες (όχι μόνο τους γλωσσικούς, άλλα και τους άλλους, όπως κινήσεων, ενδυματολογίας), την προφορική και τη γραπτή γλώσσα. Τυπικά επίσημη γραπτή γλώσσα είναι ένα είδος μέσου, προφορική επικοινωνία στην ποντιακή διάλεκτο είναι ένα άλλο.

N: *Norms*: Εδώ ο Hymes περιλαμβάνει φόρμες γλωσσικών συνηθειών που συνδέονται με το λόγο. Πρόκειται για συγκεκριμένες συμπεριφορές και ιδιότητες που συνδέονται με τον λόγο, και στον τρόπο με τον οποίο

² Όχι μόνο ο πομπός αλλά και ο δέκτης κάποιου μηνύματος

³ Αρχάκης Α./ Κονδύλη Μ., 2002, σελ. 92.

θα τις αντιμετωπίσει κάποιος. Διακρίνονται σε νόρμες αλληλεπίδρασης και ερμηνείας. Σε κάθε κοινωνία ισχύουν διαφορετικές συμβάσεις για την κατάλληλη χρήση του λόγου. Έτσι είναι πιθανόν κάτι που θεωρείται ευγενικό και αποδεκτό στα μέλη μιας γλωσσικής κοινότητας να θεωρείται αγενές και απαράδεκτο στα μέλη μιας άλλης.

G: *Genre*: Τα είδη του λόγου αναφέρονται σε καθαρά οροθετημένους τρόπους εκφωνήσεων, όπως είναι το παραμύθι, η κριτική, το δοκίμιο, το σχόλιο, η παροιμία, οι γρίφοι κ.α. Όλα αυτά συνοδεύονται από συγκεκριμένα χαρακτηριστικά αφού έχουν κοινή δομή και κοινά λεξικογραμματικά μέσα σε αντίθεση με τον ευκαιριακό λόγο. Το μοντέλο SPEAKING του Hymes υπογραμμίζει ότι ο λόγος είναι μια σύνθετη δραστηριότητα και ακόμη και ένα ειδικό κομμάτι λόγου αποτελεί ένα «κομμάτι ειδικευμένης δουλειάς». Για να είναι επιτυχημένος ο λόγος χρειάζεται να λάβει υπόψη του ο ομιλητής της γλώσσας και τους οκτώ παράγοντες που αναφέρθηκαν πιο πάνω.

2. Περιγραφή της έρευνας

Η συγκεκριμένη έρευνα διενεργήθηκε με σκοπό να εξεταστεί η επικοινωνιακή ικανότητα μαθητών που τελειώνουν την υποχρεωτική εκπαίδευση (τρίτη γυμνασίου) στην κατανόηση γραπτών κειμένων, στο μάθημα της μητρικής γλώσσας (ελληνική) σε σχέση με παράγοντες όπως είναι το φύλο, την κοινωνική προέλευση⁴, τον τόπο διαμονής και τη χρήση άλλης γλώσσας στο σπίτι τους για να επικοινωνήσουν εκτός από τα ελληνικά.

Η έρευνα διεξήχθη τα σχολικά έτη 2004-05 και 2005-06 σε σχολεία, τα οποία λειτουργούν σε μία μεγαλούπολη (Θεσσαλονίκη-πόλη από 1000000 κατοίκους και πάνω), σε αστικό κέντρο –πρωτεύουσα κάποιου νομού με πληθυσμό που κυμαίνεται περίπου στις 100000 κατοίκους (Ιωάννινα), αλλά και σε περιφερειακά επαρχιακά σχολεία περιοχών με πληθυσμό μικρότερο των 5000 κατοίκων (γυμνάσια του νομού Ιωαννίνων). Δεδομένου ότι μέχρι τη στιγμή που έγινε η συγκεκριμένη έρευνα δεν υπήρξε αντίστοιχη, που να αφορά το τέλος της υποχρεωτικής εκπαίδευσης (τέλος της γ' γυμνασίου) στο ελληνικό σχολείο και να αξιολογεί αποκλειστικά την επικοινωνιακή ικανότητα των μαθητών⁵ μέσα από καθημερινά γραπτά κείμενα, χρειάστηκε να

⁴ Στη συγκεκριμένη έρευνα καθορίζεται από το μορφωτικό επίπεδο και το επάγγελμα των γονέων.

⁵ Η έρευνα PISA είναι μια ευρύτερη συγκριτική έρευνα ανάμεσα στις χώρες που ανήκουν στον Οργανισμό Οικονομικής Συνεργασίας και Ανάπτυξης (Ο.Ο.Σ.Α.) Σ' αυτήν στο επίκεντρο βρίσκεται η αναγνωστική δεξιότητα των μαθητών με την ευρύτερη έννοια αφού περιλαμβάνει και την ικανότητα αντιμετώπισης λογοτεχνικών και θεατρικών αποσπασμάτων, διαγραμμάτων πινάκων κ.τ.λ..

κατασκευαστεί ένα καινούριο μέσο αξιολόγησης, ένα γλωσσικό τεστ, με βάση το οποίο διερευνήθηκαν οι υποθέσεις έρευνας. Το γλωσσικό τεστ αποτελείται από έξι κείμενα από τον περιοδικό τύπο στα οποία αναφέρονται 25 ερωτήματα κλειστού (18) και ανοικτού τύπου (7). Το ανώνυμο αυτό γλωσσικό τεστ διανεμήθηκε στα γυμνάσια των παραπάνω περιοχών κατά τη διάρκεια λειτουργίας των σχολείων, αποκλειστικά από τον ίδιο τον ερευνητή, συμπληρώθηκε με την παρουσία του ιδίου μέσα σε δύο σχολικές ώρες και η συλλογή του έγινε αμέσως μόλις ολοκλήρωσαν τις απαντήσεις οι μαθητές από τον ίδιο, για να διασφαλιστεί η εγκυρότητα της έρευνας. Στη συνέχεια, συγκεντρώθηκαν τα συμπληρωμένα τεστ και ακολούθησε ποσοτική επεξεργασία των δεδομένων με τη βοήθεια του στατιστικού πακέτου επεξεργασίας δεδομένων SPSS 12. Στην συγκεκριμένη εργασία παρουσιάζονται τα αποτελέσματα που σχετίζονται με το αν και σε ποιο βαθμό, διαφοροποιείται η επίδοση των μαθητών ανά κείμενο ξεχωριστά σε σχέση με φύλο των μαθητών. Παράλληλα δίνεται η τιμή της πιθανότητας (p) η οποία φανερώνει και τη σημαντικότητα των διαφορών που παρουσιάζουν οι επιδόσεις αγοριών και κοριτσιών. Η τιμή της πιθανότητας βρέθηκε για τα κείμενα χωριστά μέσα από το τεστ Mann-Whitney U ενώ για τη συνολική επίδοση έγινε με ANOVA.

3. Αποτελέσματα

Στους παρακάτω πίνακες (1-8) παρουσιάζεται η διαφοροποίηση της επίδοσης στην πραγματολογική γνώση σε σχέση με το φύλο. Στη συνέχεια παρουσιάζονται σε δύο διαγράμματα συνοπτικά τα αποτελέσματα ενώ στο τέλος παρατίθεται πίνακας (9) όπου διακρίνονται οι τιμές της πιθανότητας. Στο σημείο αυτό πρέπει να τονιστεί πως στατιστικά σημαντικά θεωρούνται όσα παρουσιάζουν πιθανότητα (p) μικρότερη από το 0,05.

| Σκορ 1 | | | | | | |
|--------|------------|-----|-----------|-----------------|---------------|--------------|
| | Παράγοντες | N | Μέση τιμή | Τυπική Απόκλιση | Ελάχιστη τιμή | Μέγιστη τιμή |
| Φύλο | Αγόρια | 256 | 2,72 | 0,99 | 0 | 4 |
| | Κορίτσια | 272 | 2,80 | 0,86 | 0 | 4 |

Πίνακας 1: Μέσος όρος επίδοσης όσο αφορά την ικανότητα να αναγνωρίσουν την θεματική ενότητα ενός άρθρου με βάση την επικεφαλίδα του ως προς το φύλο

Στον πίνακα 1 παρουσιάζονται τα αποτελέσματα της στατιστικής ανάλυσης που αφορούν το αρχικό ερώτημα του γλωσσικού τεστ. Στο ερώτημα αυτό ο κάθε μαθητής έπρεπε να ενώσει τις τέσσερις επικεφαλίδες της αριστερής στήλης με τις θεματικές κατηγορίες της δεξιάς στήλης. Στόχος ήταν να ανιχνευτεί εάν ο μαθητής αυτός ήταν σε θέση να συνάγει την θεματική ενότητα ενός άρθρου με βάση την επικεφαλίδα του συνδυάζοντας γλωσσικά, σημασιολογικά αλλά και πραγματολογικά στοιχεία. Από τον παραπάνω πίνακα γίνεται φανερό ότι το φύλο δεν φαίνεται να επηρεάζει την ικανότητα των μαθητών να αναγνωρίσουν την θεματική ενότητα ενός άρθρου με βάση τον τίτλο του, αφού η διαφορά που παρουσιάζει η κάπως υψηλότερη μέση τιμή των κοριτσιών από αυτή των αγοριών δεν θεωρείται στατιστικά σημαντική ($p=0,670$) (βλέπε πίνακα 9).

| Σκορ κείμενο 1 | | | | | | |
|----------------|------------|-----|-----------|-----------------|---------------|--------------|
| | Παράγοντες | N | Μέση τιμή | Τυπική Απόκλιση | Ελάχιστη τιμή | Μέγιστη τιμή |
| Φύλο | Αγόρια | 225 | 4,49 | 1,12 | 1 | 7 |
| | Κορίτσια | 255 | 4,56 | 0,94 | 1 | 7 |

Πίνακας 2: Μέσος όρος επίδοσης στο πρώτο κείμενο με βάση το φύλο

Με το πρώτο κείμενο ζητούμενο ήταν να διαπιστωθεί πως αντιμετώπισαν οι μαθητές ένα ειδησεογραφικό κείμενο, ένα ρεπορτάζ τρέχουσας επικαιρότητας, είδος που είναι σίγουρο ότι οι μαθητές θα συναντήσουν πάρα πολλές φορές στη καθημερινή τους ζωή, ίσως περισσότερο από κάθε άλλο. Μέσα από τέτοιου είδους κείμενα θα πρέπει να έχουν τουλάχιστον τη δυνατότητα με μια γρήγορη, ανάγνωση να ενημερωθούν. Όπως γίνεται φανερό από τον πίνακα 2 και σε αυτή την περίπτωση το φύλο δεν φαίνεται να επηρεάζει ιδιαίτερα την επίδοση των μαθητών. Μπορεί η μέση τιμή των κοριτσιών να είναι κάπως υψηλότερη από αυτή των αγοριών, η διαφορά όμως αυτή δεν παρουσιάζεται ως στατιστικά σημαντική αφού η πιθανότητα είναι 0,881 (πίνακας 9).

Πίνακας 3: Μέσος όρος επίδοσης στο δεύτερο κείμενο με βάση το φύλο

| Σκορ κείμενο 2 | | | | | | |
|----------------|------------|-----|-----------|-----------------|---------------|--------------|
| | Παράγοντες | N | Μέση τιμή | Τυπική Απόκλιση | Ελάχιστη τιμή | Μέγιστη τιμή |
| Φύλο | Αγόρια | 236 | 5,36 | 1,79 | 1 | 9 |
| | Κορίτσια | 255 | 6,01 | 1,80 | 1 | 9 |

Το δεύτερο κείμενο, που κλήθηκαν να αντιμετωπίσουν οι μαθητές, προήλθε από τον επιστημονικό χώρο και πιο συγκεκριμένα από αυτόν της βιολογίας ενώ τα ερωτήματα του γλωσσικού τεστ που το αφορούσαν ήταν τα 6-9. Το συγκεκριμένο κείμενο παρουσίαζε, κατά τη γνώμη μας, ιδιαίτερο ενδιαφέρον για επικοινωνιακά στοιχεία όπως είναι ο στόχος του κειμένου, ο συντάκτης του, το κοινό που απευθύνεται αλλά και το ύφος που ήταν γραμμένο, ενώ περιελάμβανε και αρκετές λέξεις οι οποίες άλλαζαν σημασία μέσα στο συγκεκριμένο πλαίσιο (π.χ. αλφάβητο, έκθεση, μηχανισμός). Θεωρήθηκε ενδιαφέρον λοιπόν να διαπιστωθεί εάν ήταν σε θέση οι μαθητές να διακρίνουν τις συγκεκριμένες πληροφορίες σ' ένα επιστημονικό κείμενο. Παρατηρώντας τον πίνακα 3 διαπιστώνει κανείς την υπεροχή της επίδοσης των κοριτσιών και σε αυτό το κείμενο η οποία μάλιστα, όπως μας δείχνει ο πίνακας 9, είναι στατιστικά σημαντική.

| Σκορ κείμενο 3 | | | | | | |
|----------------|------------|-----|-----------|-----------------|---------------|--------------|
| | Παράγοντες | N | Μέση τιμή | Τυπική Απόκλιση | Ελάχιστη τιμή | Μέγιστη τιμή |
| Φύλο | Αγόρια | 238 | 3,47 | 1,51 | 0 | 6 |
| | Κορίτσια | 258 | 3,67 | 1,49 | 0 | 6 |

Πίνακας 4: Μέσος όρος επίδοσης στο τρίτο κείμενο με βάση το φύλο

Από το πεδίο της τέχνης και πιο συγκεκριμένα αυτό της μουσικής, προέρχεται το τρίτο κείμενο που χρησιμοποιήθηκε στο γλωσσικό τεστ. Αυτό που ώθησε στην επιλογή του συγκεκριμένου κειμένου ήταν ότι χρησιμοποιείται εξειδικευμένος κώδικας (κώδικας που σχετίζεται με τη μουσική) και ότι οι συμμετέχοντες στην επικοινωνιακή διαδικασία (δημιουργός κειμένου, αναγνωστικό κοινό) είναι άτομα σχετικά με το συγκεκριμένο αντικείμενο. Θεωρήθηκε ενδιαφέρον, λοιπόν, να διερευνηθεί εάν οι μαθητές ήταν σε θέση να διακρίνουν τα παραπάνω στοιχεία όπως επίσης και άλλες πραγματολογικές και

κοινωνιογλωσσικές πληροφορίες όπως είναι ο στόχος του κειμένου, το ύφος του αλλά και το χρονικό σημείο που γράφτηκε. Όσον αφορά την επίδοση των μαθητών, αυτή δεν παρουσιάζει στατιστικά σημαντικές διαφορές. Διακρίνεται μόνο η μικρή τάση τα κορίτσια να υπερτερούν ελαφρά (πίνακες 4,9).

| Σκορ κείμενο 4 | | | | | | |
|----------------|------------|-----|-----------|-----------------|---------------|--------------|
| | Παράγοντες | N | Μέση τιμή | Τυπική Απόκλιση | Ελάχιστη τιμή | Μέγιστη τιμή |
| Φύλο | Αγόρια | 150 | 3,91 | 1,13 | 1 | 6 |
| | Κορίτσια | 209 | 4,12 | 0,95 | 2 | 6 |

Πίνακας 5: Μέσος όρος επίδοσης στο τέταρτο κείμενο με βάση το φύλο

Το τέταρτο κείμενο που κλήθηκαν να αντιμετωπίσουν οι μαθητές ήταν απόσπασμα από άρθρο της πρώτης σελίδας της εβδομαδιαίας εφημερίδας "Δημοσιογραφικά" που εκδίδει το υπουργείο Δημόσιας Διοίκησης και Αποκέντρωσης. Επειδή τέτοιου είδους κείμενα που θα εξηγούν τις υποχρεώσεις του πολίτη απέναντι στη δημόσια διοίκηση, θα συναντήσουν όλοι κάποια στιγμή, θεωρήθηκε πολύ ενδιαφέρον να διαπιστωθεί εάν οι μαθητές ήταν σε θέση να αναζητήσουν συγκεκριμένες πληροφορίες που σχετίζονται είτε με το νόημα είτε με τους παράγοντες που συνεργούν στο επικοινωνιακό γεγονός που συντελείται μέσα από το συγκεκριμένο κείμενο. Με βάση τους πίνακες 5 και 9 διαπιστώνεται ότι οι διαφορές που σχετίζονται με τον παράγοντα φύλο δεν είναι στατιστικά σημαντικές αφού η πιθανότητα εμφανίζεται μεγαλύτερη από το 0,05. Απλώς τα κορίτσια έχουν ελαφρώς καλύτερη επίδοση από τα αγόρια.

| Σκορ κείμενο 5 | | | | | | |
|----------------|------------|-----|-----------|-----------------|---------------|--------------|
| | Παράγοντες | N | Μέση τιμή | Τυπική Απόκλιση | Ελάχιστη τιμή | Μέγιστη τιμή |
| Φύλο | Αγόρια | 179 | 4,71 | 1,37 | 1 | 8 |
| | Κορίτσια | 225 | 5,03 | 1,41 | 1 | 8 |

Πίνακας 6: Μέσος όρος επίδοσης στο πέμπτο κείμενο με βάση το φύλο

Το προτελευταίο κείμενο που χρησιμοποιήθηκε ήταν ένα οικονομικό ρεπορτάζ με τίτλο "Γιορτινή έφοδος στην αγορά με πλαστικό χρήμα". Ζητούμενο μέσα με από το κείμενο αυτό ήταν οι μαθητές να διακρίνουν πληροφορίες σχετικές με το επικοινωνιακό πλαίσιο αυτού του ανειδίκευτου, ευρείας διάδοσης κειμένου, το οποίο πρωταρχικό σκοπό είχε να ενημερώσει για ένα οικονομικού χαρακτήρα ζήτημα όλους τους πολίτες, που θα επέλεγαν να το διαβάσουν. Στα ερωτήματα που αφορούσαν το κείμενο αυτό το φύλο διαφοροποίησε στατιστικά σημαντικά την επίδοση των μαθητών ($p=0,025$) με τα κορίτσια να παρουσιάζουν και σ' αυτή την περίπτωση την υψηλότερη με μέση τιμή 5,03 (T.A.=1,41) ενώ τα αγόρια να έπονται με 4,71 (T.A.=1,37) (πίνακες 6 και 9).

| Σκορ κείμενο 6 | | | | | | |
|----------------|------------|-----|-----------|-----------------|---------------|--------------|
| | Παράγοντες | N | Μέση τιμή | Τυπική Απόκλιση | Ελάχιστη τιμή | Μέγιστη τιμή |
| Φύλο | Αγόρια | 178 | 2,33 | 1,11 | 0 | 4 |
| | Κορίτσια | 228 | 2,39 | 0,94 | 0 | 4 |

Πίνακας 7: Μέσος όρος επίδοσης στο έκτο κείμενο με βάση το φύλο

Το τελευταίο κείμενο που περιλάμβανε το γλωσσικό τεστ δεν ήταν αυτοτελές αλλά ουσιαστικά αποτελούνταν από δύο ξεχωριστά αποσπάσματα τα οποία προήλθαν από το αθλητικό ρεπορτάζ και αναφέρονται στο ίδιο χρονικό σημείο του ίδιου ποδοσφαιρικού αγώνα. Στόχος ήταν μέσα από τα αντίστοιχα ερωτήματα (22-25), να διαπιστωθεί εάν οι μαθητές ήταν σε θέση να διακρίνουν πληροφορίες (γλώσσα, στάση συντακτών) μέσα από κείμενα από το πεδίο του αθλητισμού αλλά και να συγκρίνουν τα δύο αυτά αποσπάσματα μεταξύ τους ως προς την αντικειμενικότητα και την αποτελεσματικότητά τους. Όσον αφορά τις επιδόσεις, από τους πίνακες 7 και 9, παρατηρούμε ότι οι διαφορές που παρουσιάζει ο παράγοντας «φύλο» δεν θεωρούνται στατιστικά σημαντικές. Εντύπωση προκαλεί εδώ πάντως πως δεν είναι τα αγόρια αυτά με τη μεγαλύτερη μέση επίδοση αλλά τα κορίτσια. κάτι που είναι παράξενο αφού το ποδόσφαιρο θεωρείται, στην Ελλάδα τουλάχιστον, κατεξοχήν αντρικό άθλημα.

| Σκορ συνολικό | | | | | | |
|---------------|------------|---|-----------|-----------------|---------------|--------------|
| | Παράγοντες | N | Μέση τιμή | Τυπική Απόκλιση | Ελάχιστη τιμή | Μέγιστη τιμή |

| | | | | | | |
|-------------|-----------------|-----|-------|------|----|----|
| Φύλο | Αγόρια | 85 | 28,96 | 4,07 | 18 | 40 |
| | Κορίτσια | 129 | 29,33 | 4,21 | 19 | 38 |

Πίνακας 8: Μέσος όρος συνολικής επίδοσης με βάση το φύλο

Ολοκληρώνοντας την παρουσίαση των αποτελεσμάτων αξίζει να σταθούμε και στη συνολική επίδοση των παιδιών σε συσχέτισμό με το φύλο τους όπως αυτή παρουσιάζεται στους πίνακες 8 και 9. Μέσα από αυτούς προκύπτει πως οι διαφοροποιήσεις που παρουσιάζονται απέχουν αρκετά από τα όρια της στατιστικής σημαντικότητας. Απλώς τα κορίτσια παρουσιάζουν κάπως υψηλότερη μέση τιμή από τα αγόρια. Ενδιαφέρον παρουσιάζει η πληροφορία πως και η υψηλότερη και η χαμηλότερη επίδοση βρέθηκαν στα αγόρια (40 και 18 αντίστοιχα).

| | E 1 | 1 | 2 | 3 | 4 | 5 | 6 | Σ |
|----------------|------------|----------|------------------|----------|----------|-----------------|----------|------------------------|
| Mann-Whitney U | 34120,50 | 28472,50 | 23294,00 | 28288,50 | 14167,50 | 17583,00 | 19898,00 | Τιμή F = 1,253 (ANOVA) |
| p | 0.670 | 0.880 | <0.001 | 0.123 | 0.105 | 0.025 | 0.725 | 0.264 |

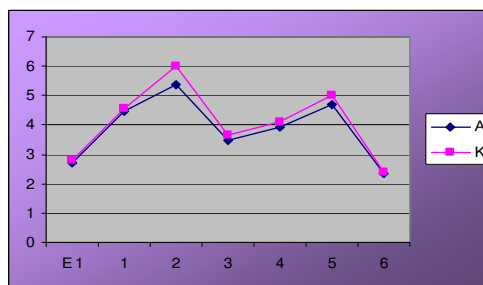
Πίνακας 9: Mann-Whitney U και η σημαντικότητα διαφορών μεταξύ αγοριών και κοριτσιών : Οι τιμές της πιθανότητας (p)

4. Συμπεράσματα

Στα δύο διαγράμματα που ακολουθούν παρουσιάζονται συγκεντρωτικά οι επιδόσεις των μαθητών ανά φύλο στο 1ο ερώτημα και στα 6 κείμενα καθώς και η συνολική επίδοση των μαθητών για να υπάρχει μια συνολική εικόνα των αποτελεσμάτων.

Η επίδοση των μαθητών ανά φύλο στο 1ο ερώτημα και στα 6 κείμενα.

→ Οριζόντιος άξονας: Ερωτήματα, κείμενα
→ Κάθετος άξονας: Μέση τιμή

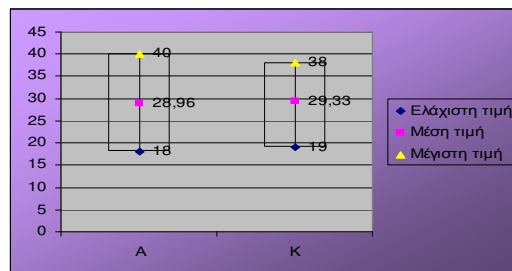


Η επίδοση των μαθητών ανά φύλο:

Η συνολική επίδοση

→ Οριζόντιος άξονας: Φύλο (αγόρια, Κορίτσια)

→ Κάθετος άξονας: Τιμές



Διάγραμμα 2

Η παραπάνω ανάλυση έδωσε σημαντικές κάποιες σημαντικές πληροφορίες. Πρώτη και σημαντικότερη παρατήρηση που μπορεί να γίνει είναι πως ο παράγοντας «φύλο» διαφοροποιεί την επίδοση των μαθητών, πάντοτε προς την ίδια κατεύθυνση: **τα κορίτσια έχουν μεγαλύτερες επιδόσεις από τα αγόρια**. Η ανάλυση που έγινε όμως με το Mann-Whitney U τεστ έδειξε πως η διαφορά αυτή είναι στατιστικά σημαντική μόνο στα δύο (B,E,) από τα έξι κείμενα όπου η πιθανότητα είναι για το μεν B κείμενο (από το πεδίο της επιστήμης) μικρότερη από το 0,001 ενώ για το E' (από το πεδίο της οικονομίας) ίση με 0,025. Αντίθετα στα υπόλοιπα τέσσερα, και το πρώτο ερώτημα οι διαφορές δεν θεωρούνται στατιστικά σημαντικές αφού η πιθανότητα παρουσιάζεται μεγαλύτερη από το 0,05. Και στην ανάλυση διακύμανσης του συνολικού σκορ φαίνεται πως οι συνολικές διαφορές που παρουσιάζονται δεν είναι στατιστικά σημαντικές αφού η πιθανότητα ανέρχεται σε 0,264. Αξίζει επίσης να σημειωθεί πως η καλύτερη επίδοση, όσον αφορά το συνολικό σκορ, βρέθηκε στα αγόρια και όχι στα κορίτσια (40), κάτι που ισχύει όμως και για την χαμηλότερη (18).

Μια επιπλέον παρατήρηση που μπορεί να γίνει είναι πως τα ερωτηματολόγια με όλες τις απαντήσεις είναι σε όλες τις περιπτώσεις περισσότερα στα κορίτσια από ότι στα αγόρια. Αυτό δείχνει ίσως είτε πως τα κορίτσια προσπάθησαν περισσότερο από τα αγόρια ώστε να μην αφήσουν κενά είτε πως τα κορίτσια συνάντησαν λιγότερες δυσκολίες στα κείμενα του τεστ.

Τέλος εντύπωση προκαλούν τα αποτελέσματα στο έκτο κείμενο όπου αναμενόταν, τουλάχιστον σε αυτό, τα αγόρια να έχουν καλύτερη

επίδοση μιας και αφορούσε ποδοσφαιρικό θέμα κάτι όμως που δεν συνέβη. Μάλιστα η επίδοση των αγοριών βρίσκεται κάτω από το 2 που είναι το μισό της μέγιστης δυνατής επίδοσης κάτι που επίσης είναι παράξενο αφού το ποδόσφαιρο θεωρείται, στην Ελλάδα τουλάχιστον, κατεξοχήν αντρικό άθλημα και τα αγόρια θεωρήθηκε ότι διαβάζουν πολύ συχνότερα ανάλογα κείμενα από ότι οι συμμαθήτριά τους. Ολοκληρώνοντας την παρούσα παρουσίαση πρέπει να τονιστεί πως θα ήταν χρήσιμη μια ανάλογη έρευνα με δείγμα και από άλλες περιοχές (π.χ. νησιωτική Ελλάδα) για να διαπιστωθεί εάν οι τάσεις που καταγράφονται στην παρούσα έχουν γενικότερη ισχύ στον ελληνικό χώρο.

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Η Μαθητεία στην Επιστημονική Γνώση μέσα από τα Κείμενα των Σχολικών Εγχειριδίων: Το Παράδειγμα της Βιολογίας

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1. Ερευνητική υπόθεση - μέθοδος

Στην παρούσα ανακοίνωση επιχειρείται μια κειμενογλωσσολογική ανάλυση των σχολικών εγχειριδίων Βιολογίας, με στόχο να εξετασθεί αν τα συναφή κειμενικά είδη και η λεξικογραμματική τους σύσταση αποκλείουν τους μαθητές από την πρόσβαση στην επιστημονική γνώση. Μελετήθηκαν αντιπροσωπευτικά κείμενα από τα σχολικά εγχειρίδια της δευτεροβάθμιας εκπαίδευσης σε συνάρτηση με τους ρητά διατυπωμένους, αλλά και άρρητους σκοπούς του νέου Αναλυτικού Προγράμματος και αναλύθηκαν οι λεξικογραμματικές επιλογές σε σχέση με το λειτουργικό τους ρόλο.

2. Θεωρητικό υπόβαθρο

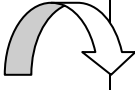
Οι βιβλιογραφικές παραδοχές στις οποίες βασίζεται το εγχείρημα αυτό είναι οι εξής:

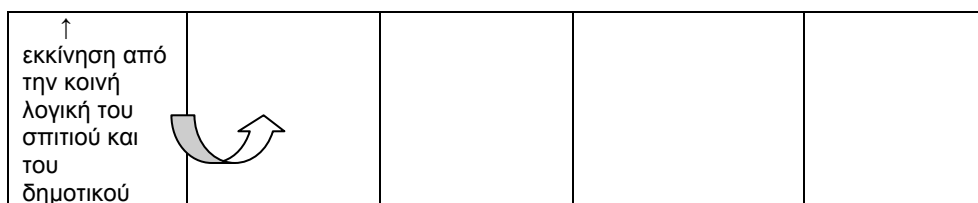
- 1) Τα επιστημονικά κείμενα ανήκουν στα επιχειρηματολογικά κείμενα (Λέκκα, 2005): Υποστηρίζεται ότι ο επιστημονικός λόγος δεν υπάρχει παρά σε άμεση συνάρτηση με τη σκοπιότητα παρατήρησης των γεγονότων και επομένως συνιστά μια ερμηνευτική κατασκευή για την πραγματικότητα. Για αυτό το λόγο, στη δόμηση του επιστημονικού κειμενικού είδους κυριαρχεί το απρόσωπο ύφος, αλλά και η αιτιολόγηση και η μεταφορά: *μας μεταφέρουν γνωστικά* σε κάτι μη εμφανές, το οποίο συνιστά μια υποκειμενική προοπτική πάνω στην πραγματικότητα (Martin, 1989: 24-27). Τη δυνατότητα αυτή την έχει η γλώσσα, σύμφωνα με τους Martin & Halliday (2000), γιατί δεν αντιστοιχεί απλά στην πραγματικότητα, αλλά τη νοηματοδοτεί, την κατασκευάζει (πρβλ. κονστρουκτιβισμό), μέσω της γεννήτριας που λέγεται γραμματική. Συγκεκριμένα, το γνωστικό πέρασμα στην κατασκευή της πραγματικότητας γίνεται μέσω των μηχανισμών της *γραμματικής μεταφοράς* και της *ονοματοποίησης*.
- 2) Ο ηγεμονισμός του λόγου της επιστήμης: Ο επιστημονικός λόγος πετυχαίνει να ελέγξει το υλικό περιβάλλον (φυσικούς και βιολογικούς πόρους) μέσω της τεχνολογίας και αυτό του αυξάνει την ισχύ στη δυτική κοινωνία, της οποίας η οικονομία είναι καπιταλιστική και βασίζεται στις επιστημονικές μεθόδους μαζικής παραγωγής. Επομένως, ο επιστημονικός λόγος καθίσταται ιδεολογικά μια κοινωνικο-οικονομική κατασκευή.

- 3) Η επιλεκτική λειτουργία του παιδαγωγικά πλαισιωμένου επιστημονικού λόγου: Όπως ισχυρίζεται ο Martin (1989: 54-61), στις καπιταλιστικές οικονομίες δυτικού τύπου η κύρια λειτουργία της εκπαίδευσης δεν είναι να προετοιμάσει τα παιδιά για την αγορά εργασίας, αλλά να ελέγξει ένα μεγάλο τμήμα του πληθυσμού, όπως είναι οι μαθητές, στο οποίο το σύστημα δεν μπορεί να προσφέρει μελλοντικά δουλειά.

Επομένως: Τα επιμέρους κειμενικά είδη του επιστημονικού λόγου στην εκπαίδευση δεν είναι «ουδέτερα» και «αληθή», αλλά ανταποκρίνονται, εντέλει, σε μια ιδιαίτερη προσέγγιση της γνώσης ως *δυνατότητας, εξήγησης, τεκμηρίωσης και πειθούς*, που με τη σειρά της αντιστοιχεί σε κοινωνικο-οικονομικές ανάγκες για *παραγωγή, διαχείριση, διατήρηση και πρακτικό χειρισμό της γνώσης* (βλ. Martin, J. R. & Veal R. (1998) και Halliday M. A. K. & Martin J. R. (2000)). Σύμφωνα με τον Rose (1997: 45), ισχύει η εξής αντιστοιχία ανάμεσα στον πλαισιωμένο λόγο της επιστήμης για την εκπαίδευση και σ' αυτόν για την παραγωγή αντίστοιχα, προσαρμοσμένη από εμάς στα ελληνικά δεδομένα:

| | | | | |
|--|-------------------|--|----------------------------|---|
| | <u>Εκπαίδευση</u> | Η επιστήμη αναπλαισιωμένη ως Αναλυτικό Πρόγραμμα | <u>Οικονομική παραγωγή</u> | Η επιστήμη αναπλαισιωμένη ως βιομηχανική παραγωγή |
|--|-------------------|--|----------------------------|---|

| | | | | |
|---|---------------------------------------|-------------------------------|---|---|
|  | ακαδημαϊκοί ερευνητές | ↓ | ↓προμήθεια επιστημόνων-ερευνητών | ↓ανάπτυξη νέων επιστημονικών διαδικασιών |
| προς την παραγωγή νέας γνώσης | προπτυχιακοί φοιτητές | επαγγελματική εκπαίδευση | προμήθεια ειδικών επιστημόνων εφαρμογών και μηχανικών | σχεδιασμός και διαχείριση της τεχνολογίας |
| προς τα θετικά μαθήματα κατεύθυνσης | τελειόφοιτοι μαθητές Ενιαίου Λυκείου | προπαρασκευή για πανεπιστήμιο | προμήθεια κατηρτισμένων τεχνικών και παρα-επαγγελματιών | κατασκευή και διατήρηση της τεχνολογίας |
| προς τα γενικής παιδείας θετικά μαθήματα | τελειόφοιτοι μαθητές Τεχνικών Λυκείων | επιστημονικά «θέματα» | προμήθεια ειδικευμένων χειριστών | χειρισμός της τεχνολογίας |
| κατάκτηση της βασικής τεχνικής εγγραματοσύνης | μαθητές Γυμνασίου | «κάνοντας» επιστήμη | προμήθεια ανειδίκευτων εργατών | |



**μεταφέροντας
τον κόσμο της εμπειρίας
στον κόσμο της γνώσης**

Πίνακας 1: Αντιστοίχιση του παιδαγωγικά και οικονομικά πλαισιωμένου επιστημονικού λόγου με την εκπαιδευτική πολιτική και τη βιομηχανική παραγωγή.

Όσο οι μαθητές προχωρούν στη δευτεροβάθμια εκπαίδευση σταδιακά αλλάζει η εστίαση του παιδαγωγικά πλαισιωμένου επιστημονικού λόγου από τους τύπους του νοήματος που κατασκευάζονται μέσω της φυσικής, πρακτικής εξάσκησης προς τη γνώση που είναι προσανατολισμένη στα «αντικειμενικά» γεγονότα και θεωρείται δεδομένη και συσσωρευμένη σε βιβλία. Ο Veel (1997:175) σ' αυτή τη κοινωνιο-γνωστική διαδικασία, γνωστή και ως «μονοπάτι γνώσης», την οποία καλούνται από τη σχολική πρακτική να ακολουθήσουν με επιτυχία οι μαθητές, αντιστοιχεί τα εξής κειμενικά είδη κατά κλίμακα:

Υψηλά εκτιμώμενο είδος.....Χαμηλά εκτιμώμενο είδος

| | | | |
|--|---|---|---|
| 1) έμφαση στις πρακτικές δεξιότητες | διαδικαστικά κείμενα και διαδικασιακές αναφορές | εξηγήσεις και περιγραφικές/ταξινομικές αναφορές | εκθέσεις και συζητήσεις |
| 2) έμφαση σε κοινωνικά προβλήματα και κοινωνικό αντίκτυπο | εκθέσεις και συζητήσεις | εξηγήσεις και περιγραφικές/ταξινομικές αναφορές | διαδικαστικά κείμενα και διαδικασιακές αναφορές |

Πίνακας 2: Αντιστοίχιση κειμενικών ειδών στο «μονοπάτι της γνώσης»

3. Δεδομένα

Με βάση τα προαναφερθέντα θα επιχειρήσουμε να εξετάσουμε τη ρητή ιδεολογία του εκπαιδευτικού συστήματος σε σχέση με την επιστημονική βιολογική γνώση, έτσι όπως αυτή εκφράζεται στα αναλυτικά προγράμματα, και να τη συσχετίσουμε με την άρρητη ιδεολογία όσον αφορά την επιλεκτική ή μη λειτουργία του εκπαιδευτικού συστήματος, έτσι όπως αυτή συνίσταται στην κοινωνιογνωστική διαδικασία που υπαγορεύεται από τα κειμενικά είδη και τις αντίστοιχες λεξικογραμματικές επιλογές στα εγχειρίδια Βιολογίας της δευτεροβάθμιας εκπαίδευσης.

3.1. Ιδεολογικό υπόβαθρο και εκπαιδευτική πολιτική:

- 1) Ο κομβικός ρόλος της Βιολογίας στη σύγχρονη κοινωνία και οικονομία: Η κλωνοποίηση, η τεχνητή γονιμοποίηση, η βιοτεχνολογία, τα νέα εμβόλια, οι βιολογικές καλλιέργειες είναι μόνο μερικά από τα επιτεύγματα της Βιολογίας που ανταποκρίνονται στο μοντέλο της πυρηνικής οικογένειας και του καταναλωτισμού, αλλά και της ατομικότητας που προωθεί η σύγχρονη, δυτικού τύπου καπιταλιστική οικονομία.
- 2) Στόχοι Α.Π. Γυμνασίου: Δημιουργία *μαθητή-εξερευνητή*, ο οποίος έχει ως σημείο αφόρμησης κυρίως το εργαστήριο, όπου θα κάνει πειράματα με βάση την επιστημονική μέθοδο (παρατήρηση-υπόθεση-πείραμα-συμπέρασμα) - Πέρασμα από τη γνώση του σπιτιού-δημοτικού στην επιστημονική με όρους *πρακτικότητας* και *οικειότητας*. (Είναι χαρακτηριστικό ότι ο μαθητής της Α΄ Γυμνασίου καλείται να παρατηρήσει, να δει συστηματικά ομοιότητες-διαφορές, να εντοπίσει παράγοντες και να ταξινομήσει, ενώ ο μαθητής της Γ΄ καλείται επιπλέον να αναπτύξει πρωτοβουλία και να προβεί σε έρευνα με το σχηματισμό υποθέσεων προς επιστημονικό έλεγχο).
- 3) Στόχοι Α.Π. Λυκείου: Η γνώση ως «*σύμβουλος*» και η επιστημονική σκέψη ως απόκτηση *μεθόδου επεξεργασίας θεμάτων* (Βιολογία Γενικής Παιδείας) - Πρότυπο του *ευαισθητοποιημένου πολίτη* («βιολογικά σκεπτόμενος»), αλλά κυρίως του *επιστήμονα*. Ο επιστημονικός τρόπος σκέψης παρουσιάζεται ως δημιουργικός, δυναμικός, ανάλογος της σκοπιάς του ερευνητή και βέβαια ιεραρχημένος και καθολικός. Δηλώνεται ότι η Μοριακή Βιολογία δεν περιορίζεται πια μόνο στην παρατήρηση των βιολογικών διαδικασιών, αλλά *παρεμβαίνει για την παραγωγή κοινωνικών αγαθών* (Βιολογία Κατεύθυνσης).

3.2. Τα επιλεγμένα είδη κειμένων:

Αρχίζοντας από το Γυμνάσιο, ο μαθητής ως εξερευνητής του οικείου του κόσμου και εξοικειωνόμενος με τη συστηματικότητα και τη λογική εξήγηση της επιστήμης μέσα από *διαδικαστικά* κείμενα, *περιγραφικές* και *ταξινομικές* αναφορές και *αιτιακές* εξηγήσεις, προχωρά προς το ιδεώδες του ευαισθητοποιημένου κοινωνικά-περιβαλλοντικά πολίτη, μέσα από *συζητήσεις*, *εκθέσεις*, *εξερευνήσεις*, για να καταστεί εν συνεχεία βιολογικά σκεπτόμενος, να κατακτήσει τελικά την επιστημονική βιολογική σκέψη και να προχωρήσει σε ερευνητικές πρωτοβουλίες μέσα από κείμενα ανώτατου βαθμού αφάιρεσης, όπως είναι οι *εκθέσεις*, αλλά την ίδια στιγμή κείμενα που δίνουν έμφαση στο ακριβές, *διαδοχικό* και *συστηματικό* της διαδικασίας, διότι οι εύστοχες παρατηρήσεις-αξιολογήσεις του επ' αυτής θα

του προσφέρουν τη δυνατότητα να δομήσει μια νέα προοπτική-ερμηνεία πάνω στην πραγματικότητα.

3.3. Οι λεξικογραμματικές επιλογές:

Όσο προχωράμε σε οντογενετικό και λογογενετικό επίπεδο, η γλώσσα του επιστημονικού κειμένου γίνεται *λεξικά πιο πυκνή*, με περισσότερες ονοματοποιήσεις και αφαιρέσεις. Παρατηρούμε πέρασμα από την παρατακτική σταδιακά σε αντιθετική και χρονική σύνδεση και τέλος σε σύνδεση αιτίου-αποτελέσματος, καθώς εμφανίζονται και περισσότεροι κειμενικοί δείκτες:

3.3.1. Α΄ Γυμνασίου

Παράδειγμα 1:

4. *Κουνήστε καλά την οδοντογλυφίδα, ώστε να μείνει στη σταγόνα όλο το υλικό που έχετε συλλέξει από το στόμα σας και να κατανεμηθεί ομοιόμορφα*

5. *Πετάζτε αμέσως την οδοντογλυφίδα για να μην υπάρχει ο κίνδυνος να μεταφερθούν μικρόβια από το ένα άτομο στο άλλο.*

6. *Αφήστε το παρασκεύασμα για 2-3 λεπτά και κατόπιν καλύψτε το με μία καλυπτίδα με τη βοήθεια της ανατομικής βελόνας.*

Παράδειγμα 2:

Το αίμα ασκεί πίεση στα τοιχώματα των αιμοφόρων αγγείων. Αυτή την πίεση μπορούμε να τη μετρήσουμε με ειδικό όργανο, το πιεσόμετρο. Σε κάθε συστολή της καρδιάς η πίεση του αίματος στις αρτηρίες συνήθως κυμαίνεται από 11 έως 15 cmHg (μονάδα μέτρησης της πίεσης). Αυτή χαρακτηρίζεται ως “μεγάλη” αρτηριακή πίεση. Όταν η καρδιά χαλαρώνει, η πίεση αυτή συνήθως γίνεται 8cmHg και λέγεται “μικρή” αρτηριακή πίεση.

Ως προς τη λεξιλογική πυκνότητα των κειμένων θα λέγαμε ότι στο πρώτο είναι ιδιαίτερα αραιή, π.χ. 10 λέξεις περιεχομένου σε 4 προτάσεις στο 4 του κειμ. 1.1., περίπου 2 ανά φράση δηλαδή, όσες και σε ανεπιτήδευτο προφορικό λόγο. Στο δεύτερο έχουμε 30 λέξεις περιεχομένου σε 8 φράσεις, περίπου 4 ανά φράση, οπότε βλέπουμε τη λεξική πυκνότητα αυξημένη, ως αυτή του γραπτού λόγου.

Ως προς τις ονοματοποιήσεις και τις αφηρημένες έννοιες, βλέπουμε ότι στο πρώτο κειμ. έχουμε μόλις και μετά βίας 1 (βοήθεια), ενώ στο δεύτερο κάποιες (αρτηριακή πίεση, συστολή της καρδιάς: ονοματοποιήσεις/ μονάδα μέτρησης: αφηρημένη έννοια).

Η σύνδεση επιτυγχάνεται με συμπλεκτικούς και τελικούς-συμπερασματικούς συνδέσμους στο πρώτο κείμενο, ενώ στο δεύτερο

σχεδόν απουσιάζουν, εκτός από τους *όταν* και *και* στην τελευταία περίοδο. Οι λογικο-σημαντικές σχέσεις, δηλαδή, δεν είναι ιδιαίτερα σύνθετες, αλλά όταν έχουμε σχέση αιτίου-αιτιατού και χρονικοϋποθετική, τότε είναι που κατασκευάζουμε το πέρασμα από τον συγκεκριμένο περιγραφόμενο κόσμο σε έναν άλλο, πιθανό (όπου τα μικρόβια μεταφέρονται και η καρδιά χαλαρώνει). Τέλος, δεν εντοπίζουμε κειμενικούς δείκτες.

Παρατηρούμε, επομένως, ότι στην Α΄ Γυμνασίου ο επιστημονικός λόγος είναι ακόμη κοντά στο επίπεδο της εμπειρίας και ότι σιγά-σιγά οι μαθητές εισάγονται με εικονικές οντότητες και τις μεταξύ τους λογικο-σημαντικές συσχετίσεις στον κόσμο της αφαίρεσης.

3.3.2. Γ΄ Γυμνασίου

Παράδειγμα 3:

Το φαινόμενο του θερμοκηπίου: Η ηλιακή ακτινοβολία διέρχεται από την ατμόσφαιρα και φτάνει στην επιφάνεια της Γης. Ένα μέρος αυτής της ακτινοβολίας απορροφάται από την επιφάνεια του πλανήτη μας και το υπόλοιπο ανακλάται. Η ακτινοβολία που ανακλάται διαφεύγει στο διάστημα, εκτός από ένα μέρος της, το οποίο συγκρατείται από ένα στρώμα αερίων, για παράδειγμα διοξειδίου του άνθρακα και υδρατμών, που υπάρχει στην ατμόσφαιρα. Αυτό έχει ως αποτέλεσμα την αύξηση της θερμοκρασίας του ατμοσφαιρικού αέρα κοντά στην επιφάνεια της Γης. Το φαινόμενο αυτό ονομάζεται φαινόμενο του θερμοκηπίου, επειδή λειτουργεί με τρόπο παρόμοιο με αυτόν που λειτουργεί ένα θερμοκήπιο. Έτσι, η μέση θερμοκρασία στην επιφάνεια της Γης είναι 15 0C, γεγονός που επιτρέπει την ανάπτυξη της ζωής επάνω σ' αυτήν. Όμως, τα τελευταία χρόνια, εξαιτίας της απελευθέρωσης στην ατμόσφαιρα μεγάλων ποσοτήτων διοξειδίου του άνθρακα, κυρίως από τις βιομηχανίες και τα αυτοκίνητα, συγκρατούνται μεγαλύτερα ποσά ακτινοβολίας στην ατμόσφαιρα. Το αποτέλεσμα είναι να αυξάνεται περισσότερο από το φυσιολογικό η θερμοκρασία της Γης. Αυτή η μη φυσιολογική αύξηση της θερμοκρασίας μπορεί να οδηγήσει σε λιώσιμο των πάγων στους πόλους, με αποτέλεσμα την άνοδο της στάθμης της θάλασσας, την απώλεια χερσαίων εκτάσεων και μια γενικότερη αλλαγή του κλίματος της Γης.

Δειγματοληπτικά, στις 8 πρώτες προτάσεις απαντάμε 28 λέξεις περιεχομένου, περίπου 3-4 σε κάθε πρόταση, πράγμα που δηλοί πυκνότητα γραπτού λόγου.

Συναντάμε ονοματοποιήσεις (ακτινοβολία, αύξηση, θερμοκρασία, ανάπτυξη, απελευθέρωση, λιώσιμο, άνοδος, απώλεια, αλλαγή) και αφηρημένες έννοιες (φαινόμενο του θερμοκηπίου, το φυσιολογικό). Βλέπουμε, δηλαδή συστηματική χρήση εικονικών οντοτήτων.

Οι λογικο-σημαντικές σχέσεις ποικίλλουν στο κείμενο: από παρατακτική και αντιθετική σύνδεση, σε αιτιώδεις σχέσεις συνέπειας και αναγκαστικού αιτίου. Τέλος, μπορούμε να θεωρήσουμε ότι οι σύνδεσμοι *όμως* και *έτσι* οργανώνουν το κείμενο εσωτερικά.

Η συνεμφάνιση χαρακτηριστικών του επιστημονικού λόγου και το είδος του εξηγητικού κειμένου στη Γ΄ Γυμνασίου μάς οδηγούν στο συμπέρασμα ότι διαμορφώνονται οι κειμενογλωσσικές προϋποθέσεις για να γίνει γνωστικό βήμα στα σχολικά συμφραζόμενα από το «κάνοντας επιστήμη» για τα «επιστημονικά θέματα».

3.3.3. Γ΄ Λυκείου – Γενικής Παιδείας

Παράδειγμα 4:

Ο Μάλθους στο έργο αυτό υποστήριξε ότι ο ανθρώπινος πληθυσμός αυξάνεται με ρυθμό γεωμετρικής προόδου (2, 4, 8, 16,...), σε αντίθεση με τα αγαθά (τροφή κ.ά.), που παράγονται με ρυθμό αριθμητικής προόδου (1, 2, 3, 4,...). Αυτό οδήγησε το Μάλθους στο να διατυπώσει την άποψη ότι η αύξηση του ανθρώπινου πληθυσμού πρέπει να ελέγχεται, ώστε να διατηρείται το ισοζύγιο ανάμεσα στο μέγεθός του και τα διαθέσιμα αγαθά, τις πηγές τροφής. Προχώρησε μάλιστα ακόμη παραπέρα, ισχυριζόμενος ότι κάθε μέτρο ανακούφισης των οικονομικά ασθενέστερων τάξεων ενθαρρύνει την αλόγιστη αύξηση του πληθυσμού και επιδεινώνει, αντί να βελτιώνει, τις συνθήκες διαβίωσης.

Στο κείμενο αυτό η λεξική πυκνότητα είναι αρκετά ισχυρή, με 26 λέξεις περιεχομένου σε 7 προτάσεις, λίγο λιγότερο από 4 λέξεις ανά πρόταση.

Έχουμε, επίσης, τη χαρακτηριστική λειτουργία της γραμματικής μεταφοράς (ο ανθρώπινος πληθυσμός αυξάνεται → η αύξηση του ανθρώπινου πληθυσμού), όπως και αρκετές εικονικές οντότητες, και δη αφηρημένες έννοιες, ως αναμένεται από ένα κείμενο πειθούς (αύξηση, ρυθμός γεωμετρικής/ αριθμητικής προόδου, ισοζύγιο, πηγές τροφής, μέτρο ανακούφισης).

Η λογικο-σημαντική συσχέτιση των εννοιών γίνεται με συνδέσμους που εκφράζουν προσθήκη, σύγκριση, αλλά και σκοπό και εναντίωση. Κειμενικά, βλέπουμε τη φράση «Προχώρησε μάλιστα ακόμη παραπέρα» να δίνει έμφαση στη διαδικασία του συλλογισμού που ανέπτυξε ο Μάλθους.

Είναι σαφές ότι οι λεξικογραμματικές αυτές επιλογές προϋποθέτουν έναν αναγνώστη ικανό να δομήσει την επιστημονική γνώση με όρους αφαιρετικότητας.

3.3.4. Γ΄ Λυκείου – Θετικής Κατεύθυνσης

Παράδειγμα 5:

Όταν γίνεται καλλιέργεια μικροοργανισμών σε μεγάλη κλίμακα (βιομηχανική καλλιέργεια) χρησιμοποιούνται κατάλληλες συσκευές που

ονομάζονται ζυμωτήρες ή βιοαντιδραστήρες (Εικόνα 7.3). Οι βιοαντιδραστήρες επιτρέπουν τον έλεγχο και τη ρύθμιση των συνθηκών (θερμοκρασία, pH, συγκέντρωση O₂) που αφορούν την καλλιέργεια.

Παράδειγμα 6:

Η πρωτεΐνη αυτή παράγεται στο ήπαρ του ανθρώπου και η απουσία της, που είναι αποτέλεσμα μετάλλαξης του γονιδίου, έχει ως αποτέλεσμα γενετική ασθένεια, που οδηγεί στο εμφύσημα. Για την παραγωγή της πρωτεΐνης αυτής από τα πρόβατα απομονώθηκε το φυσιολογικό γονίδιο της AΤΤ του ανθρώπου και στη συνέχεια με μικροέγχυση τοποθετήθηκε σε γονιμοποιημένο ωάριο προβάτου.

Στο κείμενο του Παρ. 5 έχουμε υψηλότερη συγκέντρωση λεξικής πυκνότητας, 6 λέξεις ανά πρόταση περίπου, και στο δεύτερο πάλι ισχυρή, γύρω στις 4 λέξεις περιεχομένου ανά πρόταση.

Οι ονοματοποιήσεις απαντώνται συχνά (καλλιέργεια, έλεγχος, ρύθμιση – απουσία, μετάλλαξη, αποτέλεσμα, παραγωγή, μικροέγχυση, γενετική ασθένεια).

Οι σύνδεσμοι εκφράζουν χρονικοϋποθετικότητα, σκοπό και χρονική διαδοχή, πέρα από την προσθετικότητα του και και στα δύο κείμενα. Στα συγκεκριμένα αποσπάσματα δεν απαντώνται εσωτερικοί σύνδεσμοι.

Η προετοιμασία για το πανεπιστήμιο γίνεται μέσα από την εντατικοποίηση των λεξικογραμματικών επιλογών που δομούν την επιστημονική γνώση και τη «βιολογική σκέψη».

4. Συμπεράσματα – ερευνητικές προοπτικές

Συνοψίζοντας, θα μπορούσαμε να πούμε ότι:

Στο Γυμνάσιο επιχειρείται το πέρασμα στην επιστημονική εγγραμματοσύνη, με κείμενα διαδικαστικά, ταξινομικά, αλλά και εξηγητικά. Σκοπός του Α.Π. το «κάνοντας επιστήμη» όσο και η ευαισθητοποίηση πάνω στα κοινωνικά θέματα. Στο Λύκειο στόχος είναι η ευαισθητοποίηση και η κριτική κατάρτιση των μαθητών Βιολογίας Κορμού, καθώς και η επιτυχή προπαρασκευή των μαθητών Βιολογίας Κατεύθυνσης για την τριτοβάθμια εκπαίδευση (επαγγελματική κατάρτιση - δημιουργία επιστημόνων). Τα κείμενα είναι ως επί το πλείστον εκθετικά και εξηγηματικά, εγκιβωτίζοντας διαδικασιακές αναφορές και ταξινομίες (μικτά είδη).

Συνεπώς, ο επιλεκτικός κοινωνιο-γνωστικός χαρακτήρας του εκπαιδευτικού συστήματος ως προς την πρόσβαση στη βιολογική γνώση, σε ό,τι αφορά τα είδη και τη λεξικογραμματική σύσταση των κειμένων των σχολικών εγχειριδίων, δυνάμει αίρεται. Η διαπίστωση αυτή ερμηνεύεται σ' ένα κοινωνικο-οικονομικό (ανάγκη για βιομηχανικές εφαρμογές της

επιστήμης), αλλά και δεοντολογικό πλαίσιο (*Βιοηθική*), το οποίο έχουν αναδιαμορφώσει οι ραγδαίες εξελίξεις στην επιστήμη της Βιολογίας (*Μοριακή Βιολογία, Βιοτεχνολογία*) και στο παιδευτικό μοντέλο στο οποίο εγγράφεται ο παιδαγωγικός λόγος της επιστήμης σήμερα (*Κοινωνία της Πληροφορίας*).

Αναλυτικότερα, δε, θα πρέπει να εξεταστούν ως παράμετροι συνδιαμόρφωσης του βαθμού μαθητείας στην επιστημονική γνώση:

- ✓ Τα κειμενικά είδη, οι συναφείς λεξικογραμματικές επιλογές και οι στόχοι στα συγγράμματα της τριτοβάθμιας εκπαίδευσης, ούτως ώστε να διερευνηθεί η σύνδεση του παιδαγωγικά πλαισιωμένου επιστημονικού λόγου στο πανεπιστήμιο με την αγορά εργασίας και τον ερευνητικό τομέα.
- ✓ Το πώς διαμορφώνεται ο παιδαγωγικός επιστημονικός λόγος συνολικότερα μέσα από ένα σχολικό μακροείδος.
- ✓ Ο ειδικότερος ρόλος της ανάπτυξης του παιδικού λόγου, της σχολικής διοίκησης, της κοινωνικής τάξης, του φύλου, της εθνικότητας, της τεχνολογίας και της οικονομίας στην πρόσβαση στην επιστημονική γνώση.

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Time Conceptualisation in Modern Greek: Metaphorical Patterns and Context¹

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0. Introduction: Time and Metaphorical Structure

Time is omnipresent in every aspect of our life, from birth till death; we talk about time on a daily basis, we schedule our life over time and we measure our lifespan through time. However, time is an abstract domain of human experience; obviously it cannot be perceived *per se* but only through its manifestations in physical reality, e.g. the circle of life and death, and periodical natural phenomena, such as the sunset and the sunrise, the succession of seasons etc. Given its abstract structure, time needs to be understood in terms of other, more concrete and directly perceivable domains of experience. Moreover, it is undeniable that time is fully embedded in language not only grammatically through tense and aspect but also lexically, e.g. when we talk about our experience of time, our past experiences, our future plans etc. Within the cognitive linguistics framework it is argued that metaphor serves as the principal tool that humans make use of in order to think of and talk about time. According to Conceptual Metaphor Theory (hereafter CMT), which has been proposed by Lakoff & Johnson (1980a, 1980b, 1980c, 1999) and Lakoff (1993) in the recent years, metaphorical expressions of everyday language arise from conceptual metaphors. The latter map an abstract conceptual domain, the source domain, and its inferences onto another one, the target domain, which is typically more concrete and perceptually accessible. CMT radically differs from traditional approaches to figurative language, which viewed metaphor as a figure of speech or as an ornamental feature that belongs mostly to poetry and deviates from the literal and typically “correct” meaning. However, although CMT contributed innovative insights on metaphor in everyday language, it has been scarcely concerned with metaphor in creative language (see Lakoff & Turner 1989). Therefore, two research questions are raised that I wish to explore in this study:

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a. Do novel metaphors of time exhibit the same systematic mappings as the conventional ones attested in everyday language or do they introduce new patterns? Do the two relate to each other and in which ways?

b. What role does context play in reaching a plausible interpretation in the case of novel metaphors of time? What does this imply for metaphor theory and for utterance processing in general?

For this purpose a corpus-based methodology has been adopted. Data were collected from two discourse genres which were expected to yield conventional and non-conventional, i.e. novel, metaphors of time, namely newspapers and poetry respectively. A qualitative analysis was conducted on the basis of 100 metaphorical expressions from newspapers and 70 metaphors from poetry. The former were drawn from two daily leading Greek newspapers, namely 'Eleftherotipia' and 'Makedonia', and covered all kinds of topics (politics, sports, economy, international affairs, culture, advertisements etc.), whereas the latter derived from the online database of Modern Greek literature "Spoudastirio Neou Ellinismou" (www.snhell.gr), as well as from the bi-annual literary review "To Dentro", and belonged mainly to the 20th century poetry.

In the remainder of this paper, first I briefly sketch the framework of CMT along with the empirical evidence attested in my newspaper corpus that fall under its umbrella and next I proceed to presenting my findings from the poetic discourse and the challenges they posit for CMT.

1. CMT: Conventionally Speaking of Time

Time, along the lines of CMT, is construed through cross-domain mappings in terms of physical entities, locations and resources (Lakoff & Johnson 1999: 140-168). Conceptual metaphors of time yield a network of systematic metaphorical expressions, which have been conventionalised throughout time and therefore are stored in the lexicon (see Traugott 2004 for an approach from a historical perspective).

The system of structural mappings that yields the greatest number of instantiations cross-linguistically is TIME IS SPACE and this also seems to hold for Modern Greek. Although space has been associated with time very early within philosophy of language (McTaggart 1908: 471, Smart 1949: 483), it is only recently (Lakoff & Johnson 1980: 42, 1999: 139-161, Lakoff 1993: 213-215) that it was systematically recognised as the major source domain for the conceptualisation of time. Humans inherently perceive themselves as extending and acting in space and time, and it is with this respect that humans' sense of time differs from animals' and plants' (Popper 1993: 129-130). This entails that humans are consciously aware that they are closely interrelated with space (including locations and objects situated

in these locations) and time. Therefore it just comes natural for us to construe time in spatial terms.

Given TIME IS SPACE, time in Modern Greek is conceived of as a linear sequence of events along a path. All spatio-temporal metaphors fall under the umbrella of the Time Orientation Metaphor and follow its structure; the past is mapped onto the space behind the observer and the future onto the space in front of the observer, whereas the present is typically co-located with him:

1) *Ας επιστρέψουμε όμως στο παρελθόν.* [N]²

let's now return to the past

2) *Για τους φοιτητές το μέλλον είναι μπροστά.* [N]

for the students the future lies ahead

Schematically:

THE TIME ORIENTATION METAPHOR

The location of the observer → the present

The space in front of the observer → the future

The space behind the observer → the past (Lakoff & Johnson 1999: 140)

The dynamic nature of time is clearly illustrated in the case of two distinct conceptual metaphors that construe time either as a landscape whereby a (putative) observer is moving or as a moving entity whereby a (putative) observer is static. According to TIME IS A MOVING OBJECT (Lakoff & Johnson 1999: 141), a stationary observer is facing in a fixed direction while an indefinitely long sequence of objects is moving past him from front to back. The moving objects, namely times, are conceptualised as having fronts in the direction of their motion. Given TIME IS A LANDSCAPE, on the other hand, the observer is moving along a path consisting of locations that correspond to times (Lakoff & Johnson 1999: 145-146). In both cases, however, the observer is co-located with the present whereas the past lies behind and the future upfront.

Schematically the two mappings have the following structure (see also Figure 1):

TIME IS A LANDSCAPE (Moving-Ego Metaphor)

Locations on the observer's path of motion → times

The motion of the observer → the 'passage' of time

² In all cited utterances I indicate their source with [N] for the newspaper corpus and [P] for the poetic. In the latter within the bracket I also make reference to the poet.

The distance moved → the amount of time ‘passed’ (Lakoff & Johnson 1999: 146)

3) Βουτά στο χρόνο και γυρνά στο καλοκαίρι
He plunges in time and returns to the summer [N]

4) Εκατομμύρια επιθυμούν να αποδράσουν από ασφυκτικούς χώρους και χρόνους
Millions of people wish to escape from suffocating places and times [N]

TIME IS A MOVING OBJECT (Moving-Time Metaphor)

Objects → times

The motion of objects → the ‘passage’ of time

The distance moved → the amount of time ‘passed’ (Lakoff & Johnson 1999: 141-142)

5) Αισθανόμουν ότι έφευγε ο χρόνος.
I was feeling that time was flying [N]

6) Με το πέρασμα του χρόνου η κατάσταση της υγείας μου επιδεινώνεται.
with the passage of time my health condition gets worse [N]

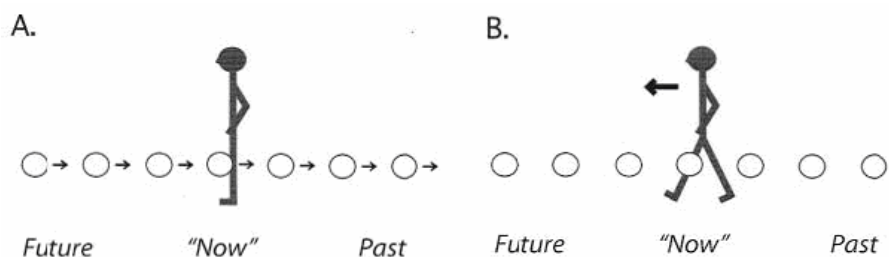


Figure 1 (adapted from Núñez, Motz & Teuscher 2005). *Moving-Time (A) and Moving-Ego (B) conceptual metaphors. In both an observer, the Ego, is co-located with the present. Locations in front of the Ego are mapped with the future and those behind the Ego with the past.*

Both mappings share motion as a common feature, although they differ with respect to the moving entity (i.e. the observer and time respectively). Given that motion is spatial, continuous and one-dimensional, the passage of time is also construed as spatial, continuous and one-dimensional. All inferential

features of motion (a path, a starting point and a destination, directionality, distance moved, linearity, velocity and duration) are mapped onto time. Thus the passage of time in Modern Greek is construed as locomotion along a linear path, starting from a point A and ending to another point B ahead of point A and having certain direction and extension. As a result, time can be measured.

Another conceptualisation of time in Modern Greek relies on the notion of resources, of which a special sub-case is money. A resource is defined as a supply that an individual can possess and therefore use, especially a non-renewable resource. Typically it refers to a measurable entity of high utility to its user. The scenario of the cognitive schema proposed by Lakoff & Johnson (1980: 66-68, 1999: 161-164) predicts that the agent, i.e. the 'user' of time, corresponds to the user of the resource, while the value of time correlates with that of the resource. Concepts such as expenditure, scarcity, efficiency, waste, cost, worthiness, which are central to the concept of resource, pertain equally to the conceptualisation of time. Given that money is a kind of resource, TIME IS A RESOURCE entails a variation of it, namely TIME IS MONEY. In this case the value of money is mapped onto the value of time and the user of the money onto the 'user' of time. Schematically:

TIME IS A RESOURCE

The resource → time

The user → the agent

The value of the resource → the value of time (Lakoff & Johnson 1999: 162-163)

7) Με διάθεση να ζοδευτεί δημιουργικά ο χρόνος

In the mood for spending time creatively

[N]

8) Σας ευχαριστώ για τον πολύτιμο χρόνο σας.

Thank you for your precious time

[N]

Given that in the Western culture the passage of time amounts to the gain or loss of money, time is unsurprisingly conceptualised in terms of resources. Our culture has reified this metaphor in cultural institutions such as clocks, deadlines, appointment books, as well as in the norm of people being paid according to the amount of their time worked (Lakoff & Johnson: 154-165). This pattern of time conceptualisation in Modern Greek emerges under the socio-economical requirement to budget our time in order to make good profit out of it. In the light of this, TIME IS A RESOURCE is a culture-

specific conceptual metaphor and Modern Greek seems to be embedded within the broader context of the Western culture.

3. Novel Metaphors of Time: from Convention to Context

As it has been already shown, conventional metaphors of time crucially lack a literal equivalent, i.e. they cannot be paraphrased as, e.g., in “John is a pig” (= a dishonest man). Moreover, they are largely systematic in objectifying time through specific domains of human experience and especially in terms of moving entities, spatial locations and resources, especially money. Interestingly, time metaphors that use space as their source domain seem to constitute the large majority of the collected data. Therefore, conventional metaphors like those attested in newspapers can be finely accommodated along the lines of CMT.

However, poems often depart from the standardised patterns of time conceptualisation in that they seem to contain not only conventional metaphors but also completely novel ones. On the basis of empirical evidence, I suggest that metaphors of time exhibit varied conventionality; they form a continuum of conventionality which extends from purely conventional expressions that rely on underlying standard mappings and are attested in the newspaper discourse, to novel poetic metaphors which represent fully new mappings. As it is shown below in Table 1, conventionality of time metaphors develops in a scale of four degrees; first, there are lexicalised metaphors that have been fully conventionalised through long-time, high frequency of use and therefore are already familiar to the hearer; second; there is a category of what I dub mediocre non-conventionality. This contains non-conventional metaphors which, however, originate in already established conventional metaphors through the mechanisms of extension and elaboration (see Lakoff & Turner 1989) and therefore are not difficult for the hearer to understand; with the third category belong a few instantiations of mixed non-conventionality, i.e. combinations of novel metaphors with others arising from conceptual metaphors or their non-conventional uses (of the second degree); and last, the largest majority of metaphors in poetry concerns novel, genuinely creative metaphors. These do not rely on any pre-existing conceptual patterns and therefore are context-dependent in their interpretation and more time-consuming in their processing.

| Full conventionality |
|---------------------------|
| <i>Όπως η μέρα φεύγει</i> |

| |
|---|
| <p>‘as the day goes by’ [P:Sinopoulos]</p> <p><i>Γιατί ο ήλιος εξαρκεί χωρίς πίστωση χρόνου</i> because the sun suffices without credit of time [P:Veltsos]</p> |
| <p>Mediocre non-conventionality</p> |
| <p><i>όταν ο χρόνος θα ’ναι ακίνητος από τα θαύματα</i> when time is still out of the miracles [P:Sinopoulos]</p> <p><i>Χιονίζει στα παιδικά μου χρόνια.</i> It’s snowing in my childhood. [P:Tsaknias]</p> <p><i>Σε λίγο τέλειωνε το καύσιμο Νυν</i> soon we would run out of the combustible Now [P:Kaknavatos]</p> |
| <p>Mixed non-conventionality</p> |
| <p><i>Η αποκεφαλισμένη μέρα / μια χώρα μακρινή</i> ‘the decapitated day / is a country far away’ [P:Sinopoulos]</p> |
| <p>Full non-conventionality</p> |
| <p><i>αχ! Η χήρα στιγμή, κάθε τόσο!</i> oh! the widow moment, ever and again! [P:Dimula]</p> <p><i>Το αεράκι να αφήσεις να φουσηξει/ την καύτρα της στιγμής</i> let breeze blow the wick / of the moment [P:Papaditsas]</p> <p><i>Η γλίτσα του χρόνου/ ιξώδης/ δεν μ’ αφήνει</i> The slime of time/ sticky/ won’t let me go [P:Tsitseli]</p> <p><i>Κι η Κυριακή, κόμπος σφιχτός/ να μη λυθούν οι βδομάδες</i> Sunday, a tight knot,/ that ties the weeks [P:Dimula]</p> |

Table 1. Variety of conventionality in poetic metaphors. Poetry evidences four degrees of conventionality, namely full conventionality, mediocre non-conventionality, mixed non-conventionality and full non-conventionality, each one followed by some of their instantiations in the poetic corpus.

Therefore a theoretical apparatus is needed that will be able to account for the lexicalised and systematic character of time metaphors in conventional speech, on the one hand, and for novel time metaphors that introduce new mappings and require a context-sensitive understanding, on the other. This amounts to a synthesis of semantic tools that will incorporate conceptual patterns underlying metaphorical expressions of time and context, whenever this is required. The need for a broader perspective to metaphor, i.e. for a unified account of conventional and non-conventional metaphors, has been

only scarcely acknowledged in the literature in the recent years (see Jaszczołt 2002 and especially Kiratzis 1997).

I wish to argue that the context contributes to the understanding of metaphors optionally and in particular depending on their degree of conventionality. My findings suggest that all metaphors at the conceptual level have a set of underlying mappings, either pre-established or new ones, but, importantly, they call for a different processing according to their conventionality. This is in alignment with the graded salience hypothesis (Giora 1997, 1999, 2003) for utterance processing, which sustains that meanings are processed accordingly to their salience, that is a function of conventionality, frequency, prototypicality and familiarity of the lexically encoded meaning.

In the past other processing models have also been proposed in order to explain how language comprehension works and have attracted a great deal of attention (for a concise overview see Gibbs 2001). Although they all conclude that context plays a crucial role during utterance processing, they differ relatively to the process and the temporal stage at which contextual information contributes to meaning comprehension; on the direct access or interactionist view (for metaphor processing see Gibbs 1994) the hearer accesses the appropriate meaning directly depending on the context (top-down process), whereas, on the standard modular view (Fodor 1983) all possible meanings are accessed simultaneously and the context selects the proper one. Meanings which are incompatible with the context are ruled out and the appropriate meaning is reached at last (bottom-up process).

The graded salience hypothesis, on the other hand, presumes a lexical access mechanism which predicts that the more salient the coded meaning is, the faster and more sufficiently it will be accessed and thus the utterance will be processed. Grounded in results from experimental research, it promises to give enlightening insights on various pragmatic phenomena, such as ambiguity resolution, irony, humour and metaphor. Conventional metaphors, along these lines, are processed automatically, regardless of context, because they are highly salient; they exhibit the highest degree of conventionality, as it was shown in Table 1, they have high rates of frequency given that there are no literal equivalents to time metaphors, they make use of prototypical construals of space (e.g. motion along the horizontal axis instead of the vertical) and, as a result of all these, they are certainly familiar to the hearer. Novel metaphors, on the other hand, are not salient and therefore they require a longer and more effortful processing; then context has to come into play in order to reach a contextually appropriate interpretation. Following Leezenberg (2001), I suggest that it is the minimal linguistic context, i.e. immediately previous and following discourse, that assigns to the encoded lexical meaning a new meaning which

is therefore contextually retrieved. This runs in parallel with the formation of an *ad hoc* concept which is also contextually constructed and is stored in short-term memory (Carston 2002).

Finally, although the optional contribution of context seems to be appealing along the lines of graded salience, it remains to be explored how exactly the hearer reaches an appropriate, or at least plausible, interpretation every time he is confronted with an open-ended metaphorical expression, like those found widely in poetry. This is by far a more thorny issue given that complicated mechanisms such as analogical reasoning, subjectivity and imagination are involved.

4. Concluding Remarks

The present study aimed at viewing metaphor as a unified phenomenon that includes both lexicalised meanings (so-called ‘dead’ metaphors) and novel metaphorical utterances; the former amount to conceptual metaphors which give rise to systematic and salient expressions that are already familiar to the hearer, whereas the latter are unsystematic, less salient and context-sensitive. However, it was shown that no clear-cut distinction can be drawn between the two; findings from Modern Greek poetry suggest that between the two extremes, namely full conventionality and full non-conventionality, there are intermediate degree of non-conventionality, such as extensions and elaborations of conventional metaphors and ‘mixed’ utterances consisting of both conventional and non-conventional patterns. This gives rise to an optional contribution of the context, viewed as a minimal context, to metaphor interpretation along the lines of the graded salience hypothesis. This explains why conventional metaphors are automatically and effortlessly understood, whereas novel ones require a more complex and time-consuming processing.

Consequently, I argued that CMT is challenged to embrace the notion of context in its theoretical apparatus in order to account adequately for the ways in which the hearer comprehends novel metaphorical expressions, i.e. how he selects the contextually appropriate interpretation among the available ones. Moreover, the present study sought to make a contribution in the direction of interdisciplinary research on metaphor theory by bringing together insights from cognitive linguistics, pragmatics and psycholinguistics. Nevertheless, in the future it aims at stimulating a large-scale corpus study in Modern Greek and in other languages, as well as a quantitative analysis, so that safer conclusions could be drawn.

Last but not least, my discussion of time metaphors in Modern Greek gives rise to a few interesting insights on time conceptualisation in Modern Greek. In particular, Modern Greek features a principal construal of time either as a

horizontal line with a starting and a terminal point, along which the observer moves, or as a moving entity along a path. Horizontal linearity amounts to extension of time, whereas motion along the trajectory corresponds to duration. Moreover, given its conceptualisation in terms of resources, time in Modern Greek is conceived of as a measurable, usable, limited and non-renewable entity. On the cultural component, therefore, the conceptualisation of time in Modern Greek shares the same patterns with other Indo-European languages and confirms what is generally assumed for time conceptualisation in the Western world. However, poetry introduces new and unique patterns to the conceptualisation of time and forms an autonomous semantic network of time to be further explored in the future.

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Πάλιν: Σημασιολογικές και Πραγματολογικές Μετατοπίσεις του Επιρρήματος

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1. Περίληψη

Στην παρούσα μελέτη υποστηρίζουμε ότι οι σημασιολογικές και πραγματολογικές μετατοπίσεις του επιρρήματος *πάλιν* μπορούν να ερμηνευθούν με αναφορά στις αρχές της γραμματικοποίησης, και συγκεκριμένα στις θεωρήσεις εκείνες που έχουν γνωσιακή βάση. Στις παρατηρούμενες αλλαγές στη σημασία ακολουθείται ορισμένη κατευθυντικότητα, από το συγκεκριμένο στο αφηρημένο, η οποία συνάδει με την προτεινόμενη από τη βιβλιογραφία σημασιολογική πορεία (Heine *et al.* 1991). Ιεράρχηση στην εξέλιξη υφίσταται και στις πραγματολογικές μεταβολές, με τις αλλαγές να γίνονται σύμφωνα με το ακόλουθο σχήμα: ενδοπροτασιακό επίρρημα > προτασιακό επίρρημα, δείκτης εστίασης > δείκτης λόγου, οι οποίες εκτός των άλλων αντικατοπτρίζουν την τάση του ομιλητή να εκφράσει τη στάση του σχετικά με αυτό που λέγεται.

2. Προκαταρκτικές παρατηρήσεις

Η διαδικασία της γραμματικοποίησης εξ ορισμού εμπεριέχει αλλαγή στη σημασία που σχετίζεται με μια γλωσσική μορφή. Ενώ ορισμένοι θεωρητικοί της γραμματικοποίησης υποστηρίζουν ότι η σχετική αλλαγή συνίσταται σε απώλεια σημασίας (βλ. μεταξύ άλλων Lehmann 1995: 164, ο οποίος αναφέρεται σε απώλεια των σημασιολογικών χαρακτηριστικών, Bybee & Pagliuca 1985: 59-76, οι οποίοι περιγράφουν την εξέλιξη από τη λεξική στη γραμματική σημασία ως μια *διαδικασία γενίκευσης ή εξασθένισης του σημασιολογικού περιεχομένου*), άλλοι τονίζουν ότι η γραμματικοποίηση συνεπάγεται όχι μόνο απώλεια αλλά και κέρδος σε σημασιολογικά χαρακτηριστικά (βλ. μεταξύ άλλων Traugott 1980, 1988, Sweetser 1988). Τέλος, μια τρίτη ομάδα ερευνητών περιγράφει τη σημασιολογική αλλαγή σαν μια περίπτωση πολυσημίας: η μετάβαση από την έννοια-πηγή στην έννοια-στόχο εμπεριέχει ένα ενδιάμεσο στάδιο επικάλυψης, κατά τη διάρκεια του οποίου παλαιές και νέες σημασίες

* Ευχαριστώ θερμά τους καθηγητές μου ΕΛΕΝΗ ΠΑΝΑΡΕΤΟΥ, ΝΙΚΟΛΑΟ ΠΑΝΤΕΛΙΔΗ και ΣΤΑΥΡΟ ΣΚΟΠΕΤΕΑ για τα σχόλια τους κατά τη διάρκεια συγγραφής του άρθρου. Λάθη και παραλείψεις βαρύνουν αποκλειστικά τον συγγραφέα. Μέρος της παρούσας έρευνας είναι κομμάτι της διατριβής μου που χρηματοδοτείται από το Ίδρυμα Κρατικών Υποτροφιών (IKY).

συνυπάρχουν, προτού οι πρώτες εκτοπιστούν (βλ. μεταξύ άλλων Heine *et al.* 1991: 113).

Σύμφωνα με το θεωρητικό πλαίσιο των Heine *et al.* (1991: 62, 111-113), το οποίο υιοθετούμε, η γραμματικοποίηση είναι αποτέλεσμα της διάδρασης δύο διαδικασιών: η πρώτη είναι η εννοιολογική μεταφορά, η οποία συσχετίζει διαφορετικά γνωσιακά πεδία μεταξύ τους. Η δεύτερη εμπεριέχει επανερμηνεία ωθούμενη από το περιεχόμενο και τη μετωνυμία, και οδηγεί στην εμφάνιση επικαλυπτόμενων εννοιών.

Επιπλέον, η γραμματικοποίηση συνδέεται εξ ορισμού και με αλλαγή στη λειτουργία μιας γλωσσικής μορφής (εκτός από αλλαγή στη σημασία). Οι μετατοπίσεις σε πραγματολογικό επίπεδο ακολουθούν συγκεκριμένη κατεύθυνση, η οποία συνδέεται με την προοδευτική αποτύπωση στο λόγο της οπτικής του ομιλητή.

Ιχνηλατώντας τη διαδρομή που ακολούθησε το επίρρημα *πάλιν* μέσα στο χρόνο, υποθέτουμε ένα αρχικό τύπο T_1 ο οποίος περιλαμβάνει μια τοπική σημασία Σ_1 σε μια συγκεκριμένη χρονική περίοδο. Σε ένα επόμενο διαχρονικό στάδιο, ο τύπος T_1 γραμματικοποιείται, γεγονός που σημαίνει ότι η τοπική σημασία Σ_1 , υποχωρεί μπαίνει στα παρασκήνιο, ενώ στο προσκήνιο προωθούνται νέες σημασίες. Στη συνέχεια, η χρήση του τύπου T_1 επεκτείνεται σε νέα και περισσότερα περιβάλλοντα και αποκτά νέες λειτουργίες.

Τα δεδομένα μας προέρχονται από το corpus κειμένων Perseus και περιορίζουμε τη μελέτη στο χρονικό διάστημα μεταξύ της περιόδου στην οποία τοποθετούνται τα ομηρικά κείμενα μέχρι και τον 2^ο μ.Χ. αι., κατά το οποίο και διαπιστώνονται πολλές και σημαντικές αλλαγές στη σημασία και στη χρήση του *πάλιν*.

3. Η σημασιολογική εξέλιξη του *πάλιν*

Σύμφωνα με την ετυμολογία που προτείνει, μεταξύ άλλων, ο Chantraine (1968), το επίρρημα *πάλιν* προέρχεται από ένα αμάρτυρο ουσιαστικό **πάλις* με σημασία “στροφή, επιστροφή, γύρισμα”, το οποίο ανάγεται στη συνεσταλμένη βαθμίδα της ρίζας *k^wel-* (πρβλ. *πέλομαι*, *πόλος* κτλ.). Ίχνη του ουσιαστικού μπορούν να βρεθούν κυρίως σε περιφράσεις όπως: *πάλιν ἵεναι*, *πάλιν βαίνειν*.

Το πέρασμα από την κατηγορία του ονόματος σε αυτή του επιρρήματος είναι μια περίπτωση επανάλυσης (*reanalysis*, βλ. Langacker 1977: 58) και έχει υποστηριχθεί ότι ισχύει και διαγλωσσικά (βλ. Lehmann 1995: 87-90). Η συγκεκριμένη επανάλυση θα μπορούσε να θεωρηθεί και ένα πιθανό πρώιμο στάδιο γραμματικοποίησης. Η τοπική σημασία του *πάλιν* σε αυτό το πρώτο στάδιο γραμματικοποίησης ερμηνεύεται αν δεχθούμε την προτεινόμενη από τους Heine *et al.* (1991: 48 κ.ε.) σημασιολογική πορεία που ακολουθούν οι βασικές έννοιες πηγές:

- (1) ΠΡΟΣΩΠΟ > ΑΝΤΙΚΕΙΜΕΝΟ > ΔΡΑΣΤΗΡΙΟΤΗΤΑ > ΤΟΠΟΣ > ΧΡΟΝΟΣ > ΠΟΙΟΤΗΤΑ

Η αρχική σημασία “στροφή” αποτυπώνει ΔΡΑΣΤΗΡΙΟΤΗΤΑ /ΔΙΑΔΙΚΑΣΙΑ¹· είναι επομένως αναμενόμενο στο πρώτο αυτό στάδιο να γίνει το αρχικό βήμα που οδηγεί στην τοπική σημασία¹.

Κατά το δεύτερο στάδιο γραμματικοποίησης, ένας ήδη γραμματικοποιημένος τύπος προσλαμβάνει νέες γραμματικές σημασίες ή λειτουργίες. Από τις πρώτες γραπτές μαρτυρίες της Ελληνικής γραμματείας, εμφανίζεται το *πάλιν* με λειτουργία επιρρήματος και σημασία τοπική, η οποία είναι και η κυρίαρχη. Χαρακτηριστικά, στην Ιλιάδα του Ομήρου συντριπική είναι η υπεροχή της τοπικής σημασίας, κυρίως όταν το *πάλιν* συνοδεύει ρήματα κίνησης (38 εμφανίσεις, παράδειγμα (2)), έναντι της εναντιωματικής σημασίας που έχει μεν ήδη προσγραφεί, αλλά μαρτυρείται μόλις μία φορά (παράδειγμα (3)):

- (2) ἡ μὲν τόξα λαβοῦσα πάλιν κίε θυγατέρος ἥς· (Ιλ. Φ. 502- 504)·
«Κι ως τ’ ἄρματα ἄσκωσε της κόρης της, φεύγει γοργά».

- (3) οὐ τίς τοι τὸν μῦθον ὀνόσσειται ὅσσοι Ἀχαιοί,
οὐδὲ πάλιν ἔρει· ἀτὰρ οὐ τέλος ἴκεο μύθων (Ιλ. Ι. 55-56)·
«Κανένας Αχαιός το λόγο σου δε θ’ αψηφήσει, κι ούτε
θ’ αντιλογήσει, μα δεν ἐβγαλες το λόγο σου ως την ἄκρη».

Ο Revuelta (2006: 457) υποστηρίζει ότι ήδη στον Όμηρο απαντάται και μία ακόμη σημασία του *πάλιν*, η επαναληπτική. Κατά την άποψή μας, όμως, το επίρρημα δεν εισάγει το υπονόημα μιας προηγούμενης χρονικής στιγμής σε καμία από τις 57 εμφανίσεις του στον επικό ποιητή. Υπόνοια χρονικής σημασίας ίσως μπορεί να διαπιστωθεί στην περίπτωση που το *πάλιν* συμπαρατάσσεται με το χρονικό επίρρημα *αὔθις* (ή *αὖτις*). Πιθανότερη εκδοχή για την εν λόγω περίπτωση είναι η αντιστοίχιση του *πάλιν* στο *ὀπίσω* και του *αὔθις* στο χρονικό *ἐξ ὑστέρου* (βλ. και αναφορά του Ανδριώτη (1960: 89) για ένα σχολιαστή του Ομήρου):

- (4) τοὺς ὑποταρβήσαντες ἐχώρησαν πάλιν αὖτις

¹ Φαίνεται δηλαδή ότι ο ΤΟΠΟΣ είναι παραγόμενη έννοια, διαπίστωση η οποία δεν συνάδει -σε πρώτη ανάγνωση- με την Τοποθετολογική Υπόθεση (Localist Hypothesis), σύμφωνα με την οποία οι τοπικές έννοιες είναι πιο βασικές και συνεπώς αποτελούν προφανή οδηγό για άλλες έννοιες (βλ. μεταξύ άλλων Lyons 1977: 718).

Ἔκτωρ Αἰνείας τ' ἠδὲ Χρομῖος θεοειδής (Ιλ. Ρ. 533)·

«κι ὡς τοὺς ἀντίκρισαν, φοβήθηκαν καὶ κáναν πίσω πάλε
ὁ μέγας Ἑχτορας κι ὁ θεόμορφος Χρόμιος κι ὁ γιος τοῦ Ἀγχίσου».

Ωστόσο, αξίζει νὰ σημειωθεῖ ὅτι ἤδη ἀπὸ τὸν Ὅμηρο ἔχουν δημιουργηθεῖ οἱ συνθήκες ἐκεῖνες ποὺ θα εὐνοοῦσαν τὴ μετάβαση ἀπὸ τὴ σημασία τοῦ τόπου σὲ αὐτὴ τοῦ χρόνου. Βρισκόμαστε στὸ στάδιο ὅπου σὲ ὀρισμένα περιβάλλοντα οἱ συναγόμενες ἐρμηνεῖες κινοῦνται ἀνάμεσα στὴν τοπικότητα καὶ στὴ χρονικότητα καὶ σὲ ἐνδιάμεσες ἐννοιες (αὐτὴν τῆς ἀποκατάστασης (*restitution*)). Για παράδειγμα, ὅταν τὸ ρῆμα δηλώνει ἀλλαγὴ κατοχῆς (π.χ. *δίδωμι*), σὲ ὀρισμένες περιπτώσεις δὲν εἶναι σαφές ἀν τὸ ἐπίρρημα περιλαμβάνει στὴν ἐμβέλεια τοῦ τοῦ σύνολο τῶν καταστάσεων² (ὁπότε καὶ προκρίνεται ἡ σημασία τῆς ἐπανάληψης) ἢ μόνον μέρος αὐτῶν (ὁπότε καὶ προκρίνεται ἡ σημασία τῆς ἀποκατάστασης)^{3,4}:

(5) *νῦν αὐτὲ με θυμὸς ἀνῆκεσθήμεναι ἀντία σεῖο· ἔλοιμί κεν ἢ κεν ἀλοίην. [...] ἀλλ' ἐπεὶ ἄρ' κέ σε συλήσω κλυτὰ τεύχε' Ἀχιλλεῦ νεκρὸν Ἀχαιοῖσιν δώσω πάλιν* (Ιλ. Χ. 253-254, 258-259).

«τώρα ἡ καρδιά με σπρώχνει νὰ χτυπηθοῦμε πια κατὰστηθα, κι ὅποιονε πάρει ὁ Χάρος! [...] τα ξακουστά σα γδύσω τ' ἄρματα, θα δώσω τὸ κορμί σου στοὺς Ἀχαιοὺς γιὰ νὰ τὸ θάψουνε τὸ ἴδιο καὶ σὺ νὰ κάνεις».

Απὸ τὸ κειμενικὸ περιβάλλον βέβαια συμπεραίνουμε ὅτι πρόκειται γιὰ τὴ σημασία τῆς ἀποκατάστασης καὶ εἶναι αὐτὴ ἡ σημασία ποὺ συναντάται καὶ στα δύο ἐπὶ τοῦ Ομήρου στὶς περιπτώσεις ποὺ ὑπάρχει ἐνδεχόμενη ἀμφισημία (ἡ ὁποία αἱρεται, ὅπως εἶπαμε, ἀπὸ τὸ περικείμενο).

Ἡ ἀμιγῶς χρονικὴ-ἐπαναληπτικὴ σημασία τοῦ ἐπιρρήματος ἐμφανίζεται ἀρκετοὺς αἰῶνες ἀργότερα (5^{ος} π.Χ.). Πρόκειται γιὰ περιπτώσεις στὶς ὁποῖες ἡ τοπικότητα δὲν συνιστᾷ πραγματολογικὰ πιθανὴ ἐρμηνεία:

(6) *κἀγὼ τοιοῦτός εἰμ', ἐπεὶ δυσμηχανῶ
λόγοισι τὸν θανόντ' ἀνιστάναι πάλιν* (Αἰσχ. Ἀγ. 1361)·

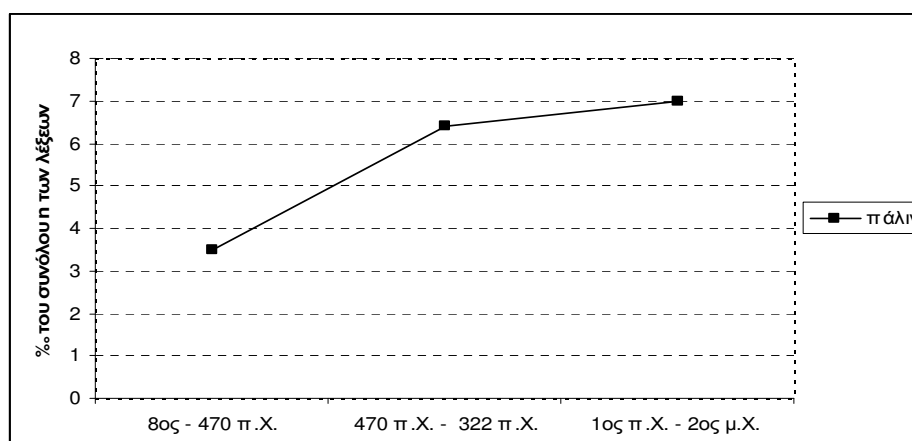
«Τέτοιος εἶμαι καὶ γω· δύσκολα βλέπω τρόπο ἓνα νεκρὸ με λόγια νὰ ἀναστήσω πάλι».

² Με τὸν ὅρο *καταστάσεις* ἀποδίδω τὸν ἀγγλικὸ ὅρο *State of Affairs*.

³ Ὁ Stechow (1996) υποστηρίζει στὸ ἀρθρο τοῦ γιὰ τὶς διαφορετικὲς ἀναγνώσεις τοῦ γερμανικοῦ *wieder*, ὅτι ἡ ἀμφισημία ἀνάμεσα στὴ σημασία τῆς ἐπανάληψης καὶ αὐτὴ τῆς ἀποκατάστασης αἱρεται με ἀναφορὰ στὴ συντακτικὴ ἐμβέλεια (*syntactic scope*) τοῦ ἐπιρρήματος.

⁴ Βλ. καὶ Revuelta 2006 (: 458-459) γιὰ παραδείγματα ποὺ ἀποσαφηνίζουν τὴ σημασιολογικὴ διαφορὰ ἀνάμεσα στὴν ἐπανάληψη καὶ τὴν ἀποκατάσταση.

Όσο περισσότερο προχωρούμε μέσα στο χρόνο, η τοπική σημασία υποχωρεί, ενώ αυξάνονται οι χρήσεις του *πάλιν* τόσο με επαναληπτική σημασία όσο και με τη σημασία της αποκατάστασης. Η εξέλιξη αυτή συνοδεύεται από ταυτόχρονη αύξηση της χρήσης του επιρρήματος, όπως φαίνεται στο σχεδιάγραμμα 1, το οποίο παρουσιάζει τις συχνότητες εμφάνισης του *πάλιν* σε δείγμα κειμένων από 28 συγγραφείς. Παρατηρούμε τη σχετική αύξηση στα δύο τελευταία διαχρονικά στάδια: το επίρρημα εμφανίζεται με συχνότητα 3,476‰ ($n = 92$) στην πρώτη περίοδο, αλλά στη δεύτερη, κατά τη διάρκεια της οποίας λαμβάνουν χώρα αρκετές από τις αλλαγές σε σημαιολογικό και σε πραγματολογικό επίπεδο, διαπιστώνουμε υψηλότερη συχνότητα εμφάνισης (6,403333‰, $n = 1675$), ενώ στην τρίτη περίοδο η χρήση του παρουσιάζει περαιτέρω αύξηση (6,978‰, $n = 389$). Ένα στατιστικό τεστ Chi-square στις συχνότητες του *πάλιν* αποκαλύπτει ότι υπάρχει συσχέτιση ανάμεσα στο διαχρονικό στάδιο και την εμφάνιση του στοιχείου. Η διαφορά ανάμεσα στο πρώτο και το δεύτερο στάδιο είναι στατιστικά σημαντική ($\chi^2(1) = 51.663$, $p < .001$), και στο ίδιο συμπέρασμα καταλήγουμε στη σύγκριση ανάμεσα στο δεύτερο και στο τρίτο ($\chi^2(1) = 15.078$, $p < .001$). Από τις διαφορές αυτές εικάζουμε μια πιθανή σύνδεση της διεύρυνσης της χρήσης του σε περισσότερα περιβάλλοντα και των αλλαγών σε σημασία και λειτουργία (βλ. Bybee 2003 για τον ρόλο της συχνότητας στη διαδικασία της γραμματικοποίησης).



Διάγραμμα 1. Συχνότητα εμφάνισης του *πάλιν* σε 3 περιόδους.

Όσον αφορά τη συσχέτιση των σημασιών (τόπος-εναντίωση, τόπος-χρόνος), παρατηρούμε ότι αυτή δεν είναι συμπτωματική: αρχικά, η αντιστοίχιση των πεδίων του τόπου και της εναντίωσης, προϋποθέτει μια σειρά εννοιολογικών διαδικασιών. Για να πυροδοτηθεί η συγκεκριμένη συσχέτιση πρέπει να υπάρξει το κατάλληλο περιβάλλον. Ένα ρήμα με

λιγότερο συγκεκριμένη σημασία, όπως είναι ένα λεκτικό ρήμα, θα μπορούσε να παράσχει ένα τέτοιο περιβάλλον. Όταν το επίρρημα συνδυαστεί με ρήμα περισσότερο αφηρημένης σημασίας, αυτό αποκτά περισσότερο αφηρημένη σημασία έχοντας ως βάση την τοπική:

(7) οὐ τίς τοι τὸν μῦθον ὀνόσσει ὅσσοι Ἀχαιοί,
οὐδὲ πάλιν ἔρρει· ἀτὰρ οὐ τέλος ἴκεο μύθων (Ιλ. Ι. 55-56)⁵.

Εδώ η σημασία υποστηρίζεται και από τα συμφραζόμενα. Υπάρχει η λέξη *ὀνόσσει* (<ὄνομαι) η οποία σημαίνει “περιφρονώ”. Το επίρρημα βαθμυδόν απορροφά το πιθανολογικό υπονόημα του περικειμένου του και η εναντιωματική σημασία αρχίζει να υποβόσκει. Στο παραπάνω παράδειγμα, δεν είναι δύσκολο να εντοπίσουμε τη γνωσιακή βάση της μετακίνησης από την έννοια του τόπου στην έννοια της εναντίωσης: Συλλαμβάνουμε την εξέλιξη της ομιλίας σαν ένα προοδευτικά διανυόμενο μονοπάτι. Έτσι, όταν λέω κάτι, προχωρώ μπροστά· όταν όμως *αντιλέγω* (εναντιώνομαι δηλαδή σε ό, τι έχει ήδη ειπωθεί), διαγράφω την αντίστροφη κίνηση, οπισθοχωρώ. Εφόσον ο αντίλογος προϋποθέτει τον λόγο (άρα ο λόγος προηγείται του αντιλόγου), για να πραγματοποιήσω τη δεύτερη «κίνηση» (αντίλογο) πρέπει πρώτα να έρθω σε επαφή με την πρώτη «κίνηση» (λόγο) (άρα πρέπει να κάνω βήματα προς τα πίσω).

Παράλληλα, δεν προκαλεί καμία εντύπωση η συσχέτιση των πεδίων του ΤΟΠΟΥ και του ΧΡΟΝΟΥ, καθώς είναι γεγονός ότι οι ανθρώπινες γλώσσες εκφράζουν τις χρονικές και τις τοπικές έννοιες με παρόμοιο τρόπο, φαινόμενο που εμφανίζεται διαχρονικά, διαγλωσσικά και σε διαφορετικούς τομείς του λεξιλογίου (βλ. μεταξύ άλλων Lyons 1977: 718, Haspelmath 1997: 1).

Επιπλέον, ο συγκεκριμένος συσχετισμός υποστηρίζεται και από δεδομένα διαλέκτων της Νέας Ελληνικής, καθώς ανάλογες μετακινήσεις έχουν υποστεί επιρρήματα με αρχική τοπική σημασία. Έτσι, σύμφωνα με τον Ανδριώτη (1960: 89-90), σε σημερινά ιδιώματα της Πελοποννήσου και Στερεάς Ελλάδος το επίρρημα *ὀπίσω* προσέλαβε την χρονική σημασία «εκ νέου, πάλιν». Έτσι λέγεται στην Κορινθία: *πίσω τρύγο έχετε σήμερα; Πίσω στάρι θα σπείρετε φέτο το χωράφι;* Στην Κίτα της Μάνης: *πίσω τα ίδια κάνεις;* Το ίδιο και στην Αιτωλία: *πίσου όξου ήσουν απόψι; Πέ μ' του πίσου, γιατί δεν άκ'σα.*

Η μετάβαση από το πεδίο του ΤΟΠΟΥ στο πεδίο του ΧΡΟΝΟΥ γίνεται μέσω του μηχανισμού της μεταφοράς. Ωστόσο, αν αποκλειστικά εμπλεκόμενος μηχανισμός στην εξέλιξη της σημασίας ήταν η μεταφορά,

⁵ Για τη μετάφραση του παραδείγματος, βλ. παράδειγμα (3).

αυτό θα υπονοούσε ότι η αλλαγή είναι απότομη, χωρίς ενδιάμεσους «σταθμούς». Όμως, η μεταβολή στη σημασία δεν επισυμβαίνει απότομα: αντιθέτως μάλιστα, παρατηρείται σταδιακή μετατόπιση από τις τοπικές στις χρονικές χρήσεις του *πάλιν*, περιλαμβάνοντας ένα ενδιάμεσο στάδιο το οποίο επιτρέπει τόσο την τοπική όσο και τη χρονική ερμηνεία. Το παρατηρούμενο συνεχές σημασιών, το οποίο πιστοποιείται και από τις εμφανίσεις του επιρρήματος στα κείμενα, είναι χαρακτηριστικό γνώρισμα της διαδικασίας της γραμματικοποίησης. Συνεπώς, ή θα πρέπει να υποβαθμίσουμε το ρόλο της μεταφοράς ως ερμηνευτικού μηχανισμού, ή θα πρέπει να αναζητήσουμε έναν επιπλέον μηχανισμό ο οποίος θα δρα συμπληρωματικά. Το πρόβλημα αίρεται αν λάβουμε υπόψη μας ότι η διαδικασία της γραμματικοποίησης επηρεάζεται και από το ρόλο του περικειμένου, ο οποίος στο μοντέλο των Heine *et al.* (1991) είναι αναβαθμισμένος.

4. Αύξηση της λειτουργικότητας του επιρρήματος

Σε αυτή την ενότητα, εξετάζουμε μια πρόσθετη διαχρονική εξέλιξη του *πάλιν* και δείχνουμε ότι το επίρρημα μετακινείται σταδιακά από αναφορικές (referential) σημασίες σε πιο πραγματολογικές σημασίες. Οι παρατηρούμενες αλλαγές συμβαδίζουν με τη γενικότερη κατευθυντικότητα που προτείνεται, από το συγκεκριμένο στο αφηρημένο. Επιπλέον, απηχούν την από μέρους του ομιλητή προσπάθεια εξωτερίκευσης της υποκειμενικής του άποψης, δηλαδή την *υποκειμενοποίηση*⁶ (subjectification), η οποία ορίζεται από την Traugott⁷ (1999:189) ως εξής:

[...] η υποκειμενοποίηση εμπεριέχει την από μέρους των ομιλητών στρατολόγηση τύπων με κατάλληλες σημασίες για να εξωτερικεύσουν την υποκειμενική τους άποψη. Είναι μια διαδικασία η οποία αντλεί από γνωστικές αρχές αλλά λαμβάνει χώρα στο περιβάλλον της επικοινωνίας και της ρητορικής στρατηγικής.

Σχετικά με τη διεύρυνση του πραγματολογικού φορτίου του επιρρήματος που εξετάζουμε, εικάζουμε ότι οι ομιλητές, προκειμένου να δηλώσουν το υποκειμενικό τους σχόλιο σε σχέση με αυτό που λέγεται, καινοτομούν χτίζοντας πάνω στις ήδη υπάρχουσες λειτουργίες του *πάλιν*. Έτσι, σε ένα ακόλουθο διαχρονικό στάδιο, το *πάλιν* αποκαλύπτει την

⁶ Τα περισσότερα παραδείγματα γραμματικοποίησης εμπεριέχουν υποκειμενοποίηση (βλ. Traugott 1980, 1999, Traugott and Dasher 2002), συνεπώς οι σχετικές αλλαγές μπορούν να θεωρηθούν περιπτώσεις γραμματικοποίησης, παρόλο που δεν πληρούν τα κριτήρια της υψηλής δεσμευσιμότητας (bondedness) και της μείωσης της συντακτικής εμβέλειας (scope) (βλ. Lehmann 1995, Traugott 1995).

⁷ Την έννοια της *υποκειμενοποίησης* εισήγαγε πρώτος ο Langacker (1990, μεταξύ άλλων άρθρων) και δίνει σε αυτήν διαφορετικό περιεχόμενο.

πρόθεση του ομιλητή να προσθέσει μια επιπλέον σχετική πληροφορία στο λόγο του, προοδευτικά δηλαδή παρατηρείται η αύξηση της εμπλοκής του:

(8) *ἐὰν δὲ μὴ ἐπιτρέπη ἡ πόλις, ὥσπερ τότε μητέρα καὶ πατέρα ἐκόλαζεν, οὕτω πάλιν τὴν πατρίδα, ἐὰν οἶός τ' ᾗ, κολάζεται ἐπεισαγόμενος νέους ἐταίρους ... (Πολιτ. 9.575d)*

«ὅπως κακοποιούσε τότε τη μητέρα και τον πατέρα του, έτσι τώρα θα κακοποιήσει, αν μπορέσει να το κάνει, και την πατρίδα του φέρνοντας απ' έξω καινούργιους συντρόφους ...».

Στο παράδειγμα (8), ο Πλάτων με τη χρήση του *πάλιν* προβάλλει την προσωπική του άποψη, τον τρόπο που βλέπει τα πράγματα συνδέοντας λογικά το περιεχόμενο του πρώτου εκφώνηματος, που αποτελεί ένα γεγονός (βλ. παρελθοντικό χρόνο *ἐκόλαζεν*) με το περιεχόμενο του δεύτερου (*οὕτω πάλιν τὴν πατρίδα*), το οποίο όμως αποτελεί συμπέρασμα, εικασία, που αναφέρεται στο μέλλον (βλ. μελλοντικό χρόνο *κολάζεται*). Το επίρρημα πλέον μπορεί και συνδέει λογικές προτάσεις μεταξύ τους, δημιουργεί δηλαδή λογικές σχέσεις. Οι λογικές σχέσεις είναι υποκειμενικές, καθώς απορρέουν από τον συλλογισμό του ατόμου⁸.

Παράλληλα, στο επίρρημα μπορούμε να διακρίνουμε και άλλη μια λειτουργία: τη χρήση του ως εστιακού στοιχείου (βλ. Revuelta 2006: 460 κ.ε.). Τόσο η απομάκρυνσή του *πάλιν* από το πεδίο επιρρόης του ρήματος, όσο και η εμφάνιση της εστιακής, εμφατικής λειτουργίας του, αντανακλούν αυτή την αύξηση της υποκειμενοποίησης στην οποία και αναφερθήκαμε.

Η αλλαγή όμως δεν περιορίζεται μόνο στην επανάλυση του *πάλιν* σε προτασιακό επίρρημα, αλλά σημειώνεται μια εκ νέου μετατόπιση, και σε ορισμένες περιπτώσεις αρχίζει να λειτουργεί ως δείκτης λόγου, να χρησιμεύει δηλαδή ως μεταβατικό στοιχείο στο κείμενο. Ο δείκτης λόγου σηματοδοτεί ένα σχόλιο εξειδικεύοντας το τύπο της σχέσης της διαδοχής λόγου που ισχύει ανάμεσα στο τρέχον εκφώνημα και σε ένα προηγούμενο κομμάτι λόγου. Στο παράδειγμα που ακολουθεί, αν αφαιρέσουμε το *πάλιν*, δεν μεταβάλλεται η γραμματικότητα της πρότασης, αλλά απομακρύνουμε ένα ισχυρό στοιχείο σχετικό με τη δέσμευση του ομιλητή οσον αφορά τη σχέση ανάμεσα στο πρώτο εκφώνημα και τον προηγούμενο λόγο (βλ. Fraser 1988: 21-22 για τους δείκτες λόγου):

⁸ Ανάλογες μεταβολές έχουν συμβεί και σε άλλες γλώσσες, στοιχείο που αποτελεί ένδειξη ότι υπάρχει κανονικότητα στη σημασιο-πραγματολογική αλλαγή. Για παράδειγμα, βλ. την αναφορά της Traugott (1980: 50-51) για το *again* της Αγγλικής

(9) Οὐκοῦν ἐπιστήμη μὲν ἐπὶ τῷ ὄντι πέφυκε, γνῶναι ὥς ἔστι τὸ ὄν; —
μᾶλλον δὲ ὧδέ μοι δοκεῖ πρότερον ἀναγκαῖον εἶναι διελέσθαι [...]

Δεῦρο δὴ πάλιν, ἣν δ' ἐγώ, ὦ ἄριστε. ἐπιστήμην πρότερον δύνάμιν τινα
φῆς εἶναι αὐτήν, ἣ εἰς τί γένος τιθεῖς; (Πλατ. Πολιτεία 5.477b-d)·

«Συνεπώς η επιστήμη (=γνώση) αφορά από τη φύση της σ' αυτό το
οποίο έχει υπόσταση· στόχο της έχει να γνωρίσει πως είναι το ὄν·
σωστά; Νομίζω όμως ότι προηγουμένως είναι απαραίτητο να κάνουμε
την εξής διάκριση [...] Ας έλθουμε, φίλε μου καλέ, πάλι στο θέμα μας.
Για τη γνώση τι υποστηρίζεις: ότι δεν είναι κάποια δύναμη ή την
κατατάσσεις σε άλλη κατηγορία».

Στο παράδειγμα (9), το *πάλιν* είναι δείκτης αναφοράς και σηματοδοτεί
τη συνέχιση του θέματος που έχει τεθεί σε προηγούμενο σημείο του
κειμένου. Δεν συμβάλλει στην επιχειρηματολογία (δεν προσθέτει ένα
ακόμη λογικό σημείο δηλαδή) ούτε προσθέτει κάτι στις συνθήκες αληθείας
αυτού που λέγεται. Λειτουργεί μόνο με όρους διαδοχής (sequential terms)
για να δηλωθεί ότι είμαστε ακόμη στο ίδιο διάστημα διαδοχής και για να
συσχετιστεί αυτό το διάστημα με ένα προηγούμενο στο κείμενο (βλ.
Goutsos 1997: 65-66 για τη λειτουργία του *again* στα Αγγλικά, Traugott
1982, Traugott 1999: 190). Η απουσία σημασιολογικού και λογικού
περιεχομένου, η επέκταση του πραγματολογικού του ρόλου στην ένδειξη
διαδοχικότητας στο κείμενο, όπως επίσης και η τοποθέτηση του σε
μεταβατικές θέσεις μέσα στο κείμενο, είναι τυπικά χαρακτηριστικά των
δεικτών λόγου (βλ. μεταξύ άλλων Γεωργακοπούλου και Γούτσος 1999:
133), τα οποία τα εμφανίζει το *πάλιν*.

Η πραγματολογική μετατόπιση του επιρρήματος και οι νέες λειτουργίες
του δεν είναι τυχαίες. Για παράδειγμα, η λειτουργία του ως δείκτη λόγου
μπορεί να ενταχθεί σε ένα σύστημα πιθανών αλλαγών: δείκτες που μας
βοηθούν να προσανατολιστούμε στο χώρο μπορούν κάλλιστα να
αποτελέσουν δείκτες προσανατολισμού στο κείμενο.

Αποτέλεσμα των αλλαγών που περιγράψαμε είναι ότι οι σημασίες
τείνουν να αναφέρονται λιγότερο στην περιγραφόμενη κατάσταση και
περισσότερο στην κατάσταση του λόγου (discourse situation), περισσότερο
σε υποκειμενικές καταστάσεις (βλ. Traugott 1986: 540), εμπεριέχουν
δηλαδή υποκειμενοποίηση.

Συνοψίζοντας, ενώ στον Όμηρο (αλλά και στους εγγύς χρονικά ποιητές
σε αυτόν, π.χ. Ησίοδο, Βακχylίδη, Πίνδαρο) το *πάλιν* είναι μόνο
ενδοπροτασιακό, το όριο δηλαδή της συνδεσμικότητάς του περιορίζεται στο
ρήμα, στη συνέχεια, από τα μέσα του 5^{ου} π.Χ αιώνα περίπου, παρατηρείται
μεταβολή στο συντακτικό του ρόλο με επίδραση της γραμματικοποίησης
και λειτουργεί πια και ως προτασιακό επίρρημα, αλλά και ως στοιχείο

εστίασης. Κατά το διάστημα της δεύτερης από τις τρεις περιόδους που εξετάζουμε (όπως τις ορίσαμε παραπάνω: 470-322 π.Χ.), αυξάνεται περαιτέρω η λειτουργικότητα του επιρρήματος, καθώς εμφανίζει χαρακτηριστικά δείκτη λόγου⁹. Σχηματικά, η συνολική πραγματολογική μεταβολή γίνεται βάσει του ακόλουθου σχήματος (βλ. και Traugott 1982, 1989, 1995, 1999) :

(10) ενδοπροτασιακό επίρρημα > προτασιακό επίρρημα, δείκτης εστίασης > δείκτης λόγου.

5. Επίλογος

Στο παρόν άρθρο εξετάστηκαν οι εξελίξεις σε σημασιολογικό και σε πραγματολογικό επίπεδο του επιρρήματος της Αρχαίας Ελληνικής *πάλιν*. Υποστηρίξαμε την άποψη ότι η εξέλιξη του επιρρήματος μέσα στα διαχρονικά στάδια της γλώσσας είναι χαρακτηριστικό παράδειγμα εκδήλωσης του μηχανισμού της γραμματικοποίησης. Η προσοχή εστιάστηκε αφενός στην περιγραφή των σημασιών που εμφανίζονται (τοπική, εναντιωματική, χρονική, σημασία αποκατάστασης), τη μεταξύ τους σύνδεση και την ερμηνεία αυτής (μέσω των μηχανισμών της μεταφοράς και της μετωνυμίας), τη σταδιακότητα της μετάβασης (και το ρόλο του κειμενικού περιβάλλοντος σε αυτή), και αφετέρου στην λειτουργική ποικιλία του: ενδοπροτασιακό επίρρημα, προτασιακό επίρρημα, δείκτης εστίασης, δείκτης λόγου. Συμπερασματικά, η σημασιο-πραγματολογική αλλαγή προς τη γραμματικοποίηση είναι μονοκατευθυντική, από το συγκεκριμένο στο αφηρημένο, και επιπλέον όσον αφορά τις πραγματολογικές μετατοπίσεις γίνεται σύμφωνα με το ακόλουθο σχήμα:

(11) ενδοπροτασιακό επίρρημα > προτασιακό επίρρημα, δείκτης εστίασης > δείκτης λόγου.

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⁹ Θα πρέπει να επισημάνουμε, βέβαια, ότι στη διαδρομή του στο χρόνο το *πάλιν* δεν παύει να διατηρεί και τις άλλες δύο λειτουργίες του.

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ΠΑΡΑΡΤΗΜΑ

| | Σύνολο n λέξεων | Εμφανίσεις πάλιν | Συχνότητα/10K |
|-------------------------------|--------------------|---------------------|---------------|
| <i>Σύνολα στο Perseus 2,0</i> | <i>3391814</i> | <i>2156</i> | <i>5,983</i> |
| Όμηρος | 199039 | 57 | 2,86 |
| Ησίοδος | 16192 | 3 | 1,85 |
| Αισχύλος | 40085 | 26 | 6,49 |
| Πίνδαρος | 21106 | 4 | 1,9 |
| Βακχylίδης | 4677 | 2 | 4,28 |
| Σοφοκλής | 59774 | 51 | 8,53 |
| Αντιφώντας | 18083 | 2 | 1,11 |
| Ευριπίδης | 147204 | 116 | 7,88 |
| Ηρόδοτος | 184937 | 8 | 0,43 |
| Θουκυδίδης | 150141 | 111 | 7,39 |
| Αριστοφάνης | 94658 | 84 | 8,87 |
| Ανδοκίδης | 17401 | 14 | 8,05 |
| Λυσίας | 56081 | 13 | 2,32 |
| Πλάτων | 562535 | 453 | 8,05 |
| Ξενοφών | 312194 | 283 | 9,06 |
| Ισαίος | 31653 | 12 | 3,79 |
| Ισοκράτης | 118722 | 51 | 4,3 |
| Αισχίνης | 44300 | 52 | 11,74 |
| Λυκούργος | 10781 | 2 | 1,86 |
| Υπερείδης | 11557 | 12 | 10,38 |
| Αριστοτέλης | 304795 | 162 | 5,32 |
| Δημοσθένης | 278157 | 241 | 8,66 |
| Δίναρχος | 10639 | 8 | 7,52 |
| Διόδωρος | 189109 | 125 | 6,61 |
| Στράβων | 148004 | 109 | 7,36 |
| Ψευδο-Απολλόδωρος | 35127 | 35 | 9,96 |
| Πλούταρχος | 106782 | 114 | 10,68 |
| Παυσανίας | 218081 | 6 | 0,28 |

Διαγλωσσική Πραγμάτωση των Εννοιών *Πάνω* και *Μέσα*: Η Προαιρετικότητα των Ελληνικών Προθέσεων

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Εισαγωγή

Οι τοπικές προθέσεις αποτελούν κλειστή κατηγορία γραμματικών μορφημάτων τα οποία χρησιμοποιούν οι ομιλητές για να περιγράψουν στατικές χωρικές σχέσεις συνήθως μεταξύ δύο αντικειμένων εκ των οποίων το ένα γίνεται αντιληπτό ως φιγούρα και το άλλο ως φόντο.

Η γνωσιακή γλωσσολογία δέχεται ότι οι πραγματικές σημασίες των τοπικών προθέσεων υπάρχουν στο μυαλό των ομιλητών με τη μορφή προλεκτικών νοητικών σχημάτων (κιναισθητικά νοητικά σχήματα, νοητικές αναπαραστάσεις της εμπειρίας κ.α.) τα οποία όμως δεν είναι εύκολο να κωδικοποιηθούν λεκτικά με μεγάλη ακρίβεια καθώς οι ομιλητές δεν έχουν συνειδητή γνώση τους (Evans & Green 2006: 180).

Μέσα από την έως τώρα μελέτη των τοπικών προθέσεων αναδεικνύονται δύο ειδών ερμηνείες σχετικά με τη σημασία τους, η καθεμία από τις οποίες βασίζεται σε διαφορετικά κριτήρια. Η γεωμετρική ερμηνεία (geometric account) αντιλαμβάνεται την νοητική αναπαράσταση με όρους βασικών γεωμετρικών σχέσεων ενώ η τοπολογική ερμηνεία (topological account) θεωρεί ότι οι προθέσεις αντανakλούν λειτουργικές ή φυσικές σχέσεις μεταξύ των αντικειμένων του κόσμου. Τα τελευταία όμως χρόνια αποδεικνύεται ότι η μονόπλευρη θέαση της σημασίας από τη μία ή την άλλη σκοπιά δημιουργεί προβλήματα και κενά στην ερμηνεία των προθέσεων. Την αδυναμία αυτή έρχονται να συμπληρώσουν προσεγγίσεις που λαμβάνουν υπόψη τους τόσο γεωμετρικούς όσο και λειτουργικούς παράγοντες (Garrod, Ferrier, Campbell 1999).

Στο πλαίσιο της παρούσας εργασίας θα ασχοληθούμε με τις πολυλειτουργικές προθέσεις¹ *πάνω σε* και *μέσα σε* της ελληνικής, της αγγλικής (*on, in*) και της γαλλικής (*sur, dans*) γλώσσας. Πιο συγκεκριμένα θα προβούμε σε συγκριτική εξέταση των σχέσεων που εκφράζουν οι συγκεκριμένες προθέσεις στις παραπάνω γλώσσες και θα εξετάσουμε κατά πόσον υπάρχει ταύτιση σημασιών. Στη συνέχεια, έχοντας ως αφετηρία τον

¹ Στην περίπτωση της αγγλικής και της γαλλικής πρόκειται για απλή πρόθεση της μορφής πρόθεση+όνομα, ενώ στην περίπτωση της ελληνικής είναι περιφραστικές προθέσεις της μορφής επίρρημα+πρόθεση+όνομα. Ο προαιρετικός χαρακτήρας αφορά το επιρρηματικό συστατικό των προθέσεων *πάνω σε, μέσα σε*. Εδώ ασχολούμαστε με τις προθέσεις ως έννοια. Έτσι θα χρησιμοποιούμε αδιακρίτως τον όρο πρόθεση είτε πρόκειται για απλή είτε για περιφραστική πρόθεση.

προαιρετικό χαρακτήρα που εμφανίζουν τα επιρρήματα *μέσα* και *πάνω* (ως συστατικά στοιχεία της περιφραστικής τοπικής πρόθεσης *μέσα σε, πάνω σε*) σε συγκεκριμένα περιβάλλοντα στην ελληνική γλώσσα θα εξετάσουμε ποιες σημασίες-τοπικές σχέσεις δίνουν μεγαλύτερα περιθώρια για παράλειψη του επιρρήματος. Τέλος θα επιχειρήσουμε να διατυπώσουμε υποθέσεις για τους λόγους εμφάνισης της ιδιαιτερότητας αυτής στην ελληνική.

1. Οι προθέσεις πάνω σε, on, sur

1.1. Σημασίες

Τα τέσσερα *on* της φυσικής επαφής, όπως χαρακτηριστικά αναφέρει ο Goddard (2002: 282-291) είναι τα εξής:

[A] Απλή επαφή και συνεπαγόμενη σταθερότητα θέσης

Το X είναι πάνω στο Ψ =

- α. το X ακουμπάει το Ψ σε κάποιο σημείο για κάποιο χρονικό διάστημα
- β. για το λόγο αυτό, το X μπορεί να παραμείνει στο ίδιο σημείο αυτό το χρονικό διάστημα.

α. Η βασική έννοια που εκφράζεται στο πρώτο σκέλος του ορισμού είναι η επαφή και αποτελεί πρωταρχική σημασιολογική έννοια.

1. the rug is *on* the floor/ le paquet est *sur* la table/ το χαλί είναι *πάνω* στο πάτωμα.

β. Η βασική έννοια που εκφράζεται στο δεύτερο σκέλος του ορισμού είναι η στήριξη. Δεν έχει υποχρεωτικό χαρακτήρα καθώς σε πολλά περιβάλλοντα η επαφή δεν περιορίζει την κίνηση

2. the billiard balls were rolling *on* the table/ les boules ont été roulais *sur* la table/ οι μπάλες του μπιλιάρδου κυλούσαν *πάνω* στο τραπέζι.

Ακόμα και στις περιπτώσεις που η επαφή είναι στιγμιαία, το αντικείμενο X παραμένει για κάποιο διάστημα στην ίδια θέση (the ball bounced *on* the table/ le ballon a rebondi *sur* la table/ χτύπησε δυνατά το χέρι του *πάνω* στο τραπέζι).

[B] Επαφή μέρος με μέρος, προσκόλληση και συνεπαγόμενη σταθερότητα

Το X είναι πάνω στο Ψ =

- α. μέρος του X ακουμπάει μέρος του Ψ με κάποιο τρόπο για κάποιο χρονικό διάστημα
- β. εξαιτίας αυτού, το X είναι σαν να είναι μέρος του ίδιου πράγματος όπως το Ψ και
- γ. εξαιτίας αυτού, το X μπορεί να μένει στον ίδιο τόπο για το συγκεκριμένο χρονικό διάστημα.

3. a ring *on* her finger/ a collar *on* her neck (πρόκειται για αντικείμενα τα οποία είναι φτιαγμένα έτσι ώστε να εφαρμόζουν απόλυτα σε συγκεκριμένα μέρη του σώματος. Φαίνεται λοιπόν ότι εδώ λαμβάνονται υπόψη λειτουργικά κριτήρια). Το αντικείμενο (X) προορίζεται για συγκεκριμένη χρήση πάνω στο αντικείμενο Ψ και παρουσιάζονται ως ενότητα. Η πρόθεση *πάνω* αποκτά τη στενή έννοια του «*πάνω* σε μέρος του ανθρώπινου σώματος».

Διαγλωσσική διαφορά: αντίθετα με την αγγλική, η γαλλική και η ελληνική γλώσσα για την έκφραση αυτού του είδους επαφής δεν χρησιμοποιούν την πρόθεση *πάνω*. Η γαλλική προτιμά την πρόθεση *à/ au* (un bracelet *à* sa main). Η ελληνική:

α) Παραλείπει το επιρρηματικό *πάνω* (*Ένα δαχτυλίδι στο δάχτυλό της/ χειροπέδες στα χέρια της/ ένα κολάρο στο λαιμό της*).

β) Χρήση της πρόθεσης θα είχε σκοπό να μας δείξει ότι το αντικείμενο X (δαχτυλίδι, χειροπέδες) δεν χρησιμοποιείται κατά τον αναμενόμενο τρόπο. Άρα, ένα δαχτυλίδι *πάνω* στο δάχτυλό της θα δήλωνε μια μη συνηθισμένη θέση και λειτουργία του αντικειμένου (*Ένα δαχτυλίδι πάνω στο δάχτυλό της / χειροπέδες πάνω στα χέρια της*).

γ) Τα δύο αντικείμενα είναι σε αρκετές περιπτώσεις συγγενείς λέξεις (δαχτυλίδι-δάχτυλο, χειροπέδες-χέρι).

δ) Όταν το σώμα αντιμετωπίζεται ως όλο και δεν γίνεται αναφορά σε συγκεκριμένο μέρος του, η παρουσία του *πάνω* είναι απαραίτητη. Στην περίπτωση αυτή συνοδεύεται από αδύνατο τύπο της προσωπικής αντωνυμίας (*Έριξε πάνω του ένα πουκάμισο και βγήκε/ Πάνω σου δείχνει φανταστικό αυτό το φόρεμα: εδώ το πουκάμισο και το φόρεμα εφαρμόζουν στο σημείο του σώματος για το οποίο είναι φτιαγμένα, όμως η εστίαση δε γίνεται στο μέρος αλλά στο σώμα ως όλο*).

[Γ] Επαφή μέρος με μέρος και συνεπαγόμενη σχέση μέρους-όλου

Το X είναι πάνω στο Ψ =

α. μέρος του X ακουμπάει μέρος του Ψ με κάποιο τρόπο για κάποιο χρονικό διάστημα

β. εξαιτίας αυτού, το X μπορεί να είναι μέρος του Ψ για το συγκεκριμένο χρονικό διάστημα

Το αντικείμενο X είναι ευδιάκριτο και αποσπώμενο μέρος του αντικειμένου Ψ.

4. leaves *on* a tree/ the handle *on* the door/ wheels *on* the bus/ les feuilles *sur* l'arbre

Στην ελληνική για τη δήλωση της σχέσης μέρους-όλου χρησιμοποιείται γενική πτώση. Αντίστοιχη περίπτωση και η γαλλική η οποία επιλέγει τη δομή *de*+όνομα, μια μορφή γενικής (τα φύλλα του δέντρο/ το χερούλι της

πόρτας/ οι ρόδες του λεωφορείου/ les feuilles de l'arbre/ les rues de l'autocar).

Επιλογή της πρόθεσης *πάνω* έχει διαφορετικό στόχο. Προσδιορίζει με μεγαλύτερη ακρίβεια τη θέση του αντικειμένου X τονίζοντας ιδιαίτερα τη διαφοροποίηση ανάμεσα στο *πάνω* και το *κάτω*. Ένα εκφώνημα του τύπου «κοίτα τα φύλλα *πάνω* στο δέντρο» υποδηλώνει την παρουσία δύο ειδών φύλλων. Για παράδειγμα, φύλλα που βρίσκονται *πάνω* στο δέντρο και φύλλα που είναι *πесμένα* στο έδαφος. Η επιλογή προθετικής δομής έναντι της δομής με τύπο γενικής έχει σαν στόχο να βοηθήσει τον ακροατή να εντοπίσει σωστά το αντικείμενο X για το οποίο γίνεται λόγος. Αν εξετάσουμε όμως και τα άλλα δύο παραδείγματα της ελληνικής, θα παρατηρήσουμε το εξής: ακόμα και αν *πέρα* από τις ρόδες του λεωφορείου υπήρχαν και άλλες ρόδες ή και αν εκτός από το χερούλι υπήρχε κάποιο άλλο χερούλι στο οπτικό πεδίο του ακροατή ικανό να του προκαλέσει σύγχυση, για τον σαφέστερο προσδιορισμό της θέσης του θα επιλεγόταν ξανά ένας τύπος με γενική και όχι με πρόθεση (το *ψωμί* είναι κρεμασμένο στο χερούλι της πόρτας, όχι του παραθύρου/ του έσκασε η ρόδα του αυτοκινήτου, όχι του ποδηλάτου). Μια πιθανή εξήγηση για την παραπάνω διαφοροποίηση θα μπορούσε να είναι το γεγονός ότι τα φύλλα γίνονται αντιληπτά ως οντότητες που έχουν την ιδιότητα να αποσπώνται από το δέντρο (αναμενόμενα σε συγκεκριμένη εποχή). Κατά συνέπεια, υποκρύπτεται η αντίθεση *πάνω στο δέντρο-κάτω από το δέντρο* (*πάνω στο έδαφος*). Αντίθετα στην περίπτωση της ρόδας ή του χερουλιού υπό φυσιολογικές συνθήκες δεν υπάρχει αυτό το δίπολο (*πάνω στο λεωφορείο-κάτω από το λεωφορείο, πάνω στην πόρτα-κάτω από την πόρτα*).

[Δ] Οπτικό χαρακτηριστικό που μοιάζει με απλή επαφή

Το X είναι *πάνω* στο Ψ

α. όταν κάποιος βλέπει το Ψ, μπορεί την ίδια στιγμή να δει και το X

β. κάποιος θα μπορούσε να δει κάτι σαν κι αυτό, αν το X ήταν κάτι το οποίο ακουμπούσε το Ψ

Το αντικείμενο X είναι οπτικά ευδιάκριτο χαρακτηριστικό του αντικειμένου αναφοράς. Πιο συγκεκριμένα, μπορεί να είναι άυλη "οντότητα" (5,6) ή κάτι που σχετίζεται με την κατάσταση μιας επιφάνειας (7). Και στα τρία παραδείγματα που ακολουθούν, το αντικείμενο X δεν γίνεται αντιληπτό ως αυθύπαρκτη οντότητα. Η φιγούρα ενσωματώνεται πλήρως στο φόντο γεγονός που οφείλεται στη φύση του αντικειμένου που συνιστά τη φιγούρα.

5. the shadow *on* the wall/ l'ombre *sur* le mur/ η σκιά (*πάνω*) στον τοίχο

6. wrinkles *on* his forehead/ les rides *sur* son front/ ρυτίδες (*πάνω*) στο μέτωπό του

7. a sore *on* her knee/ une blessure *sur* son genou/ μια πληγή (*πάνω*) στο γόνατό της

Στη σημασία αυτή του *on*, εντάσσονται και περιπτώσεις επαφής ενός οπτικά προεξέχοντος αντικειμένου X με ένα άλλο Ψ που γίνονται όμως αντιληπτά ως ένα όλο.

8. the fins *on* the back of the fish/ les nageoires *sur* le dos du poisson/ τα πτερύγια (*πάνω*) στην πλάτη του ψαριού

1.2. Ο προαιρετικός χαρακτήρας του πάνω

Ας εξετάσουμε στο σημείο αυτό σε ποιες σημασίες του επαφικού *on* το επιρρηματικό στοιχείο της πρόθεσης *πάνω σε* έχει προαιρετικό χαρακτήρα:

[Α] απλή επαφή: προαιρετικός χαρακτήρας {το βιβλίο είναι (*πάνω*) στο τραπέζι}.

απλή επαφή και μετακίνηση: υποχρεωτικός χαρακτήρας {οι μπάλες του μπιλιάρδου κυλούσαν *πάνω* στο τραπέζι, το νερό έτρεχε *πάνω* στο τζάμι}.

[Β] επαφή μέρος με μέρος, προσκόλληση και συνεπαγόμενη σταθερότητα θέσης: δεν χρησιμοποιείται η πρόθεση {φορούσε ένα δαχτυλίδι στο δάχτυλο του, είχε ένα κολάρο στον λαιμό της}.

[Γ] επαφή μέρος με μέρος και σχέση μέρους – όλου: γενική πτώση {κοίτα τα φύλλα του δέντρου/ τα αγκάθια της τριανταφυλλιάς/ τα λέπια του ψαριού}.

[Δ] οπτικό χαρακτηριστικό που μοιάζει με απλή επαφή: προαιρετικός χαρακτήρας. Συνήθως παραλείπεται {είδα μια σκιά *πάνω* στον τοίχο, διέκρινες κάποιες ρυτίδες στο μέτωπό του, είχε μια ελιά στο μάγουλο}.

Γενικά, η πρόθεση *πάνω* έχει προαιρετικό χαρακτήρα στη δήλωση των περισσότερων επαφικών σημασιών της.

2. Οι προθέσεις μέσα σε, in, dans

2.1. Σημασίες

[Α] **Μερικός γεωμετρικός εγκλεισμός**: όταν ένα αντικείμενο X βρίσκεται μέσα στο αντικείμενο Ψ, σημαίνει ότι το X περιέχεται μέσα στο Ψ. Για να μπορεί το Ψ να λειτουργήσει ως περιέκτης, θα πρέπει να έχει ένα σχήμα που να του επιτρέπει να δεχτεί ένα άλλο αντικείμενο στο εσωτερικό του. Για το λόγο αυτό συχνά προστίθεται η κυρτότητα ως ιδιότητα του αντικειμένου-περιέκτη.

9. the flowers *in* the vase /les fleurs *dans* le vase/ τα λουλούδια *μέσα* στο βάζο

[Β] **Πλήρης γεωμετρικός εγκλεισμός**: το X βρίσκεται μέσα στην περιοχή του Ψ. Είναι σαν το X να ακολουθεί το γεωμετρικό σχήμα του Ψ.

10. the water *in* the glass/ l'eau *dans* le verre/ το νερό *μέσα* στο ποτήρι

[Γ] **Διασκορπισμένος γεωμετρικός εγκλεισμός:** το αντικείμενο X καταλαμβάνει μία περιοχή μέσα στον ευρύτερο χώρο που οριοθετούν διεσπαρμένα αντικείμενα Ψ.

11. a bird *in* the tree/ an island *in* the archipelago/ la maison est *dans* la forêt

[Δ] **Τοπολογικός εγκλεισμός:** η περιοχή του αντικειμένου Ψ περιβάλλει πλήρως την περιοχή του αντικειμένου X. Η περιοχή δηλαδή που καταλαμβάνει το X είναι τοπολογικά μέσα στην περιοχή του Ψ.

12. the jam *in* the pot/ la confiture est *dans* le pot/ η μαρμελάδα *μέσα* στο βαζάκι

13. the insect *in* the amber/ l'insecte *dans* l'ambre/ το έντομο *μέσα* στο κεχριμπάρι

[Ε] **Περιοχές και αντικείμενα που μπορούν να γίνουν αντιληπτά ως περιέκτες:** περιλαμβάνονται και αντικείμενα της μορφή διάυλος, αντικείμενα δηλαδή που είναι διάτρητα ή διαμπερή (15,16).

14. pour the tea *into* the cup/ versez du thé *dans* la tasse /βάλε τσάι στα φλυτζάνια

15. put your finger *into* the handle of a teacup

16. πέρασε την κλωστή *μέσα* (στη) βελόνα/ ρίξε το νερό στον νιπτήρα/ jetez l'eau *dans* le bassin

Συχνά τα αντικείμενα της μορφής διάυλος συνοδεύονται από ρήματα που δηλώνουν κίνηση, γεγονός που φανερώνει ότι αυτό το είδος εγκλεισμού δεν αποκλείει την κίνηση.

Εξωγεωμετρικά, λειτουργικά κριτήρια

Αν το Ψ λειτουργικά περιέχει (functional containment) το X, τότε η θέση του Ψ ελέγχει τη θέση του X εξαιτίας κάποιου βαθμού εγκλεισμού του X στο Ψ.

17. a person *in* a queue/ une personne *dans* une file d'attente/ ένας άνθρωπος στην ουρά

Ένας άνθρωπος που περιμένει στην ουρά, από τη στιγμή που είναι μέρος της ουράς θα κινηθεί όπως θα κινηθεί η ουρά. Κίνηση του αντικειμένου Ψ συνεπάγεται κίνηση του αντικειμένου X.

Αντίστοιχα:

18 α. the bulb *in* the socket/ l'ampoule *dans* la prise de courant/ η λάμπα *μέσα* στο ντουί ≠

β. *the bottle *in* the cap/ la bouteille *dans* le bouchon / το μπουκάλι *μέσα* στο καπάκι.

Στο παράδειγμα 18α, το αντικείμενο-περιέκτης (το ντουί) ελέγχει την κίνηση του περιεχόμενου (της λάμπας) γι' αυτό και η χρήση της πρόθεσης *μέσα* είναι ενδεδειγμένη. Πέρα από το γεγονός ότι αν κινηθεί το ντουί θα κινηθεί και η λάμπα ως όλο, το ντουί συγκρατεί επιπλέον τη λάμπα από τη

δύναμη της βαρύτητας. Αντίθετα, το εκφώνημα της 18β, και πιο συγκεκριμένα η επιλογή της πρόθεσης είναι μη αναμενόμενη γιατί αν κινηθεί το καπάκι δεν έπεται κίνηση του μπουκαλιού ούτε συγκρατεί το μπουκάλι από την επίδραση της βαρύτητας (Evans & Green 2006: 184).

2.2. Ο προαιρετικός χαρακτήρας του *μέσα*

Το ελληνικό *μέσα* δε διαφέρει ως προς τις σημασίες που μπορεί να εκφράσει σε σχέση με το αντίστοιχο της αγγλικής και της γαλλικής.

Σημείο διαφοροποίησης ελληνικής αποτελεί ο προαιρετικός χαρακτήρας της πρόθεσης *μέσα*. Ποιες είναι οι σημασίες που αφήνουν μεγαλύτερα περιθώρια παράλειψης της πρόθεσης:

[Α] Μερικός γεωμετρικός εγκλεισμός: προαιρετικός χαρακτήρας (τα λουλούδια είναι {*μέσα*} στο βάζο).

[Β] Πλήρης γεωμετρικός εγκλεισμός: μάλλον υποχρεωτικός χαρακτήρας (έπεσαν ψίχουλα *μέσα* στο ποτήρι, το φαγητό είναι *μέσα* στην κατσαρόλα).

[Γ] Διασκορπισμένος γεωμετρικός εγκλεισμός: μάλλον προαιρετικός χαρακτήρας (ένα νησί {*μέσα*} στο αρχιπέλαγος, ένα νούφαρο {*μέσα*} στη λίμνη, ένα βότσαλο στη λίμνη, το μικρό σπίτι στο λιβάδι).

[Δ] Τοπολογικός εγκλεισμός: μάλλον υποχρεωτικός χαρακτήρας (η μαρμελάδα είναι {*μέσα*} στο βαζάκι).

[Ε] Περιοχές και αντικείμενα που μπορούν να γίνουν αντιληπτά ως περιέκτες: μάλλον προαιρετικός χαρακτήρας (ρίξε το νερό στον νιπτήρα, βάλε κρασί στα ποτήρια).

Αντικείμενα της μορφής διάυλος: υποχρεωτικός χαρακτήρας (πέρασε την κλωστή {*μέσα*} στη βελόνα).

Συμπέρασμα

Στην ελληνική οι προθέσεις *μέσα σε* και *πάνω σε* εμφανίζουν σε αρκετά περιβάλλοντα έναν προαιρετικό χαρακτήρα όσον αφορά το επιρρηματικό στοιχείο τους, γεγονός που τις διαφοροποιεί από τις αντίστοιχες της αγγλικής και της γαλλικής. Πιθανοί λόγοι:

α) Η ίδια η δομή της πρόθεσης. Περιφραστικές προθέσεις (επίρρημα+πρόθεση). Για τη δήλωση μιας περιοχής χρησιμοποιούνται στην ελληνική κυρίως τα επιρρήματα τόπου (πάνω, μέσα κ.α.). Προκειμένου ο ομιλητής να δηλώσει επαφή ή εγκλεισμό σε μια περιοχή του τόπου, χρησιμοποιεί τα επιρρήματα του τόπου σε συνδυασμό με την πρόθεση *σε* (Κλαίρης, Μπαμπινιώτης 2001: 45).

β) Σε περιπτώσεις που μπορεί να παραλειφθεί το επίρρημα ως ευκόλως εννοούμενο, παραλείπεται και έτσι οδηγούμαστε στη μορφή πρόθεση+ονοματικό στοιχείο. Το σύστημα της ελληνικής δίνει τη δυνατότητα παράλειψης του επιρρήματος. Αντίθετα, το σύστημα της αγγλικής και της γαλλικής δεν δηλώνει τις σημασίες των *πάνω* και *μέσα* με

περιφραστικές προθέσεις με αποτέλεσμα να μην μπορεί να παραλείψει κανένα στοιχείο.

γ) Διαφορετική πορεία γραμματικοποίησης. Ενώ οι προθετικές φράσεις των τριών υπό εξέταση γλωσσών λεξικοποιούν έννοιες που συνδέονται με τα ίδια νοητικά σχήματα (CONTAINER, UP-DOWN), διαφοροποιούνται ως προς τον αριθμό και τον χαρακτήρα των στοιχείων που απαιτούν για την αναφορά στο νοητικό σχήμα. Η συγχρονική αυτή διαφοροποίηση των συστημάτων συνδέεται με διαφορετική πορεία γραμματικοποίησης που ακολούθησαν τα τοπικά επιρρήματα και οι προθέσεις, πορεία η οποία πρέπει να εξεταστεί διεξοδικότερα προκειμένου να φωτιστεί καλύτερα η συγχρονική κατάσταση.

Η προαιρετικότητα των ελληνικών προθέσεων δημιουργεί το εξής ερώτημα: πώς οι ομιλητές της ελληνικής καταφέρνουν να εκφράσουν ένα μεγάλο μέρος των πολύπλοκων τοπικών σχέσεων του κόσμου μας χωρίς την προσθήκη επιρρηματικών στοιχείων; Το σύστημα της ελληνικής δίνει τη δυνατότητα για οικονομικότερη δήλωση αυτών των σχέσεων. Αυτό που αξίζει να εξεταστεί είναι πώς παρά το υψηλό επίπεδο αφαίρεσης επιτυγχάνεται η επικοινωνία μεταξύ των ομιλητών. Περαιτέρω έρευνα βασισμένη σε συλλογή δεδομένων και έλεγχος των παραπάνω υποθέσεων κρίνονται απαραίτητα προκειμένου να εξαχθούν αξιόπιστα συμπεράσματα.

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Η Παραγωγικότητα των Επαγγελματικών Παραγωγικών Επιθημάτων –τζης και –ας στο Πατρινό Ιδίωμα

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Περίληψη

Αντικείμενο της παρούσας μελέτης αποτελεί η εξέταση του βαθμού παραγωγικότητας των επαγγελματικών παραγωγικών επιθημάτων –τζης και –ας στο πατρινό ιδίωμα. Ο κύριος στόχος του άρθρου έγκειται στην κατάδειξη του πιο παραγωγικού εκ των δύο επιθημάτων. Βασική παραδοχή της εργασίας αποτελεί ότι το επίθημα –τζης επιλέγει κατά κανόνα βάσεις τουρκικής προέλευσης, αλλά εμφανίζεται όλο και συχνότερα και με βάσεις μη τουρκικής προέλευσης αντικαθιστώντας πολλές φορές το επίθημα –ας με το οποίο εμφανίζεται σε συμπληρωματική κατανομή. Μεθοδολογικό εργαλείο για την συγκέντρωση του υλικού μας αποτέλεσε η συμπλήρωση ερωτηματολογίου κλειστού τύπου.

0. Εισαγωγή

Στην παρούσα μελέτη θα εξετάσω την παραγωγικότητα των επαγγελματικών παραγωγικών επιθημάτων –τζης και –ας στο πατρινό ιδίωμα, στοχεύοντας με την ολοκλήρωσή της στην ανάδειξη του πιο παραγωγικού. Στη 1^η ενότητα, ορίζοντας την παραγωγικότητα, την αντιπαραθέτω με την έννοια της δημιουργικότητας, την διαφοροποιώ από την συχνότητα και αναφέρω τα βασικά της χαρακτηριστικά αλλά και τους πάσης φύσεως περιορισμούς στους οποίους υπόκειται. Στη 2^η ενότητα παρουσιάζω το φαινόμενο το οποίο θα μελετήσω, και επιχειρώ να διατυπώσω μια επιστημονική υπόθεση, η οποία θα επαληθευτεί ή θα διαψευστεί από τα δεδομένα μου. Στην 3^η ενότητα αποσαφηνίζονται τα μεθοδολογικά ζητήματα της έρευνας, που συνίστανται τόσο στη μέθοδο όσο και στη διαδικασία συλλογής του υλικού μέσω της χρήσης ερωτηματολογίου. Στην 4^η ενότητα παρουσιάζω τα δεδομένα τις έρευνας, όπως προέκυψαν από τις απαντήσεις των πληροφορητών, και βάσει αυτών επιχειρώ να μετρήσω την παραγωγικότητα των επιθημάτων που με ενδιαφέρουν και να ερμηνεύσω στην 5^η ενότητα τα αποτελέσματα. Στο τέλος της εργασίας παρατίθεται παράρτημα με το ερωτηματολόγιο που αποτέλεσε το εργαλείο συλλογής του υλικού μου.

1. Παραγωγικότητα

Βασική έννοια στην εργασία μου αποτελεί η *παραγωγικότητα* (productivity), η οποία είναι γενικότερα μία από τις βασικότερες έννοιες της μορφολογικής μελέτης, καθώς σχετίζεται με τις διαδικασίες σχηματισμού λέξεων. Πιο συγκεκριμένα, παραγωγικότητα είναι εκείνη η ιδιότητα της γλώσσας που μας επιτρέπει να λέμε πράγματα τα οποία δεν έχουν ξαναειπωθεί (Hockett, 1958:575), η ιδιότητα δηλαδή της γλώσσας να δημιουργεί νέα στοιχεία, και ο βασικότερος παράγοντας εμπλουτισμού του λεξιλογίου μιας γλώσσας και δημιουργίας νεολογισμών (Bauer, 1983:63).

Η δημιουργία νεολογισμών όμως δεν είναι αποτέλεσμα μόνο της παραγωγικότητας. Άμεσα συνδεδεμένη με την εμφάνιση καινούριων στοιχείων στη γλώσσα είναι και η έννοια της *δημιουργικότητας* (creativity). Η διαφορά των δύο εννοιών έγκειται στο γεγονός ότι η παραγωγικότητα φέρει πιο προβλέψιμα και γενικεύσιμα αποτελέσματα, σε αντίθεση με τη δημιουργικότητα που τα αποτελέσματά της είναι μη προβλέψιμα και κατά τη δημιουργία των νέων στοιχείων δεν εφαρμόζονται συγκεκριμένοι κανόνες.

Μία επιπλέον έννοια με την οποία συνδέεται η παραγωγικότητα είναι αυτή της *συχνότητας* (frequency). Θα ήταν λάθος να ταυτίζαμε την παραγωγικότητα με τη συχνότητα, αφού η συχνότητα εξαρτάται από το περιβάλλον και τις συνθήκες που επηρεάζουν την έκφραση των ομιλητών, και δεν αποτελεί κριτήριο για το αν μια διαδικασία ή ένα στοιχείο είναι παραγωγικό ή όχι (Ράλλη, 2005:95). Μπορεί για παράδειγμα ένα στοιχείο να εμφανίζει πολύ μεγάλη συχνότητα εμφάνισης, να μην είναι όμως καθόλου παραγωγικό μια δεδομένη χρονική περίοδο, και το αντίστροφο.

Δύο βασικά γνωρίσματα της παραγωγικότητας σύμφωνα με τον Bauer (1988) αποτελούν η *διαβάθμιση* και ο *συγχρονικός χαρακτήρας*. Η παραγωγικότητα μιας μορφολογικής διαδικασίας ή ενός στοιχείου δεν είναι μια έννοια απόλυτη (Bauer 1988, 2001). Το πόσο παραγωγική είναι μια διαδικασία μπορεί να μετρηθεί μόνο συγκριτικά με κάποια άλλη. Για παράδειγμα, μια διαδικασία προσφυματοποίησης μπορεί να είναι εξαιρετικά παραγωγική, αλλά όχι απόλυτα παραγωγική, μπορεί δηλαδή η διαδικασία να μην εφαρμόζεται ανεξαιρέτως, αν και θεωρητικά θα έπρεπε να εφαρμοστεί¹. Επίσης μπορεί να υπάρχει και διαφορά παραγωγικότητας μεταξύ δύο προσφυσμάτων που χρησιμοποιούνται για να δημιουργήσουν λέξεις που εκφράζουν την ίδια ή παρεμφερείς σημασίες² (Ράλλη, 2005).

Με το χαρακτηριστικό της διαβάθμισης σχετίζεται και η έννοια της *ημι-παραγωγικότητας* (semi-productivity). Ως ημι-παραγωγικά ορίζονται εκείνα

¹ Παράδειγμα το επίθημα *-άρω* προστίθεται σε ξενικές βάσεις και δημιουργεί ρήματα, υπάρχουν όμως και ρήματα με ξενικές βάσεις που έχουν δημιουργηθεί από πρόσθεση επιθημάτων ελληνικής προέλευσης. Επομένως η επιθηματοποίηση με το *-άρω* δεν μπορεί να χαρακτηριστεί ως απόλυτα παραγωγική διαδικασία.

² Για παράδειγμα τα επαγγελματικά παραγωγικά επιθήματα *-τζης* και *-ας*.

τα στοιχεία ή οι διαδικασίες που παρουσιάζουν περιορισμένη ή περιστασιακή δημιουργικότητα³ (Crystal, 2003:306), και που δεν εφαρμόζονται χωρίς εξαιρέσεις σε όλες τις περιπτώσεις (Bauer, 1988:71).

Ο συγχρονικός χαρακτήρας της παραγωγικότητας είναι το δεύτερο βασικό της γνώρισμα. Δεν μπορούμε να μιλάμε για παραγωγικότητα μιας μορφολογικής διαδικασίας, χωρίς να προσδιορίσουμε τη χρονική περίοδο κατά την οποία η διαδικασία αυτή είναι παραγωγική (Bauer, 1988:61). Κάτι που είναι παραγωγικό σήμερα, μπορεί να μην υπήρξε παραγωγικό σε κάποια προηγούμενη φάση της γλώσσας, και το αντίστροφο. Επομένως η μελέτη της παραγωγικότητας πρέπει να γίνεται σε συγχρονικό επίπεδο, η αλλαγή της όμως μελετάται διαχρονικά (Ράλλη, 2005).

Η παραγωγικότητα ενός στοιχείου ή μιας διαδικασίας εξαρτάται από την ευκολία με την οποία το χρησιμοποιούμε: όσο λιγότεροι περιορισμοί εφαρμόζονται, τόσο πιο παραγωγική είναι η εκάστοτε διαδικασία, και αντίστροφα. Οι περιορισμοί για τους οποίους γίνεται λόγος μπορεί να προέρχονται από τα συστατικά της δομής των λέξεων στα οποία εφαρμόζεται η διαδικασία, όπως υποστηρίζει και η Χριστοφίδου (1990:483), ή να αφορούν την ίδια τη διαδικασία (Ράλλη, 2005:97). Ανάλογα με την περίπτωση, το περιεχόμενό τους μπορεί να είναι φωνολογικό, μορφολογικό, συντακτικό, σημασιολογικό ή και πραγματολογικό (Bauer, 2001).

Εκτός όμως από τους επιμέρους περιορισμούς, υπάρχει και ένας γενικότερος περιορισμός, αυτός του **φραγμού**⁴ (blocking). Ο φραγμός είναι εκείνος ο περιορισμός που σύμφωνα με τον Aronoff (1976:43) αποτρέπει την δημιουργία νέων σχηματισμών, εξαιτίας της ύπαρξης άλλων λέξεων που εκφράζουν την ίδια σημασία. Μια μορφολογικά σύνθετη λέξη δηλαδή, δεν γίνεται αποδεκτή εξαιτίας κάποιας άλλης συνώνυμης που την μπλοκάρει, και όχι επειδή δεν ανταποκρίνεται στον μορφολογικό σχηματισμό.

2. Περιγραφή φαινομένου και Διατύπωση Υπόθεσης

Στη συγκεκριμένη έρευνα μελετάται η παραγωγικότητα των επαγγελματικών παραγωγικών επιθημάτων –τζης και –ας, και συγκεκριμένα, ποιο από τα δύο επιλέγουν οι φυσικοί ομιλητές τόσο σε υπαρκτές λέξεις της ελληνικής όσο και κατά τη διαδικασία δημιουργίας νεολογισμών.

³ Για παράδειγμα το πρόθημα α- (στερητικό) προστίθεται στην αρχή λέξεων για να σχηματίσει τα αντίθετά τους, υπάρχουν όμως και αρκετές εξαιρέσεις. Πχ. *σαφής* → *ασαφής* αλλά όχι *καλός* → **άκαλος*

⁴ Ο Rainer (1988, 2005) θεωρεί ότι υπάρχουν δύο τύποι φραγμού, ο **φραγμός του τύπου** (type-blocking) και ο **φραγμός του δείγματος** (token-blocking).

Τα δύο αυτά επιθήματα βρίσκονται μεταξύ τους σε συμπληρωματική κατανομή ως προς την επιλογή βάσης, αφού το $-τζης$ ⁵ επιλέγει κυρίως βάσεις τουρκικής προέλευσης, σε αντίθεση με το $-ας$ που σε γενικές γραμμές επιλέγει βάσεις ελληνικές και σπάνια άλλων γλωσσών, σε καμία περίπτωση όμως τουρκικής προέλευσης [βλ.(1),(2)]

- (1) π.χ. χαλβατζής (τούρκικο halva)
καφετζής (τούρκικο kahve)
σοβατζής (τούρκικο siva)
- (2) π.χ. ρολογάς
αμαξάς
καστανάς

Παρ' όλα αυτά βλέπουμε ότι το επίθημα $-τζης$ εμφανίζεται πλέον όλο και πιο συχνά και με βάσεις μη τουρκικής προέλευσης, ενώ εμφανίζεται και σε περιπτώσεις που υπάρχει ήδη κάποιο παράγωγο σε $-ας$ (Ράλλη, 2005:92).

- (3) π.χ. παγωτατζής (ελληνικό παγωτό)
βιολιτζής (βενετσιάνικο violin)
ψιλικατζής
σαπουνάς/ σαπουντζής (ιταλικό sapone)
κουλουράς/ κουλουρτζής

Σύμφωνα λοιπόν με τα παραπάνω δεδομένα, βασική υπόθεση της έρευνας είναι ότι η συμπληρωματικότητα των $-τζης$ και $-ας$ σε βάσεις μη τουρκικής προέλευσης τείνει να εξουδετερωθεί, και το $-τζης$ είναι πλέον πολύ πιο παραγωγικό συγκριτικά με το $-ας$ (Ράλλη, 2005:92).

3. Μέθοδος και Διαδικασία συλλογής Υλικού

Η μέθοδος που ακολούθησα για τη συλλογή υλικού είναι η συμπλήρωση από 15 πληροφορητές⁶ ενός γραπτού ερωτηματολογίου κλειστού τύπου. Η επιλογή της συγκεκριμένης μεθόδου για τη συγκέντρωση του υλικού ήταν σκόπιμη. Σε ένα ερωτηματολόγιο, η έρευνα είναι σαφώς πιο εστιασμένη στο φαινόμενο που θέλουμε να μελετήσουμε, απ' ότι για παράδειγμα μια ηχογράφηση φυσικής συνομιλίας, και η κωδικοποίησή του πολύ πιο εύκολη. Έχει επίσης το πλεονέκτημα συλλογής μεγάλης ποσότητας υλικού

⁵ Το παραγωγικό επίθημα $-τζής$ προέρχεται από το τουρκικό επίθημα $-ci$ (Ράλλη, 2005).

⁶ Οι πληροφορητές είχαν όλοι κοινή καταγωγή (Πάτρα), ίδια ηλικία (40-58 ετών), σχεδόν ίδιο μορφωτικό επίπεδο (ανώτερη και ανώτατη εκπαίδευση) και παρόμοιο κοινωνικό και οικονομικό status..

σε μικρό σχετικά χρονικό διάστημα (Milroy & Gordon, 2003).

Το ερωτηματολόγιο είναι ένα σύνολο προκατασκευασμένων ερωτήσεων που ελέγχουν όλα τα ενδεχόμενα του υπό εξέταση θέματος. Στην περίπτωση της δικής μου μελέτης σχετικά με την παραγωγικότητα των επιθημάτων -τζης και -ας, επέλεξα ένα τυπικό ερωτηματολόγιο με ερωτήσεις ονομασίας, ερωτήσεις δηλαδή μερικής άγνοιας, σύμφωνα με τις οποίες ζητάω από τους πληροφορητές να ονομάσουν αυτό που τους περιγράφεται στην ερώτηση⁷. Οι ερωτήσεις είναι της μορφής « *Πώς ονομάζεται αυτός που* ».

- (4) π.χ. Ερώτηση: *Πώς ονομάζεται αυτός που οδηγεί ταξί;*
Απάντηση: *ταξιτζής*

Το ερωτηματολόγιο χωρίζεται σε δύο μέρη. Το πρώτο μέρος περιλαμβάνει ονοματοθεσία ήδη υπάρχουσών λέξεων της ελληνικής, και πιο συγκεκριμένα λέξεων που εκφράζουν επαγγελματική ιδιότητα μέσω των επιθημάτων -τζης και -ας. Παρ' όλα αυτά, για να μην γίνει απόλυτα αντιληπτό το τι ακριβώς μελετάται και οι πληροφορητές προσαρμόσουν τις απαντήσεις τους προς αυτή την κατεύθυνση και μόνο, έχουν τοποθετηθεί και κάποιες ερωτήσεις παραπλανητικές, όπως αυτή στο (5)

- (5) *Πώς ονομάζεται αυτός που κάνει άρση βαρών;*

Το δεύτερο μέρος περιλαμβάνει ονοματοθεσία πιθανών⁸ λέξεων της ελληνικής, λέξεων που δεν υπάρχουν αλλά θα ήταν πιθανό να υπάρξουν.

- (6) π.χ. Ερώτηση: *Πώς ονομάζεται αυτός που οδηγεί τρένο;*

Με αυτόν τον τρόπο θα επιχειρήσω να ελέγξω την παραγωγικότητα των επαγγελματικών επιθημάτων που με ενδιαφέρουν στην προκειμένη εργασία.

4. Παρουσίαση Δεδομένων

Στο πρώτο μέρος του ερωτηματολογίου μελετώνται υπαρκτές λέξεις της Ελληνικής. Επειδή στόχος της εργασίας είναι η ανάδειξη του πιο παραγωγικού μορφήματος ανάμεσα στα -τζης και -ας, εκτός από λέξεις τουρκικής προέλευσης, που εκ των πραγμάτων συνδέονται με το επίθημα -τζης, εξετάζονται λέξεις ελληνικής προέλευσης που αν και κανονικά

⁷ Αναλυτικά το ερωτηματολόγιο παρουσιάζεται στο παράρτημα.

⁸ Πιθανές λέξεις (possible words) είναι εκείνες οι οποίες δεν εμφανίζονται στα κοινά λεξικά, είναι όμως καλοσχηματισμένες δομικά, σύμφωνα με τον μορφολογικό μηχανισμό της γλώσσας, και εύκολα αποδεκτές υπό κανονικές συνθήκες. (Ράλλη, 2005:80 και Rainer, 2005)

συνδέονται με το επίθημα *-ας*, θα μπορούσαν να συνδεθούν και με το επίθημα *-τζης*.

Στις ερωτήσεις στις οποίες οι λέξεις ήταν τουρκικής προέλευσης, οι απαντήσεις ήταν ομόφωνες (πχ. *‘Πώς ονομάζεται αυτός που σοβαντίζει σπίτια’* → *‘σοβατζής’*). Στις ερωτήσεις στις οποίες οι λέξεις ήταν ελληνικής προέλευσης, και ανέκαθεν συνδέονταν είτε με το τουρκικής προέλευσης επίθημα *-τζης* (πχ *παγωτατζής*), είτε με το *-ας* (πχ. *ψαράς*), οι απαντήσεις των πληροφορητών ήταν επίσης κοινές. Σε λέξεις ελληνικής ή γενικότερα ευρωπαϊκής προέλευσης, οι οποίες, ενώ συνδέονται με το επίθημα *-ας*, κάποιες φορές μπορεί να εμφανίζονται και με το επίθημα *-τζης*, οι απαντήσεις των πληροφορητών ήταν ετερόκλητες (πχ στην ερώτηση *‘Πώς ονομάζεται αυτός που λέει παραμύθια’*, 12 από τους 15 ερωτηθέντες απάντησαν *‘παραμυθάς’*, ενώ οι υπόλοιποι 3 απάντησαν *‘παραμυθατζής’*). Αναλυτικότερα οι απαντήσεις των πληροφορητών παρουσιάζονται στον ακόλουθο πίνακα:

| Πώς ονομάζεται αυτός που: | -τζης | -ας | Άλλο | Σύνολο |
|-------------------------------|-------|-----|------|--------|
| Λέει παραμύθια | 3 | 12 | - | 15 |
| Πουλάει κουλούρια | 5 | 10 | - | 15 |
| Σοβαντίζει σπίτια | 15 | - | - | 15 |
| Στρώνει πλακάκια | 2 | 11 | 2 | 15 |
| Παρασκευάζει αλεύρι | - | 11 | 4 | 15 |
| Πουλάει παγωτά | 15 | - | - | 15 |
| Φτιάχνει μπακλαβάδες | 15 | - | - | 15 |
| Κάνει κατασκευές με αλουμίνιο | 1 | 12 | 2 | 15 |
| Πουλάει παλιά αντικείμενα | 14 | - | 1 | 15 |
| Ψαρεύει | - | 15 | - | 15 |
| Παρασκευάζει σαπούνια | 3 | 9 | 3 | 15 |
| Φτιάχνει παπλώματα | 1 | 14 | - | 15 |

Πίνακας 1

Τα εμπειρικά μας αποτελέσματα έδειξαν ότι το επίθημα *-τζης*, τείνει σε ορισμένες περιπτώσεις να πάρει τη θέση του *-ας*, αν και ο αριθμός των παραδειγμάτων και των πληροφορητών δεν είναι ικανός ώστε να οδηγήσει σε ασφαλή συμπεράσματα τα οποία θα συγκλίνουν υπέρ μιας τέτοιας τάσης.

Στο δεύτερο μέρος του ερωτηματολογίου αντικείμενο μελέτης είναι πιθανές λέξεις της Ελληνικής. Οι πληροφορητές, στην προσπάθειά τους να δημιουργήσουν λέξεις που δεν υπάρχουν στην καθομιλουμένη, αλλά που θα μπορούσαν να υπάρξουν, θα καταδείξουν με την επιλογή των επιθημάτων που θα χρησιμοποιήσουν ποιο από τα δύο επιθήματα παρουσιάζει μεγαλύτερη παραγωγικότητα. Οι λέξεις που ζητήθηκε από τους

ερωτώμενους να δημιουργήσουν, βασίζονται τόσο σε τουρκικές όσο και σε ελληνικές βάσεις.

Στις νέο-σχηματιζόμενες λέξεις με βάσεις τουρκικής προέλευσης, ενώ θα αναμέναμε οι πληροφορητές μας να επιλέξουν το επίθημα –τζης παρατηρούμε ότι σε πολλές περιπτώσεις επιλέγεται το επίθημα –ας (πχ στην ερώτηση *‘Πώς ονομάζεται αυτός που βασική του ενασχόληση είναι τα καπάκια’*, 8 από τους πληροφορητές απάντησαν *‘καπακάς’* και 7 *‘καπακατζής’*). Παρόμοια συμπεριφορά των πληροφορητών παρατηρείται και στις σχηματιζόμενες λέξεις με βάσεις ελληνικής ή ευρωπαϊκής προέλευσης (πχ στην ερώτηση *‘Πώς ονομάζεται αυτός που βασικό του επάγγελμα είναι να αναβοσβήνει φώτα’*, 7 από τους πληροφορητές απάντησαν *‘φωτατζής’*, 4 *‘φωτάς’* και 4 κάτι άλλο). Πιο αναλυτικά οι απαντήσεις των πληροφορητών παρουσιάζονται στον ακόλουθο πίνακα:

| Πώς ονομάζεται αυτός που: | -τζης | -ας | Άλλο | Σύνολο |
|----------------------------|-------|-----|------|--------|
| Οδηγεί τρένο | 3 | 12 | - | 15 |
| Κάνει δουλειές στη θάλασσα | 1 | 12 | 2 | 15 |
| Φτιάχνει ταβάνια | 3 | 11 | 1 | 15 |
| Δουλεύει με κεράσια | - | 14 | 1 | 15 |
| Κατασκευάζει παράθυρα | - | 15 | - | 15 |
| Ασχολείται με το πιλάφι | 1 | 14 | - | 15 |
| Κατασκευάζει συνδετήρες | 2 | 13 | - | 15 |
| Οδηγεί λεωφορείο | 9 | 6 | - | 15 |
| Οδηγεί πούλμαν | 13 | 2 | - | 15 |
| Κάνει δουλειές στα βουνά | 7 | - | 8 | 15 |
| Τραγουδάει αμανέδες | 13 | - | 2 | 15 |
| Αναβοσβήνει φώτα | 7 | 4 | 4 | 15 |
| Κατασκευάζει βαλίτσες | - | 15 | - | 15 |
| Εργάζεται σε μπουντρούμι | 7 | 8 | - | 15 |
| Ασχολείται με καπάκια | 7 | 8 | - | 15 |

Πίνακας 2

Συμπερασματικά, θα μπορούσαμε να πούμε ότι η παραγωγικότητα του –τζης και του –ας βρίσκεται περίπου στα ίδια επίπεδα. Τα δεδομένα του δεύτερου πειράματος δεν επιβεβαιώνουν την υπόθεση που είχαμε αναπτύξει στην αρχή, αφού ο συνδυασμός του εν λόγω επιθήματος δεν επιτυγχάνεται με όλες τις βάσεις τουρκικής προέλευσης. Το επίθημα –τζης συνδυάζεται σε έναν ικανοποιητικό βαθμό με βάσεις μη τουρκικής προέλευσης, αλλά όχι σε μεγαλύτερο βαθμό από το –ας, το οποίο κατά παράδοξο τρόπο δημιουργεί λέξεις συνδυαζόμενο και με τουρκικές βάσεις.

Συνοψίζοντας, οι ομιλητές του πατρινού ιδιώματος, χρησιμοποιούν τόσο το *-τζης* όσο και το *-ας* κατά την παραγωγή ήδη υπαρχουσών λέξεων, χωρίς όμως να δείχνουν τόσο μεγάλη προτίμηση στο επίθημα *-τζης* σύμφωνα με την αρχική υπόθεση. Κατά την παραγωγή δε νεολογισμών, το επίθημα *-ας*, είχε, όπως δείχνουν τα δεδομένα, σημαντικό προβάδισμα έναντι του *-τζης*, αφού χρησιμοποιήθηκε κατά κόρον όχι μόνο συνδυαζόμενο με βάσεις ελληνικής ή γενικότερα ευρωπαϊκής προέλευσης, αλλά και με βάσεις τουρκικής προέλευσης, που λογικά θα περιμέναμε να δούμε το επίθημα *-τζης*. Επομένως, προς διάψευση της αρχικής υπόθεσης της έρευνας, το επίθημα *-ας* φαίνεται στο πατρινό ιδίωμα να είναι ίσως πιο παραγωγικό από το *-τζης*, ή, για να το θέσω καλύτερα, ότι μάλλον το *-τζης* δεν είναι τόσο παραγωγικό σύμφωνα με τις αρχικές προσδοκίες.

5. Ερμηνεία

Έχοντας μετρήσει την παραγωγικότητα των επιθημάτων *-τζης* και *-ας*, και έχοντας καταλήξει ότι μάλλον το *-ας* είναι πιο παραγωγικό στο πατρινό ιδίωμα από το *-τζης*, το αμέσως επόμενο ερώτημα που προκύπτει είναι γιατί το *μεν* και όχι το *δε*, ποιες είναι οι ιδιότητες εκείνες που έχει το ένα έναντι του άλλου και το κάνει πιο παραγωγικό.

Για την απάντηση τέτοιου είδους ερωτημάτων, η ψυχολinguιστική έχει επιχειρήσει να δώσει κάποιες ερμηνείες. Σύμφωνα λοιπόν με ψυχολinguιστικές προσεγγίσεις, οι μορφολογικά σύνθετες λέξεις είναι αποθηκευμένες στον ανθρώπινο νου και προσπελάσιμες με δύο τρόπους, είτε ως ολόκληρες λέξεις (*whole word route*), είτε ως μεμονωμένα μορφήματα, τα οποία συντιθέμενα δίνουν την συνθετότερη λέξη (*decomposition route*) (Hay & Plag, 2004). Σύμφωνα με κάποια ερμηνευτικά μοντέλα, εξαρτάται από το είδος της λέξης το ποιο είδος αποθήκευσης και προσπέλασης θα επιλεχθεί, και σ' αυτό παίζει ρόλο η συχνότητα (Plag, 2005). Πιο συγκεκριμένα, το κατά πόσο μια συγκεκριμένη λέξη μπορεί εύκολα να χωριστεί σε μορφήματα (*decomposability*) εξαρτάται από τη σχετική συχνότητα (*relative frequency*) της παράγωγης λέξης και της αρχικής βάσης, και υπολογίζεται σύμφωνα με τον τύπο στο (7):

$$(7) \quad f_{\text{relative}} = \frac{f_{\text{derivative}}}{f_{\text{base}}}$$

Σύμφωνα με τον παραπάνω τύπο, αν η σχετική συχνότητα είναι χαμηλή, η συχνότητα της βάσης είναι υψηλότερη από τη συχνότητα της παράγωγης λέξης, και έτσι είναι πιο εύκολα αναλύσιμη στα συστατικά της, και το πρόσφυμα που μας ενδιαφέρει είναι πιο διαθέσιμο στον ομιλητή, ο οποίος

το χρησιμοποιεί και πιο εύκολα. Ως εκ τούτου, η χαμηλή σχετική συχνότητα σχετίζεται και με υψηλή *σημασιολογική* (semantic) και *φωνολογική διαφάνεια* (phonological transparency).

Στα πλαίσια της συγκεκριμένης έρευνας, δε θα με απασχολήσει η σημασιολογική διαφάνεια, αλλά η φωνολογική, σύμφωνα με την οποία τα όρια ανάμεσα στο θέμα και στο πρόσφυμα είναι από φωνολογικής άποψης απολύτως διακριτά. Σύμφωνα με διάφορες έρευνες, οι ομιλητές κατά την διαδικασία επεξεργασίας μιας λέξης, βασίζονται σε φωνοτακτικούς περιορισμούς και τείνουν να βάζουν κάποια όρια ανάμεσα σε εναλλαγές φωνημάτων που δεν απαντώνται στο εσωτερικό μονομορφηματικών λέξεων. Όσο πιο σπάνιος και ασυνήθιστος είναι ο συνδυασμός των γειτνιαζόντων φωνημάτων, τόσο πιο εύκολο είναι αντιληπτικά να διασπαστεί μια λέξη στα μορφήματά της, σε βάση και πρόσφυμα, και τόσο πιο εύκολα χρησιμοποιείται το πρόσφυμα αυτό κατά την δημιουργία άλλων λέξεων, άρα τόσο πιο παραγωγικό είναι.

Στην δική μας περίπτωση, το πρόσφυμα –ας, που προέκυψε ως πιο παραγωγικό από το –τζης, δεν έχει κατά την γνώμη μου τα χαρακτηριστικά που προαναφέρθηκαν. Δεν θεωρώ ότι όταν συνδυάζεται με διάφορες βάσεις παρουσιάζει φωνολογική διαφάνεια, σε αντίθεση με το –τζης, που –κατά την άποψή μου πάντα- παρουσιάζει μεγαλύτερη διαφάνεια από το –ας, και μπορεί πιο εύκολα να γίνει αντιληπτό ως ξεχωριστό μόρφημα όταν βρίσκεται σε μία λέξη.

Οι ψυχολογολογικές προσεγγίσεις επομένως που αφορούν στην παραγωγικότητα, αδυνατούν να ερμηνεύσουν την προτίμηση των Πατρινών στο επίθημα –ας. Ίσως το –ας, επειδή ως ακολουθία φωνημάτων είναι πολύ συχνή και απαντάται σε πάρα πολλές λέξεις της ελληνικής (πχ. στην 2^η κλιτική τάξη των ουσιαστικών⁹), και όχι μόνο στα επαγγελματικά επιθήματα, να είναι πιο ‘διαθέσιμη’ στον εκάστοτε ομιλητή για την δημιουργία νέων λέξεων. Στην συγκεκριμένη περίπτωση βέβαια, δεν μιλάμε για παραγωγικότητα επιθήματος, αλλά για εξοικείωση των ομιλητών με συγκεκριμένους ήχους.

Ίσως η προτίμηση στο ένα αντί για το άλλο να οφείλεται και σε άλλους φωνολογικούς, μορφοφωνολογικούς ή σημασιολογικούς παράγοντες, παράγοντες που να αφορούν όχι μόνο το επίθημα αλλά και τη βάση. Η συγκεκριμένη έρευνα όμως δεν σχεδιάστηκε και δεν προσανατολίστηκε εξ αρχής προς αυτήν την κατεύθυνση. Η παραγωγικότητα των προσφυμάτων είναι ένα θέμα που θέλει περαιτέρω εξέταση και έρευνα, και προϋποθέτει την δημιουργία μιας μεγάλης βάσης δεδομένων για την εξαγωγή ασφαλέστερων συμπερασμάτων, καθώς και έρευνα προσανατολισμένη με

⁹ Βλ. Πάλλη (2005:120)

τέτοιο τρόπο ώστε να λαμβάνει υπόψη όλους τους δυνατούς παράγοντες που μπορούν να την επηρεάσουν.

6. Συμπεράσματα

Το άρθρο αυτό αποτελεί συμβολή στη μελέτη των επιθημάτων *-τζης* και *-ας*, της παραγωγικότητάς τους αλλά και της χρήσης τους στο ιδίωμα της Πάτρας. Η έρευνα που διεξήχθη, είχε κύριο στόχο την κατάδειξη του πιο παραγωγικού επιθήματος εκ των δύο. Βασική υπόθεση ήταν ότι το επίθημα *-τζης* θα εμφάνιζε μεγαλύτερο βαθμό παραγωγικότητας σε σχέση με το *-ας*. Μεθοδολογικό εργαλείο για την επαλήθευση ή τη διάψευση της υπόθεσης, αποτέλεσε η συμπλήρωση από τους πληροφορητές ερωτηματολογίων κλειστού τύπου.

Τα δεδομένα της έρευνας έδειξαν ότι το επίθημα *-ας*, στο ιδίωμα της Πάτρας, φαίνεται να εμφανίζει μεγαλύτερο βαθμό παραγωγικότητας συγκριτικά με το επίθημα *-τζης*, αποτέλεσμα που διαψεύδει την αρχική μου υπόθεση. Το επίθημα *-τζης*, όχι μόνο δεν υπήρξε εξαιρετικά παραγωγικό, όπως αρχικά υπέθεσα, αλλά μάλλον υπήρξε και λιγότερο παραγωγικό από το *-ας*, αφού δεν συνδυαζόταν ούτε με τις βάσεις που έπρεπε κανονικά να συνδυαστεί. Το αποτέλεσμα αυτό δεν μπόρεσε να ερμηνευτεί από κάποιο ψυχολογολογικό ερμηνευτικό μοντέλο.

Αναγνωρίζοντας τις αδυναμίες της έρευνας, οι οποίες έγκεινται στον μικρό αριθμό των πληροφορητών, και συνεπώς στον μικρό αριθμό των δεδομένων, θα ήθελα να τονίσω την αναγκαιότητα συγκέντρωσης μιας μεγαλύτερης βάσης δεδομένων για την εξαγωγή ασφαλέστερων συμπερασμάτων, και την αναγκαιότητα διεξαγωγής μιας έρευνας προσανατολισμένης σε διάφορες κατευθύνσεις ώστε να μελετηθεί το φαινόμενο από όλες τις δυνατές οπτικές.

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Παράρτημα

Ερωτηματολόγιο

Α' Μέρος

Να απαντήσετε με **μία λέξη** στις παρακάτω ερωτήσεις.

π.χ. Πώς ονομάζεται αυτός που οδηγεί ταξί;
ταξιτζής

1. Πώς ονομάζεται αυτός που λέει παραμύθια;
.....
2. Πώς ονομάζεται αυτός που πουλάει κουλούρια στον δρόμο;
.....
3. Πώς ονομάζεται αυτός που σοβαντίζει σπίτια;
.....
4. Πώς ονομάζεται αυτός που κάνει άρση βαρών;
.....
5. Πώς ονομάζεται αυτός που στρώνει πλακάκια σε δάπεδα, τοίχους κτλ.;
.....
6. Πώς ονομάζεται αυτός που παρασκευάζει αλεύρι;
.....
7. Πώς ονομάζεται αυτός που φτιάχνει παπλώματα;
.....
8. Πώς ονομάζεται αυτός που πουλάει παγωτά;
.....
9. Πώς ονομάζεται αυτός που λέει τραγούδια;
.....
10. Πώς ονομάζεται αυτός που φτιάχνει και πουλάει μπακλαβάδες;
.....
11. Πώς ονομάζεται αυτός που κάνει κατασκευές με αλουμίνιο;
.....

12. Πώς ονομάζεται αυτός που ασχολείται με επιχειρήσεις;

.....

13. Πώς ονομάζεται αυτός που αγοράζει και πουλάει παλιά αντικείμενα;

.....

14. Πώς ονομάζεται αυτός που ψαρεύει;

.....

15. Πώς ονομάζεται αυτός που παρασκευάζει σαπούνια;

.....

Β' Μέρος

Να απαντήσετε στις παρακάτω ερωτήσεις με **μία απλή (όχι σύνθετη) λέξη**, όπως παραπάνω. (Οι λέξεις που θα βρείτε είναι λέξεις που **ΔΕΝ ΥΠΑΡΧΟΥΝ**, επομένως **ΚΑΜΙΑ ΑΠΑΝΤΗΣΗ, ΟΠΟΙΑ ΚΑΙ ΝΑ ΕΙΝΑΙ, ΔΕ ΘΕΩΡΕΙΤΑΙ ΛΑΝΘΑΣΜΕΝΗ**).

1. Πώς ονομάζεται αυτός που οδηγεί τρένο;

.....

2. Πώς ονομάζεται αυτός που κάνει δουλειές στη θάλασσα;

.....

3. Πώς ονομάζεται αυτός που φτιάχνει ταβάνια;

.....

4. Πώς ονομάζεται αυτός που δουλεύει με κεράσια;

.....

5. Πώς ονομάζεται αυτός που κατασκευάζει παράθυρα;

.....

6. Πώς ονομάζεται αυτός που ασχολείται αποκλειστικά με το πιλάφι;

.....

7. Πώς ονομάζεται αυτός που κατασκευάζει συνδετήρες;

.....

8. Πώς ονομάζεται αυτός που οδηγεί λεωφορείο;

.....

9. Πώς ονομάζεται αυτός που οδηγεί πούλμαν;

.....

10. Πώς ονομάζεται αυτός που κάνει δουλειές στα βουνά;

.....

11. Πώς ονομάζεται αυτός που τραγουδάει αμανέδες;

.....

12. Πώς ονομάζεται αυτός που βασικό του επάγγελμα είναι να αναβοσβήνει φώτα;

.....

13. Πώς ονομάζεται αυτός που κατασκευάζει βαλίτσες;

.....

Η Παραγωγικότητα των Επαγγελματικών Παραγωγικών Επιθημάτων –τζης και –ας στο
Πατρινό Ιδίωμα

14. Πώς ονομάζεται αυτός που εργάζεται σε μπουντρούμι;

.....

15. Πώς ονομάζεται αυτός που βασική του ενασχόληση είναι τα καπάκια;

.....

Μαρία ΓΙΑΚΟΥΜΕΛΟΥ
