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Proceedings to the

18th International Postgraduate Linguistics Conference

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6 May 2009 University of Manchester, UK

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ISBN: 978-0-9576682-3-2

This publication can be cited as:

Dorothea Hoffmann & Michael Ramsammy (eds). 2013. *Proceedings to the 18th International Linguistics Postgraduate Conference*. Manchester: University of Manchester

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INTRODUCTION

PROCEEDINGS TO THE 18TH INTERNATIONAL POSTGRADUATE CONFERENCE IN LINGUISTICS AT THE UNIVERSITY OF MANCHESTER

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This collection of papers is a direct result of the 18th Postgraduate Conference in Linguistics held at the University of Manchester on May 6th 2009.
In March 1992 the Department of Languages, Linguistics and Cultures at The University of Manchester hosted its first Postgraduate Linguistics Conference (PLC). Since then this annual event has grown, now drawing participants from across the world to exchange ideas in a relaxed but stimulating environment. This makes PLC the longest continuously running event of its kind in the UK.

The aim of the Conference was to bring together postgraduates from within the various areas of the discipline of Linguistics and to allow them to present papers to their peers. The plenary speakers for the event were Prof David Crystal from the University of Bangor talking about 'Language Death' and Prof Eva Schultze-Berndt from Manchester University on 'Towards a Typology of overt verb classification'.

The following papers are a collection from speakers presenting at the conference covering a wide range of topics within general linguistics, including phonetics, semantics, syntax, and historical linguistics covering a number of different languages such as English, Italian, German, Gurenɛ and Creole languages.

Samuel Atintono presents in chapter 1, "The Semantics of Three Posture Verbs *gã* 'lie', *zi* 'sit' and *ze* 'stand' in Gurenɛ" an analysis of posture verbs in a Gur (Niger-Congo) language spoken in Northern Ghana. Within a cognitive linguistic framework and drawing on a number of crosslinguistic typological studies, Atintono describes the semantics and usage of the three posture verbs verbs *gã* 'be lying', *zi* 'be sitting', and *ze'* 'be standing'. He places particular focus on the extension of meanings these basic posture verbs have gone through in the language. They specifically encode spatial configurational properties reflecting cultural and experiential realities of the speakers of the language. For example the verb *ze'* is associated with situations of unrest and effort. A person experiencing any kind of troubles might be referred to as 'standing' indicating that their mind might not be at ease and uncomfortable. He then concludes suggesting that in order to describe the semantics of posture verbs in an adequate manner, one must consider not only its most common basic uses, but also keep socio-cultural aspects in mind.

In chapter 2 “Semantic Change – the evolution of lexical meaning in time and space”, Amalia Kaziani reflects on the dynamic character of semantic change. She considers a case study of the Greek word for ”melancholy” exploring its lexical changes across time and space. The lexeme can be traced back to Ancient Greek and has extended its original medical meaning to the mental health field and into today’s conventionalized usage. Kaziani used extensive corpus data to prove that the original meaning of the word has been lost in today’s usage.

Susanne Schneider analyses the expression of ‘past-perfectness’ in English and Italian in chapter 3 “Presently comparing Pre-Past”. She investigates how the two languages code past-perfectness. As a result of careful language-particular coding strategies, she was able to compile a comprehensive record of similarities and differences between the languages’ use of past-perfectness. She concludes that the conceptual space of past-perfectness is accessible by means of a dedicated Perfect-Past (PRF-PST) marking device that is used differently in English and Italian.

In chapter 4, Esther Núñez Villanueva asks “Are creoles tenseless languages?” reviewing the creole tense and aspect system. She analyses data from four different creole languages, namely Guyanese Creole English, Haitian Creole French, Papiamentu Creole Spanish, and Kituba and concludes that creoles are aspect-prominent, but not tenseless languages. They tend to display a tripartite system of perfective and past and present imperfective. Any differences between the languages can be accounted for by various grammaticalization stages.

Jennifer Sullivan’s paper on “How similar is a Belfast final rise to a Cambridge final fall?” in chapter 5 explores the possibility of the puzzling Belfast final ‘rise’ having derived historically from final ‘falls’. Her results, however, show that the Belfast rise is more similar to the timing of the Cambridge question ‘rise’ than a ‘fall’. As a tool of analysis she uses an approach to quantification of similarity that has so far received little attention.

In chapter 6, Anna Cichosz argues “Against the ‘West-Germanic syntax’ hypothesis” based on an extensive corpus study of Old High German and Old English. She claims that the syntax of both languages needs to be regarded as two independent systems starting to develop before 1066 in the old Germanic period. She bases her corpus on a selection of texts from both Old English and High German covering all of the main text types and thus eliminating differences due to stylistic constraints. She concludes in stating that the V2-constraint was present in both languages from an early stage, but that the degree of its influence was different. It appears that the V-2 constraint was already a well-developed phenomenon in Old High German. However, in Old English it never reached the status of a rule and eventually disappeared from the syntactic system of English.

Benjamin Kratz in chapter 7 “*Which*-phrases do move” presents an approach where he combines existing work on d-linked wh-phrases (DWH) with van Craenenbroek’s (2008) original idea that the wh-word and are separate items. He presents work in progress some puzzling aspects of DWH phrases such as theta-assignment, selection and reconstruction. He presents shortcomings of van Craenenbroek’s analysis and provides empirical examples challenging the approach. These are Doubly-filled COMP phenomena in Frisian and dialectal Dutch, Swiping in English, Preposition Stranding and Free Relatives in Dutch, and spading in dialectal Dutch. He then presents his own study of DWH phrases

firstly by suggesting an analysis of DWH as topics and secondly by claiming a null—head for wh-phrases.

The final chapter 8 by Neven Wenger is concerned with "Adult Root Infinites" (ARI), a variety of infinitival structures occurring in root. They are different from other root infinitives in their pragmatics which mark the speakers' incredulity towards the proposition of a previous utterance. Furthermore, they are available cross linguistically showing morphosyntactic variation in this realm. Wenger analyses ARI within a minimalist approach and provides a sketch of a syntax of (non)finiteness. The study concludes in arguing for the possibility of analysing ARIs within a syntactic framework, contrary to previous approaches. Furthermore, the complexity of ARIs qualifies them to meet the requirements of nonfiniteness.

Overall these papers provide a fascinating insight into the work carried out by young researchers at a postgraduate level at institutions in the UK, Germany, Poland, Italy, and Greece. The variety and quality of topics present an enjoyable collection into many aspects of linguistics.

CHAPTER 1

THE SEMANTICS OF THE THREE POSTURE VERBS *GÃ* 'LIE', *ZI* 'SIT' AND *ZE* 'STAND' IN GURENƐ

A COGNITIVE LINGUISTICS PERSPECTIVE

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This article discusses the meaning and use of three human posture verbs gã 'be lying', zi 'be sitting', and ze' 'be standing' in Gurenɛ, a Gur (Niger-Congo) language in Northern Ghana, West Africa. The article specifically analyses the components of the meanings of these posture verbs from a cognitive linguistics perspective. It is shown in this article that apart from their central meanings of sitting, lying and standing these posture verbs encode spatial configurational properties that reflect the experiential realities of the speakers of the language. The paper also discusses the extension of the meanings of the three posture verbs to express the location of other inanimate figures such as bottles, sticks, clothes and balls. It is argued in this paper that this extension of the basic meaning of the posture verbs provides us with the conceptualization of the speakers in categorising other entities. The data itself comes from the use of positional verb picture stimuli designed by experts at the Max Planck Institute of Psycholinguistics (MPI) supplemented with real objects and spontaneous posture tokens collected from natural speech contexts.

1 INTRODUCTION

The paper discusses the meaning and use of three human posture verbs gã 'be lying', zi 'be sitting', and ze' 'be standing' in Gurenɛ, a Gur (Niger-Congo) language in Northern Ghana, West Africa. I examine the components of the meanings of these posture verbs from a cognitive linguistics perspective. This approach provides us with an opportunity to appreciate the fact that the meanings of these verbs have spatial and cognitive underpinnings. It is shown in this paper that apart from their central meanings of sitting, lying and standing they encode spatial configurational properties that reflect the experiential realities of the speakers of the language. The extension of the meanings of the three posture verbs to express the location of other inanimate entities such as bottles, sticks, clothes and balls is also discussed. Thus, the extension of the basic meaning of the posture verbs provides us with an understanding of the conceptualization of the speakers in categorising other entities. Posture expressions in human languages show a strong lexical and semantic domain which requires an in depth investigation to properly understand the semantics and the grammar (cf Schaefer & Egbohare 2008:215).

Earlier studies on posture verbs from both typological and cognitive perspectives on diverse languages (Newman 2002; Ameka and Levinson 2007) suggest that these posture verbs encode concepts which are grounded in human experience. Two interesting hypothesis emerged from this studies: First is the observation that posture verb properties will vary greatly across languages, showing extreme variability and the second hypothesis is that they will differ little, manifesting great similarity. The present analysis aims not to test these claims but to provide evidence of the conceptualization patterns of the posture verbs in Gurenɛ.

2 MOTIVATION FOR THE POSTURE VERBS IN GURENƐ

The posture verbs in Gurenɛ has never been explored to details to the best of my knowledge except a short article by Atintono (2004) in which he discussed the semantics and syntax of three posture verbs in Gurenɛ within Talmy's model of motion events. This was a good starting point but the paper itself is limited in scope and content. This present study is of interest because its contribution has the potential of expanding our knowledge on the semantics, and pragmatics of the Gur languages which are little studied. Newman (2002), Ameka & Levinson (2007) tended to ignore the semantics of the posture verbs in figurative contexts of which this present article provides a good account utilizing cognitive linguistics concepts. The paper will have implications for cross-linguistics typological claims on spatial cognition studies. As Ameka and Levinson (2007:850) conceded the typological sample of the languages investigated so far for their postural properties is limited and there is the need to expand the scope to ensure a wider analysis to arrive at firm theoretical conclusions.

3 AN OVERVIEW OF THE ASSUMPTIONS OF THE COGNITIVE LINGUISTICS APPROACH

In this section I provide an overview of the cognitive linguistics approach adopted for the analysis of the three posture verbs in this article. It is anticipated that this will help us appreciate the analysis of the data in the subsequent sections. Cognitive linguistics is often considered as an approach and not a theory in its own right (Vyvyan & Green 2007:3, Geeraerts & Cuyckens 2007:4). The approach began in the late 1970s and early 1980s pioneered by Langacker (1987; 2000), Lakoff (1980; 1990) and further exemplified by Gibbs (1996), Talmy (2000a, 2000b), Taylor (2000), Lee (2001), Croft and Cruse (2004), Vyvyan and Green (2007). For lack of space I will not attempt to describe the diverse range of complementary and overlapping theories of the cognitive linguistics approach such as cognitive grammar, cognitive semantics, grammars of space and the like that together constitute the cognitive linguistics approach. Instead I will provide the basic principles and assumptions underpinning all these strands that collectively make up the cognitive linguistics approach. The approach views language as a tool for organizing, and conveying information conceptually (cf Geeraerts&Cuyckens 2007:3). In other words it is concerned with the conceptual and experiential basis of language in the mind of the

speaker. In this regard language is considered to be engrained in the cognitive capacity of man. The central issue here as Casad (1996:1) observes is that language use is arguably grounded in our daily experience of the real world. As it will be shown in the discussion of the semantics and conceptualization patterns of the three Gurenɛ posture verbs their application to the socio-cultural context reflects the conceptualization of the matrix of the life of the speakers. The implication is that for us to fully understand the meaning of the Gurenɛ posture verbs in this context we need to invoke some cognitive theoretical constructs in order to provide a credible and satisfactory account of the phenomenon. In what follows I now try to outline the key principles and assumptions of the cognitive linguistics paradigm as conceived by the various cognitive linguists noted above.

One of the most probable important assumption or hypothesis that binds the diverse cognitive linguistic theories and guides the approach is the orientation that natural language can be adequately explained in terms of its semantics and function rather than describing linguistic expressions in terms of formal rule system that is completely independent of meaning. Thus the conception of meaning or language use is one of the fundamental concerns of the cognitive linguistic approach. It is this view that sometimes makes others to call it a usage-based approach. They reject the autonomous cognitive faculty hypothesis proposed by generative grammarians especially in the Chomskyian formalism. Instead cognitive linguists conceive knowledge of the world to be mediated through language but generative linguists on the other hand concentrate on knowledge of language and its mental representations (Geeraerts&Cuyckens 2007:7). As Croft and Cruse (2004:2) notes the representation of linguistic knowledge in the human cognitive faculty is essentially the same as the representation of other knowledge structures. Language cannot therefore be said to constitute a separate cognitive faculty.

Another major assumption of the cognitive linguistics approach is that the grammar of a language is conceptualization. This principle seeks to explain that a particular linguistic structure or expression is linked to a particular way of conceptualizing a given situation (Lee 2001:1). Language description is therefore motivated by the human conceptual knowledge and experience of the world (cf Gibbs 1996:27). A key component of the human faculty is therefore the conceptualization of our experiences and how this is expressed through language. The linguistic knowledge that we possess in our minds is therefore rooted in our conceptual system (see Croft and Cruse 2004:3, Langacker 2000). The conceptualization principle further predicts that there is no isomorphic mapping of elements of the external world onto linguistic form instead every situation can be construed in different ways and that different ways of encoding a situation constitute a different conceptualization. Linguistics structures therefore encode conceptualizations which go beyond simple reference (Geeraerts&Cuyckens 2007:14). Rather conceptualization is associated with both socio cultural and physiological base of human experience. By this cognitive linguistics is thought to be concern with the full conception of meaning and manifestation of some fundamental properties of the human mind as viewed through the world. The posture verbs which are of interest in this article encode spatial notions which are fundamentally rooted in the conceptual thought patterns of the speakers and this explains the cultural variations of postural expressions across languages

(see Levinson 2001, Levinson & Wilkinson 2006). We shall adopt these principles in the analysis of the posture verbs in the rest of the paper.

4 THE SEMANTICS OF THE POSTURE VERBS; *GÃ*, *ZI*, *ZE*'

The three posture verbs have their basic meanings as well as their grammaticalized or figurative extensions. In their basic usage they describe basic human postures with the following central meanings; *gã* 'to be in a lying position, *zi* 'to be in a sitting position', and *ze*' 'to be in a standing position'. These three postures play an important role in our every day activities and the verbs which encode them constitute a rich semantic class for analysis. In examples (1) to (3) the posture verbs express the basic usage of these verbs. In this sense they encode the distinct spatial configurations of the human body. So in (1) the child's body is in a horizontal contact with the mat while in (2) the woman's lower torso is resting on the chair. Example (3) shows that the man is in a vertical position and is being supported by his feet. Notice that all the three verbs have stative interpretation with the human entities. That is the human participants are in a state situation devoid of any action or activity.

1. Bia la *gã* la suŋɔ puan
   Child DEF lie FOC mat LOC
   'The child is lying on the mat.'

2. Pɔka la zi la kuka zuo
   Woman DEF sit FOC chair head
   'Woman is sitting on the chair.'

3. Budaa la ze' la yiŋa
   Man DEF stand FOC outside
   'The man is standing outside.'

The extension of the usage of these posture verbs in the figurative sense are expressed in the following examples.

4. Asɔ'ɔŋa *gã* la na'am zuo
   Rabbit lie FOC chieftaincy head
   'Mr. rabbit is enjoying wealth.' (folktale text)

5. A zi la Ankara
   3SG sit FOC Accra
   'He stays at Accra.'

6. Budaa la ze' la yele puan
   Man DEF stand FOC problem LOC
   'The man is in trouble.'

In examples (4) to (6) the meanings of the three posture verbs express the maintenance of a pre-existing stative condition (see Scahefer & Egbohare 2008:217). They do not suggest any relationship with a physical body positioning of the entities. For example in (4) it does not suggest that the rabbit is physically lying on wealth. It only conceptualizes the condition that he is experiencing. Similarly (5) expresses the fact that the person stays in a place but does not imply that he is in a sitting posture. In (6) the man is said to be literally standing in a problem. What this means is that when someone is in trouble that person is naturally an unsettled person and this is conceptualized as been in a standing posture. The fact is that a standing position does not provide rest and a person in trouble is not at peace with himself. A much detail discussion is provided in the section on socio cultural domain. This latter usage in Gurenɛ requires a cultural conceptual knowledge in the semantics and pragmatics as well as the experiential world view of the speakers in order to understand the meaning of these posture expressions.

4.1 Conceptualization patterns of the three posture verbs

In the cognitive linguistics approach of which this study is based the components of the meanings of these verbs and the experiential realities associated with them encode properties which together constitute a larger semantic frame which can conveniently be grouped into four cognitive domains (see Newman 2002:2). These are; spatio-temporal domain, force dynamic domain, active zone domain, and socio-cultural domain. We shall look at each of them in turn.

4.1.1 The spatio-temporal domain

The spatio-temporal domain relates to the overall spatial configurations associated with each posture and maintained through time. Thus *zi* 'be sitting' encodes a compact shape of the entity while *gã* conceptualizes the horizontal elongation of the entity. So someone who is in a lying posture obviously will align the body in a horizontal orientation. Similarly *ze'* 'be standing' designates an entity in an upright vertical position. These three distinct spatio-temporal configuration patterns determine the spatial images in human conceptualization and significantly play a role in the alternative categorization of the position or location of other non human entities.

4.1.2 The force-dynamic domain

The force dynamic domain is a semantic category that characterizes the interaction of force that manifest across a range of linguistic phenomenon that pertains to "the physical, psychological, social, inferential, discourse, and mental-model domains of reference and conception" (Talmy 2000:400). The notion of the force dynamic discussed in the context of the posture verbs relates to the exercise of physical force through the sensorimotor control of entities in an assumed posture. It suggests the notion of the ability of the entity to exercise a rest state (Croft and Cruse 2004:66). The control of the force dynamic patterns as Talmy (2000:413-414) points out is that it involves the steady-state opposition

of two forces of which he calls Agonist (the entity that is located and exerts force on another) and Antagonist (the place of location of an entity and which provides an opposing force). In the posture verb paradigm it involves the Figure[1] and the Ground[2]. Cross-linguistically all the three verbs encode a maintained posture involving no movement of the entity (human). Nonetheless there are differences regarding the sensorimotor control required to maintain each posture. For example *ze'* 'be standing' requires both the lower and upper parts of the human body to be in a sturdy and vertical position. This requires some amount of sensorimotor control of the legs and the body to maintain this posture. On the other hand, zi 'be sitting' demands that the lower torso be rested on a solid support base with a supporting force providing the maintenance of the sitting posture. The lying posture involving *gã* may not necessarily require any sensorimotor muscular control of the body. The reason is that the body is completely at rest requiring very little force to control it or none. So the degree of control as observed by Newman (2002) varies with lying been the least while standing requires the most. Children in their early years of development require the reverse of this that is, lying, sitting, and standing.

4.1.3 Active zone domain

The term active zone is proposed by Langacker (1991:189-201) to refer to the specific area or subpart of an entity that participates directly in a spatial relation. In other words regarding the three posture verbs it is the part of the human body that is coincident with the ground. The active zone should not be conceived of as a discrete or sharply bounded region but rather the focal area of the relational interaction. For example, teeth constitute the active zone of bite. Therefore for the three posture verbs; the active zone of *zi* will be the buttocks and the upper part of the body that contribute to maintain the sitting position while for *ze'* the active zone suggests the legs. On the other hand the active zone of *gã* is one side of the body that is in contact with the ground.

4.1.4 The socio-cultural domain

The socio-cultural domain refers to the world view of the speakers and how they conceptualize the various posture states (cf Lemmens 2002:130). The various posture states play different roles in the socio-cultural domains of the speakers. Sitting is conceived as a comfortable position. This is manifested in the following Gurenɛ figurative expressions. As all the examples suggest the cultural notions encoded by the posture verbs in each of these sentences show that the subject entities are in control of some state of affairs. The rich man in (7) is construed to be sitting freely conceptually. However, its socio cultural interpretation is that he is without worry. Also (8) suggests in the Gurenɛ world view that the rabbit has amassed wealth and is enjoying it comfortably.

[1] Figure is the entity that is located with respect to another entity (Talmy 2000a:311-315). In the context of my three posture verbs the human entities are figures while the place that they are at rest designates the Ground.

[2] Ground refers to the place where the Figure is located (Talmy: ibid)

Similarly anyone who is in a comfortable position is perceived to be experiencing a chieftaincy condition as in (9). The reason is that chiefs in Gurnɛ culture do not have to work but sit in their palaces and receive good treatment from their subjects.

(7) Tata la zi la fai
Rich.Person DEF sit FOC free
'The rich man is without worry.'

(8) Asɔ'ɔŋa la zi la lɔgerɔ zuo
Rabbit DEF sit FOC things head
'Mr. Rabbit is sitting on wealth.'

(9) A zi la na'am zuo
3SG sit FOC chieftaincy head
'He is in a confortable position.'

The socio-cultural meanings of *gã* 'lying' are associated with rest, sleep, sickness, and death as the following examples attest. In each of the examples below the semantic character of the subjects and sometimes the complements in each expression provides a good ground for the appropriate socio-cultural interpretation.

(10). Kaara la taregɛ gã mɛ
Farmer DEF be.tired lie AFF
'The farmer is tired and is lying down.'

(11). Bilia la gã mɛ
Baby DEF lie AFF
'The baby is sleeping.'

(12). Asɔ'ɔŋa pɔga gã la deo-n la bã'a
Mr. Rabbit wife lie FOC room-LOC with illness
'Mr Rabbit's wife is down with illness.'

(13) Mam sira gã la dɔgeta
My husband lie FOC hospital
'My husband is lying at the hospital.'

(14). Na-katɛ la gã la deo-n
Chief-big DEF lie FOC room-LOC
'The paramount chief is dead.'

Examples (10) to (14) may encode the horizontal orientation of the Figure entity but the socio cultural meanings do not necessarily imply this physical horizontal posture. For example, (10) talks about a farmer who is tired and lying down but this suggests a resting posture and not just lying down. In (11) the baby is said to be lying down but in the

culture babies do not just lie down but are thought to always be sleeping. Sick persons are also perceived in the culture to be weak and are conceptualized as lying down (cf Song 2002 on similar semantics of Korean posture verb of lying). Example (12) is an excerpt from a folktale which seeks to portray rabbit's wife as been sick and lying in the room. Similarly (13) is a case of a woman who reports of her husband's admission in the hospital. It does not mean that her husband is in a lying posture at the hospital but that he is in a state of illness. The death of prominent people such as chiefs in the society is not normally announced as the chief is dead but rather expressed through euphemism such as the chief is lying in the room as depicted in (14). There are a number of reasons for this. First is the fact that they want to avoid a potentially conflict situation among the potential successors to the throne from making an unhealthy contest before the burial of the deceased chief. So by not publicly announcing or admitting that the chief is dead but only lying down suggests he is only resting or taking a leave. This does not give the right to any successor to contest for the throne that is not declared vacant. A second reason is that a chief is perceived to be all powerful in the society and does not succumb to death. So even when he is dead he is perceived to be alive in the spiritual world.

The experiential realities that are associated with *ze'* are trouble, suffering and general discomfort. The rich man in (15) is said to be literally standing in the sun. This means that in the culture he is in difficult times. The fact is that the Gurenɛ community is in the tropics and no one enjoys standing in the sun like people in the west do during the summer. Instead people will prefer to stand in the shade. So any one who is standing in the sun is said to be feeling the intense heat of the sun and therefore cannot be said to be enjoying any comfort. A rich person who enjoys his wealth is conceptualized to be in the shade but when his wealth is diminished he is said to be in the sun. In (16) the rabbit features prominently in Gurenɛ stories as a wise character who always outwits his fellow animals but occasionally comes into trouble. The rabbit is seen to be literally standing in a problem. We see a link with the posture verb of standing because as explained in section 4.0 when one is in trouble you are psychologically unsettled.

(15) Tata la ze' la wuntɛɛŋa
Rich.person DEF stand FOC sun
'The rich person is suffereing.'

(16) Asɔ'ɔŋa ze' la yele puan
Rabbit stand FOC trouble LOC
'Mr. Rabbit is in trouble.'

5 EXTENSION OF POSTURE TO LOCATIVE EXPRESSIONS

The posture verbs in Gurenɛ can be extended to help conceptualize the location or position of other inanimate entities. Among the three posture verbs only two, *gã* and *ze'* are used in this sense. *Zi* is restricted to human postures only as there is no instance of its usage in the locative sense. A plausible explanation for its non occurrence in the locative context is that no any other inanimate entity in the culture can assume a sitting posture except humans. When dogs and cats sit on their rear while resting on their hind legs they are described as squatting and not sitting. Some of the examples below were elicited using the MPI positional verb picture series (numbers in brackets show the positional picture numbers). It involves showing a picture of a posture scene to a consultants and asking the question *where is the entity X*? The posture verb *gã* is used to describe the location of the objects that are in a horizontal position on a surface. Example (17) is a scene where a stick is put diagonally on top of a table while (18) depicts a posture scene in which beans are spread on the floor. The example in (19) depicts a scene where a bottle is placed on its side in a basket. The stick and the bottle are described as lying because there is an extension of the conceptualization of human postures in a horizontal manner to these entities. The description of the beans as lying might sound odd but again any entity that lacks a base support (e.g. with legs) is construed as lying (also see Ameka 2007, Kutscher & Schultze-Berndt 2007).

(17) Dibega la pue gã la teebule la zuo
Stick DEF cross lie FOC table DEF head
'The stick is lying on top of the table.' (PVPS 6)

(18) Tɛala yɛregɛ gã la tiŋa.
Beans DEF spread lie FOC ground
'The beans are lying on the ground.' (PVPS 11)

(19) Tua la gã la pi'ɔ la puan
Bottle DEF lie DEF basket DEF LOC
'The bottle is lying in the basket.' (PVPS 22)

Further *ze'* is used to characterize the location of entities in a vertical position. Such objects usually are conceived of having legs which are comparable to humans or they

may have a base that projects them vertically. Objects such as tables, chairs, beds, cars, trees, bottles, bowls, and houses can all be characterised as standing. The following examples describe objects in a standing posture.

(20) Tua la *ze'* la tiŋa
Bottle DEF stand FOC land
'The bottle is standing on the ground'. (PVPS 58)

(21) Pi'ɔ la ze' la bimbine zuo
Basket DEF stand FOC platform head
'The basket is standing on the platform.'

(22) Laa la ze' la tiŋa
Bowl DEF stand FOC land
'The bowl is standing on the Ground.'

(23) Naba yire la ze' la kulega nuuren
Chief house DEF stand FOC river mouth
'The chief's palace is by the edge of the river.'

6 FORM CLASS OF VERBS

I discuss briefly in this section the form class of verbs that are used to code posture in Gurenɛ. The three posture forms discussed above code stative situations. Talmy (2000a) proposes that typologically positional verbs fall into three types namely stative "be in position", inchoative "get into a position", and agentive "put into a position". The three posture verbs in Gurenɛ discussed in this article correspond to the 'be in position type.' The dynamic postural meanings or the inchoative type such as 'to sit oneself down, to move oneself into a 'standing position' and to lay oneself down are closely related semantically to the corresponding stative meanings. At least for English this holds to some extent. For example 'sit' can have dynamic stative interpretations as in 'I sat on the chair' to mean 'I sat myself on the chair' or 'I was sitting on the chair'. In Gurenɛ distinct forms of the verb are used for the dynamic type as illustrated in (24) to (26).

(24) A ze'et-i la saazuo
3SG stand-IMPFV FOC upright
He is getting into a standing position

(25) A zi'ire la kuka zuo
3SG sit FOC chair head
'He sat down on a chair'

(26) A ga'at-i la tiŋa
3SG lie-IMPFV FOC land
'He is getting into a lying position on the ground.'

7 CONCLUSION

The article examines the meanings of three posture verbs *zi* 'be sitting', *ze* 'be standing' and *gã* 'be lying' from a cognitive linguistics perspective. It notes that the central meanings of the three posture verbs code the spatial orientation of human beings but are also extended to describe the location of inanimate objects. The verbs also manifest four conceptualization patterns in their meanings. These are spatio-temporal, force-dynamic, active zone, and socio-cultural domains. The spatio-temporal domain describes the assumed posture of the entity described by each verb. Thus zi 'sitting' requires the lower torso to be resting on a solid ground while the upper part of the body is compact. On the other hand, *ze'* characterizes the vertical position of the entity while *gã* spatio-temporal feature is that the entity is in a horizontal position. The force-dynamic domain associated with the posture verbs relates to the interaction of the sensorimotor control that is needed to maintain each posture. Thus for that of *ze'* it requires the legs and the body to be sturdy in order to maintain the upright posture. Even inanimate entities such as tables must have a rigid structure to be able to maintain a standing posture. Also *zi* requires only the bottom part and the upper part of the body to maintain the sitting position. Similarly *gã* demands the least effort to sustain because lying down does not require any much energy. The active zone domain discusses the particular part of the human body that takes an active part in the posture. The active part for *ze'* is the feet and the legs that are directly involved while that of sitting is the lower torso with the active zone of *gã* been any side of the body that is in a horizontal contact.

The socio-cultural meanings of the posture verbs reflect some conceptualization of certain experiences in the culture. In this regard the use of the posture verbs in this context do not necessarily suggest that the entities are actually in such assumed postures. As shown in the data the conception of rest is usually associated with *gã* 'lying' and also used to describe the death of important people in the community such as rich people and chiefs. In Gurenɛ culture the death of such people is not announced publicly because they have much influence on the society. The idea is to prevent the emotional shock that people who benefit from them can get and at the same time trying to preserve the social order. So by describing them as been in a lying state psychologically relief the people of this shock and seeks to convince them that they are only taking a rest but not gone into eternity. Also people who are sick are often described with this posture verb to show that they are in a state lacking good health. The posture verb *zi* in Gurenɛ worldview is associated with conditions that are associated with comfort such as enjoying one's wealth. It also sometimes describes a powerless position of the subject described with such a posture verb. The socio cultural meanings attributed to *ze'* depict the subject entities experiencing troubles. The point is that any person who encounters problems is construed to be psychologically in an upright position because the mind is not at rest.

The posture meanings of these verbs are also extended to include the locations of inanimate entities such as pots, sticks, houses, bottles, and many other such objects. It is observed in the data that *zi* 'sit' is the only posture verb with its meaning restricted to only human posture. When the extension includes other entities their characteristic features may sometimes have something similar to humans. For example it is observed that entities that are described as standing either have leg-like support such as tables, beds, cars or a base support, like houses, pots, television set, and baskets. The three posture verbs lexicalise only stative postures with different forms encoding the dynamic.

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CHAPTER 2

SEMANTIC CHANGE – THE EVOLUTION OF LEXICAL MEANING IN TIME AND SPACE
AN EXAMPLE FROM THE GREEK LANGUAGE: THE WORD *μελαγχολία* (MELANCHOLY)[3]

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Semantic change is a phenomenon which reflects the dynamic character of lexical meaning. Word forms and meanings stretch and evolve across time and space. The Greek word *μελαγχολία* is considered to be a 'living proof' of the process of semantic change which a lexical item may undergo. The original meaning of the word stretches back to ancient Greek. The word also 'stretches' in space; it is borrowed by more than 40 languages around the world. This paper shows how the original medical meaning of the word has extended through metaphorical use to the mental health field and resulted into its current everyday use through the process of conventionalization of the metaphorical meaning. Sentences collected from a Greek corpus illustrate the current use of the word *μελαγχολία* and show that, despite its obvious semantic connection to the past, the everyday use of the word does not provide any clues about its original meaning.

1 INTRODUCTION

Word forms and meanings stretch and evolve across time and space and the study of their etymology sheds light on their history and the evolution of their meaning. The dynamic character of lexical meaning is clearly depicted on the one hand in the variety of the innovative ways in which writers express themselves in genres like poetry and science fiction, and on the other hand in the examples of conventionalized semantic change, recorded in a wide range of dictionary lemmas (Seuren 2000:423-426). The phenomenon of semantic change across time and space might be viewed as a perpetual process of interaction between linguistic, cognitive and cultural factors (Wardhaugh 1986:10). Kitis (2007: 55) observed that language is "an open system that reaches out into the world". I consider the Greek word *μελαγχολία* to be the 'living proof' of this observation. The original meaning of the word *μελαγχολία* stretches back to ancient Greece – around 400 B.C. The word also stretches in space; it is borrowed by more than 40 languages around the world. Some examples are shown in the table below.

[3] I would like to thank professor Eliza Kitis for her constructive comments and suggestions and professor Dionysis Goutsos for having provided me with additional sources to supplement my study.

(1): *μελαγχολία* in 25 languages[4]

Language	Word
Albanian	malinkonia
Croatian	melanholija
Czech	melancholie
Danish	melankoli
Dutch	melancholie
English	melancholy
Estonian	melanhoolia
Finnish	melankolia
French	mélancolie
German	melancholie
Greek	μελαγχολία
Hungarian	melankólia
Italian	malinconia
Lithuanian	melancholija
Norwegian	melankoli
Polish	melancholia
Portuguese	melancolia
Romanian	melancolie
Russian	меланхолия
Serbian	меланхоличан
Slovak	melanchólia
Spanish	melancolía
Swedish	melankoli
Turkish	melankoli
Ukrainian	Меланхолія

2 THE PROCESS OF SEMANTIC CHANGE, AS REFLECTED IN THE EVOLUTION OF THE MEANING OF THE WORD *μελαγχολία*

With respect to the word's ancient Greek origin, two key figures of medicine in ancient Greece, Hippocrates and Galen, were involved in the formation of the lexical item's meaning; the former coined the term and the latter expanded its meaning (Millon & Davis 1996:36; Κεχαγιαδάκης 2003:126). The etymology of the compound word *μελαγχολία* reveals its ancient Greek origin: Its constituents, "μέλας" and "χολή" mean 'black' and 'bile' respectively (Μαντουλίδης 1977). Thus, *μελαγχολία* could be thought of as a representative sample of meaning's journey into time and space. Before looking into the evolution of the lexical item's meaning, a clarification should be made with regard to its corresponding term in English. More specifically, even though the Greek term has retained its form for the last 2300 years, in the English language the semantic change of

[4] Sources: www.logosdictionary.org, www.logos.it, www.wikiled.com

the word seems to be reflected in the two slightly different terms: *melancholia* and *melancholy*. According to the Longman Dictionary of Contemporary English (www.ldoceonline.com), the former is an old-fashioned term denoting great sadness, while the latter is a formal term referring to feelings of sadness. According to the Oxford Advanced Learner's Dictionary of Current English (Hornby, Wehmeier, McIntosh, Turnbull & Ashby 2007:956), *melancholia* refers to a specific mental illness, while *melancholy* simply refers to low spirits (table 2). The word *melancholy* was chosen as the equivalent of *μελαγχολία* in the title of this paper. *Melancholy* was preferred to *melancholia* because, as is shown later on in the examples from the Greek corpus, it corresponds accurately to the contemporary meaning of the Modern Greek word *μελαγχολία*.

(2) Two definitions of *melancholy*

The definitions of *melancholia* and *melancholy* by the Longman Dictionary of Contemporary English (www.ldoceonline.com):

melancholia [uncountable]
old-fashioned a feeling of great sadness and lack of energy
melancholy[1] *adjective* very sad
melancholy[2] *noun* [uncountable]
formal a feeling of sadness for no particular reason

The definitions of *melancholia* and *melancholy* by the Oxford Advanced Learner's Dictionary of Current English (Hornby, Wehmeier, McIntosh, Turnbull & Ashby 2007:956):

melancholia /noun (*old-fashioned*) a mental illness in which the patient is depressed and worried by unnecessary fears
melancholy / noun, adj.
noun [*U*] (*formal*) a deep feeling of sadness that lasts for a long time and often cannot be explained
adj. very sad or making you feel sadness SYN: MOURNFUL, SOMBRE

The term *μελαγχολία* was first used by Hippocrates to describe a biological condition characterized by excessive secretion of black bile in the human body. According to Hippocrates's Theory of the Four Humours (that is, fluids), which he put forward in the 4th century B.C., the human body is composed of four fluids: blood, phlegm, yellow bile and black bile. He claimed that human behaviour is determined by biological and physiological factors. Consequently, the imbalance of the fluids may result in various types of physical illness as well as in mental disorders (Katsambas & Marketos 2007:860; Millon & Davis 1996:36). Hence, the initial meaning of the term *μελαγχολία* was strictly medical: it referred to a physical symptom – a biochemical disorder. The feelings of sadness, fatigue or low spirits were only the secondary symptoms of the disease, which often accompanied the clinical picture of some of the patients with *μελαγχολία*.

Cancer was one of the illnesses Hippocrates attributed to excessive amounts of black bile (a condition which he also called "κακοχυμία" – imbalance of the humours)

(Καραμπερόπουλος 2005:85). Different types of physical pain were also attributed to increased levels of one of the four humours in the human body (Μυρωνίδου-Τζουβελέκη et al 2009:125). Within the context of Hippocrates's humoral doctrine, the excessive secretion of yellow bile, black bile, blood and phlegm corresponded to four different temperament types: the choleric, melancholic, sanguine and phlegmatic respectively (Millon & Davis 1996:36). As Theodore Millon (1996:36) observes in the book titled "Disorders of Personality. DSM-IV and Beyond", "although the doctrine of humors has been abandoned, giving way to scientific studies on topics such as neurormone chemistry, its terminology and connotations still persist in such contemporary expressions as being sanguine or good humored".

It is worth mentioning that Hippocrates's theory was radically innovative in that it refuted the fixation with religion, which was prevalent at that time and introduced a systematic, scientific method for the study of physiological problems and their causes. In other words, the Theory of the Four Humours signified the end of a long era of preoccupation with the metaphysical, which considered disease to be a "God-induced" punishment (Katsambas & Marketos 2007:860; Μυρωνίδου-Τζουβελέκη et al 2009:127).

About 520 years later, Galen developed Hippocrates's theory and tried to connect it with human personality in a more systematic way (Nutton 2005:115). Galen looked more into the correspondence of the four fluids – blood, phlegm, yellow bile and black bile – to the four personality types: sanguine, phlegmatic, choleric and melancholic respectively and he provided an analysis of these types (Millon & Davis 1996:36). Galen's theory of the four humours attached another meaning to the word *μελαγχολία*: that of a personality disorder and the related behavioural patterns (Millon & Davis 1996:36). Apart from its linguistic interest, the semantic change that the lexical item underwent also reflects the radical change in the philosophy of medicine that Galen and Hippocrates brought about with their theories. Both ancient Greek doctors introduced the holistic approach in medicine, a philosophy that views human body and psyche as an unbreakable whole (Orfanos 2007:854).

(3) *μελαγχολία* - The evolution of the meaning of *μελαγχολία*

Original meaning	medical condition	excessive secretion of black bile in the human body
↓	↓	↓
Metaphorical use	personality disorder	a severe form of depression
↓	↓	↓
Conventionalised meaning	emotion	sadness, low spirits

Returning to the linguistic aspect, Galen's use of the term *μελαγχολία* could be considered as the 'bridge' between the word's original and its current meaning. More specifically, while initially the term was used by Hippocrates to refer to a medical condition, the Galenic theory enriched its meaning, by attaching behavioural aspects to it. The term was then used metaphorically to denote a mental illness. This seems to be the case with the word *μελαγχολία*, as it appears in a Greek psychiatric manual titled "Δυναμική Ψυχιατρική" (Dynamic Psychiatry), which was published in 1971. In the aforementioned manual the word is used as a synonym of depression (an affective disorder) (Φιλιππόπουλος 1971:355). Finally, through its folklore use, the term was eventually conventionalised: it lost its metaphorical dimension and became synonymous to sadness or low spirits (Table 3).

Even though the connection between black bile and feelings of sadness that Galen suggested was never confirmed, the current meaning of the word *μελαγχολία* – and of its foreign counterparts – denotes 'feelings of sadness'. This confirms Lakoff and Johnson's view that "truth is always relative to a conceptual system (…) any human conceptual system is mostly metaphorical in nature (…) therefore, there is no fully objective, unconditional or absolute truth" (Lakoff & Johnsonn 1980:185). If one adopted an objectivistic approach of lexical meaning, once Galen's theory was refuted, the word *μελαγχολία* should cease to denote a mental state and be restricted to a physiological symptom. On the contrary, the word is used in various creative ways in a wide range of contexts and it is related to sadness, low spirits and bad mood among other, metaphoric uses; these will be illustrated by instances retrieved from the Greek corpus.

As Seuren (2000:424-426) and Lakoff & Johnson (1980:186) observe, the conventionalization of the metaphorical meaning of a word or construction, as a result of its use in everyday language, often deprives the word's meaning of its metaphorical dimension. This seems to be the case with *μελαγχολία*. As will become clear in the examples from the Greek corpus, the word *μελαγχολία*, with its current meaning, does not refer either to the clinical condition of excessive secretion of black bile that the person suffers from or to the mental symptoms that accompany it. However, its extensive use in

everyday language throughout time has resulted in the word now literally meaning 'sadness', 'bad mood'. Accordingly, the word's original meaning underwent a semantic change through its metaphorical use, which was followed by a conventionalization of its metaphorical meaning.

With respect to the word's use in formal mental health contexts, it should be stressed that, as is indicated in the Greek versions of DSM-IV and ICD-10, two of the most widely used diagnostic manuals of psychiatry worldwide, the word *μελαγχολία* is not included in the formal definition of any affective disorder (Γκοτζαμάνης 1996:161-171; Στεφανής, Σολδάτος, Μαυρέας 1993:135-163). More specifically, the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) is a manual published by the American Psychiatric Association that includes detailed classifications and diagnostic criteria for all the mental disorders. The Greek version of DSM-IV does not include the word *μελαγχολία* as a classification of an Affective Disorder per se. It only refers to the presence or absence of "melancholic features" (loss of pleasure, early morning awakening, anorexia etc) as some of the criteria for the subclassification of a depressive episode (Γκοτζαμάνης 1996:191). What is more, in the third edition of DSM the word *melancholia* is characterized at the footnote as "a term from the past" which is only used as a distinctive feature of a specific type of a depressive episode (American Psychiatric Association 1980:205). Finally, in the Greek version of the Tenth revision of the International Classification of Diseases (ICD-10) of the World Health Organization the word *μελαγχολία* is also used only as a feature or symptom of a subcategory of a depressive episode (Στεφανής, Σολδάτος & Μαυρέας 1993:138).

3 CORPUS DATA

Before proceeding to the presentation of the corpus data, a short reference will be made to the Hellenic National Corpus, from which I took the examples I used in my study (http://hnc.ilsp.gr/). The Hellenic National Corpus has been developed by the Institute of Language and Speech Processing (ILSP). It currently contains about 47,000,000 words (May 2009), which correspond to over 2,000,000 sentences or 50,800 texts, while it is constantly being updated. All texts have been selected, so as to present a realistic picture of modern language use. It should be mentioned, however, that the Corpus contains samples of written language exclusively. Most texts have been selected based on their high readability (high circulation newspapers, best-selling books etc.). In order to include different types of language, texts from several media, belonging to different genres and dealing with various topics have been selected. The Corpus texts are classified according to medium into the following categories: Books, Internet, Newspapers (daily or weekly), Magazines (published every week, fortnight, month etc), and Various Other Sources (any kind of text that does not belong to any of the above categories, such as: leaflets, brochures, flyers, and all kinds of reports and documentation).

From the 100 sentences randomly selected from the Hellenic National Corpus (HNC) , 70 sentences were finally selected for the study. The remaining 30 were not analysed because they were either too brief or didn't provide the necessary contextual information

needed in order to define the meaning of the key word in question (that is, *μελαγχολία)*. In 47 out of the 70 sentences (i.e. 67.14%), *μελαγχολία* refers to an emotion, of mild intensity and short duration, which often precedes or follows feelings of joy or enthusiasm. In 28 sentences (that is, 40% of the sample) the word *μελαγχολία* appeared in descriptions or reviews of various types of artistic work. In another 40% of the sample the word was used metaphorically in various creative ways. Finally, in 17 of the 70 sentences (24.28%) the word *μελαγχολία* appeared within sport – related contexts (see (4)).

(4) The word *μελαγχολία* as it appeared in the Hellenic National Corpus

	Number of sentences	(%)
μελαγχολία as a mental disorder	0	(0%)
μελαγχολία as an emotion	47	(67.14%)
μελαγχολία as a characteristic of artistic work	28	(40%)
μελαγχολία used in metaphors	28	(40%)
μελαγχολία appearing in sports-related contexts	17	(24.28%)

It should be mentioned at this point that an attempt was made to translate the sentences from the Hellenic National Corpus which are presented in the following examples, in order to illustrate how the word *μελαγχολία* is used within the Greek language context. As a consequence, some of the examples may seem semantically or syntactically awkward in English. In addition, the word *melancholy* is being used as the English equivalent of *μελαγχολία* in all the examples, even though it might not be the most suitable in every case. The aforementioned word was chosen for homogeneity purposes.

4 ANALYSIS: CONCLUSION

As was mentioned earlier, in 67.14% of the sample the word *μελαγχολία* refers to an emotion (table 5). More specifically, in the examples from the corpus *μελαγχολία* is presented as an emotion which may be stirred up by a theatrical performance (example 3) or which often characterizes songs (example 7), poems (example 8) or works of fiction (example 9). As such, *μελαγχολία* is not an overwhelming or intense emotion. On the contrary, the fact that it tends to appear in the same context with laughter (examples 3 and 5), humor (example 5) and sweetness (example 11) indicates that it is perceived to be a mild emotion, which can easily fade and give way to joy (example 2). This observation

might be confirmed by examples in the Greek corpus in which *μελαγχολία* coexists with anniversaries (example 1), enthusiasm (example 4) and cheers (example 13).

(5) *μελαγχολία* as an emotion

(1) "οι επέτειοι κουβαλούν πάντοτε πάνω τους μια μελαγχολία"
(1ª) "anniversaries always have a touch of melancholy"
(2) "η χθεσινή μελαγχολία έγινε ακράτητη χαρά"
(2ª) "yesterday's melancholy turned into irrepressible joy"
(3) "έχει στήσει μια παράσταση μοναδική, με πολύ γέλιο και, πού και πού, λίγη μελαγχολία"
(3ª) "he has created a unique performance, full of laughter and a little melancholy now and then"
(4) "ενθουσιασμός και μελαγχολία ήταν τα δύο ακραία συναισθήματα, ανάκατα στο Συμβούλιο Υπουργών"
(4ª) "enthusiasm and melancholy were the two conflicting emotions which were mixed in the Council of Ministers"
(5) "πίσω από το χιούμορ και το γέλιο κρύβεται και η μελαγχολία του κεντρικού ήρωα"
(5ª) "behind humor and laughter hides the melancholy of the central hero"
(6) "δεν έχει στο ύφος του τίποτε από τη χαμογελαστή μελαγχολία του Τσέχωφ"
(6ª) "His style isn't reminiscent of Chekhov's smiling melancholy at all"
(7) "αν και η μελαγχολία είναι διάχυτη στα τραγούδια μας, η μουσική των *Hope of the States* δεν είναι καταθλιπτική"
(7ª) "even though melancholy is infused into our songs, the music of Hope of the States is not depressive"
(8) "τα ποιήματά του διαπνέονται από μελαγχολία"
(8ª) "melancholy pervades his poetry"
(9) "η γλώσσα του έχει τη δύναμη να εκφράζει τη μελαγχολία και το αίσθημα με τόνο λυρικό"
(9ª) "his language has the power to convey melancholy and emotion in a lyrical tone"

The term *μελαγχολία* is also used to describe various types of artistic work, as can be seen in examples 3-9 in table 5. These examples confirm the observation that the word in question has shifted from the domain of medicine to other domains, like sports (table 7) and arts, among which poetry (example 8), music (example 7) and literature (examples 5 and 6).

The analysis of the corpus sample also showed that *μελαγχολία* is used in various creative ways when referring to emotional states. More specifically, in 28 examples (40% of the sample) *μελαγχολία* had a more obvious metaphorical function. It was often personified (examples 5 and 6) or used metaphorically to describe a person's facial expression (examples 12 and 15) or emotional reaction (examples 13, 14 and 16). The word was also used creatively in descriptions of nonhuman entities, as shown in examples 10 and 11:

(6) Metaphorical uses of *μελαγχολία*

(10) "ο μακρύς φιδίσιος δρόμος πέρναγε μέσα από τα δάση, που είχαν μια αόριστη και υποβλητική μελαγχολία με τα ξέφωτα και τα μονοπάτια τους"
(10ª) "The long winding road passed through the forests which had a vague and imposing melancholy, with their clearings and paths"
(11) "το φθινόπωρο που είναι τόσο γλυκιά η μελαγχολία του και τόσο υποβλητική η γλύκα του"
(11ª) "Autumn, which has such a sweet melancholy and such an emotive sweetness"
(12) "αδιαμαρτύρητα, αλλά με πολλή μελαγχολία στο βλέμμα της παρακολουθούσε αυτήν την… εξαίσια επίδειξη αντιρατσισμού"
(12ª) "she was observing this outstanding demonstration of antiracism patiently, but with her eyes filled with melancholy"

The semantic contexts in which the word *μελαγχολία* appeared more frequently were arts (40% of the sample) and sports (24.28% of the sample). There were no cases in the corpus sample in which the word would refer to a mental disorder. Hence, following the course of semantic change, the meaning of the word started from the original medical field, passed through the mental health field and has ended up with its current conventionalized form. The term, in its everyday use, does not seem to have any scientific connotation; as can be seen in examples 13-16 (table 7) the term is used to refer, among other things, to the feelings of the fans and the players of the losing team.

(7) *μελαγχολία* in sport – related contexts:

(13) "ο αγώνας έκλεισε με «κυανόλευκους» πανηγυρισμούς και «κίτρινη» μελαγχολία στο κατάμεστο Ιβανώφειο"
(13ª) "the match ended amidst "bluewhite" cheers and "yellow" melancholy in the packed Ivanofeio stadium"
(14) "το 40-48 στο 36' βύθισε τη γειτονιά στη μελαγχολία"
(14ª) "40-48 at36 minutes plunged the neighbourhood into melancholy"
(15) "βλέποντας τη μελαγχολία αποτυπωμένη στο πρόσωπο του αξιότερου εκπροσώπου των χρωμάτων μας στην ποδοσφαιρική Ευρώπη"
(15ª) "seeing melancholy engraved on the face of the worthiest bearer of our national colours in European football"
(16) "η μελαγχολία στο άδειο, λόγω τιμωρίας, ΟΑΚΑ διπλασιάστηκε από τον τραυματισμό του Πρέλεβιτς"
(16ª) "the melancholy emanating from the empty OAKA stadium, due to the punishment, was doubled because of Prelevic's injury"

The above evidence indicates that the present meaning of the word *μελαγχολία* seems to derive from its folklore rather than its scientific use. The current use of the word does not provide any clue about the item's original meaning. Nevertheless, the study of its etymology reveals its obvious semantic connection to the past. Finally, it is worth mentioning that even though the term is not used in mental health contexts, which means that it is not 'officially' connotative of a mental disorder, in every day language it is widely used to describe negative mood of varying intensity and duration. It is also extended to include a wide range of real-world entities (landscapes, songs, poems, football matches) that may inspire feelings of melancholy. This, interestingly, seems to be the case not only with Greek, but also with the other languages that have adopted the term

μελαγχολία. A future study of possible semantic analogies between languages might provide enlightening information.

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CHAPTER 3

PRESENTLY COMPARING PRE-PAST
THE EXPRESSION OF 'PAST-PERFECTNESS' IN ENGLISH AND ITALIAN

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Tempo-aspectuality is a dimension of human conceptual space which has to be processed in all natural languages. Consequently, every language must provide adequate means for the expression of tempo-aspectual meaning. Starting from general observations about the linguistic codification of time, this paper investigates how English and Italian code the complex notion of past perfectness. In order to guarantee a methodologically sound comparison of the relevant language-particular coding strategies, a descriptive apparatus, defined as 'meta-category', is first developed from cognitive and typological insights and then applied to the languages in question. Since the 'meta-category' is an empirical and illustratable tool, it allows for the principled inclusion and graphical representation of both secondary and primary comparative data. The result is a comprehensive record of the similarities and differences which characterise the expression of past perfectness in English and Italian.

1 INTRODUCTION

Space and time are fundamental cognitive experiences which provide essential parameters for a human being's self-orientation in the world. Physically, an individual is always in one specific place at one specific time. While everyone is free to some degree to determine and influence the local component of their existence, the temporal component is rigidly restricted to the present, i.e. the transitory moment of actual consciousness. It is for this reason that during a telephone conversation a question like "Where are you?", which enquires about the spatial location of the absent interlocutor, seems rather normal and relevant, while an equivalent enquiry about the person's temporal location – "When are you?" – strikes us as really irrelevant. This changes as soon as non-physical, i.e. mental states are taken into account. In fact, the mind emancipates human beings from the physical confines not only of space, but also of time. Thus, memories can take us back to places that we saw at an earlier date, while visualisations of alternative and/or future states of affairs allow for an imaginary projection of the self into hypothetical space and time. As a consequence, even the temporal component appears to be no longer rigidly fixed throughout, but becomes a somewhat more variable parameter, similar to space.

If human beings can indeed entertain thoughts about different places and times, then their language must supply them with sufficient means to talk about these mental images. Taking this cognitivist[5] statement as a starting point, this paper focuses on the linguistic

[5] The label 'cognitive linguistics' refers to a rather broad movement within (modern) linguistics which holds that "language forms an integral part of human cognition" (Taylor 2002:4). For this reason,

codification of temporal notions. More precisely, it explores and compares how two specific languages, namely English and Italian, cope with the task of representing situations that the speaker perceives as belonging to the pre-past. This so-called pre-past is a period which is anterior to another period which is itself located in the past with respect to the speaker's present, i.e. the moment in which s/he is making the utterance. A comprehensive comparative overview of the relevant language-specific devices thus constitutes the final aim of this paper and will be given in the form of a 'meta-category' in the Appendix.

The organisation of the paper is as follows: section 2 provides the theoretical outline and section 3 treats actual linguistic data. More precisely, section 3.1 focuses on typological data, while language-particular secondary and primary sources are analysed in sections 3.2.1 and 3.2.2, respectively. Finally, the conclusions presented in the last section of this paper briefly summarise the main findings of the preceding sections and highlight the adequacy of the 'meta-category' for the description of the similar and/or different codification strategies that English and Italian speakers adopt when referring back to pre-past situations.

2 THEORETICAL INTRODUCTION

2.1 The linguistic expression of time and essential premises of its comparative description

In his monograph on Hopi, an Amerindian language, which famously (but falsely) had been reckoned by Whorf (1940 [1998:93]) to be a 'timeless language', Malotki (1983:630) argues that time forms a "fundamental experience conceptualised by every human mind and processed linguistically by all languages to some degree or other." While even Hopi has now repeatedly been shown to constitute no exception to this general rule and, consequently, to possess a number of linguistic devices for the codification of time in utterances, the reasons for Whorf's wrong conclusion may become clearer if one considers the fact that though all languages are indeed capable of encoding temporal reference, they do so in rather different ways, assigning different functional weight to lexical and/or grammatical resources. Grouping the relevant linguistic strategies according to their structural properties, Comrie (1985:8) distinguishes three major classes of temporal expressions, namely lexically composite expressions, lexical items and grammatical categories. The lack or infrequent use of expressions belonging to one or two of these classes does not imply that a language fails to encode temporal reference.[6] It

cognitivist scholars typically ground their analyses of linguistic phenomena in what is generally known about human cognition.

[6] Comrie accuses Whorf of having fallen prey to exactly this fallacy, since his analysis of Hopi as timeless was "based simply on the fact that the language in question has no grammatical device for expressing location in time, i.e. has no tense" (1985:4). More recently, Dahl (2001) made a case for considering Maybrat (a Bird's Head language of New Guinea) a language without tense and aspect. However, in the conclusive remarks of his paper, he admits that even in this language "some compensatory mechanisms are found" (ibid, 172).

merely means that the language in question employs different means for achieving an overall similar effect.

While a natural language may or may not rely on certain specific strategies for the codification of temporal notions, some general tendencies can be observed. On the one hand, relevant lexical devices are typically members of rather large sets of forms from which the speaker may choose if the specific temporal information that the item expresses is necessary and/or relevant to the message he intends to communicate. On the other hand, the principal grammatical categories traditionally regarded to deal with time are tense and aspect, i.e. two categories only, each of which comprises a finite set of constructions from which the speaker has to choose the most adequate form for every utterance he makes. The grammatical categories of tense and aspect thus appear to play a very important role in the linguistic codification of time and we will discuss them later in the paper without, however, forgetting that lexical means may contribute to the codification of temporal meanings.

Tense and aspect thus constitute the grammatical expression of time in language, where tense is concerned with "location in time" (Comrie 1985:9), and aspect with "different ways of viewing the internal temporal constituency of a situation" (Comrie 1976:3). Being categories of the verb, tense and aspect may be expressed either synthetically, i.e. by inflectional morphology, or periphrastically, i.e. involving several forms of words, such as auxiliaries, in addition to the main verb, yet without ceasing to count as one constructional unit. While there are predicates in which the tense and aspect markers can rather easily be recognised as distinct morphemes, it is not an infrequent phenomenon to find temporal and aspectual notions fused in a single grammatical form. For example, while English *I was singing* visibly aligns a past tense marker (carried by the auxiliary) and a periphrastic progressive marker (*be V-ing*) both past tense and imperfective aspect are interwoven in the Italian synthetic form *cantavo* ('I was singing' / 'I used to sing'). There are thus not always neatly delineated categorical distinctions between temporal and aspectual markers and even simple tense forms, such as the English Simple Present[7] in *I sing*, appear to carry an inherent aspectual meaning, which in the example given is most likely to be interpreted as habitual like in the utterance *She sings in a choir.*

The fact that languages divide up the space of tempo-aspectuality in rather different ways, distributing sections of tempo-aspectual meaning among their particular inventories of forms, may cause initial methodological problems for a comparative approach. For example, the specific languages selected for comparison may differ greatly as to the number of the tempo-aspectual forms they possess because distinctions that are made in one language may be neutralised in the others and therefore sometimes lack morphological marking. While such a situation would render the choice of comparable forms difficult at first, cases of forms that are identically or similarly named across the selected languages might make such a choice all too obvious and tempt us into forgetting

[7] We will follow the widely accepted practice introduced by Comrie (1976) and write designations of language-specific categories with initial capitals. Single quotes around lower case denominations are used for the dimensions of conceptual space.

that traditional language-specific denominations should not be taken as descriptive of the actual forms' functions in present-day languages (cf. Coseriu 1972:47). In order to avoid these and similar pitfalls, linguists who intend to embark on comparative studies should bear in mind that, as emphasised by Johanson (2000:45), "linguistic values determined within differently structured systems cannot be compared with each other in a direct way."

What, then, enables us to compare the various linguistic phenomena related to the expression of time that we encounter across languages? After having determined exactly what it is that we want to compare, i.e. after having decided on the language-specific tempo-aspectual forms as our units of comparison (at this point our choice to concentrate on grammatical markers helps us to ensure that our units retain manageable proportions), and after having ensured that these units share a general common foundation, namely their reference to particular sections of the conceptual space of tempo-aspectuality, we need to establish a set of stable parameters in terms of which we can describe the languages we are interested in. Naturally, such parameters cannot be taken from any of the object languages themselves since this would lead us to impose the categories and terms of one language onto the others, which would result in a depersonalisation of the latter ones. On the contrary, such parameters must really be a solid tertium comparationis, which is constant, free from the idiosyncrasies of any individual linguistic system and thus equally applicable across the entire set of languages that we want to compare.

For a linguistic comparison within the field of tempo-aspectuality, such a stable tertium must necessarily reflect the structures of general conceptual space because, as mentioned earlier, all languages have to cope with the uniform task of 'coding' these notional structures into linguistic form (cf. Langacker 1976). The adoption of such purely semantic parameters alone, however, can "be inadequate and misleading" and must therefore be "constrained *formally*" (original emphasis), as rightly argued by Krzeszowski (1984:302). In fact, only through the principled implementation of a combined semantic and formal tertium comparationis can we (1) confirm the essential functional equivalence of the compared forms and (2) guarantee a strict correlation between the relevant semantic components on the one hand and grammatical structure on the other. In the following section, we will show how such a complex tertium comparationis can be generated from certain cross-linguistic tendencies revealed in typological studies and how this step can help us to create a valid methodological tool for the comparison of tempo-aspectual reference.

2.2 A typologically based comparative tool: the 'meta-category'

Croft (2008:5) formulates one of the fundamental assumptions of linguistic typology when he states that "each language expresses the same meanings or functions," but "the encoding can vary in ways that are not predictable from how meaning is encoded in one particular language." The emphasis here lies on 'one particular language', because what typologists are concerned with is the detection of "language universals via cross-linguistic generalizations" (Croft 2001:7). These can only be achieved through the study of large

samples of languages which are representative of a wide range of language families and geographical regions. Bybee (1985), Dahl (1985) and Bybee et al. (1994) are perhaps the most prominent typological works dedicated to the grammatical codification of tempo-aspectual notions. Whereas Bybee (ibid) examined secondary sources (mainly reference grammars) for a sample of 50 maximally unrelated languages, extending the sample to comprise 76 languages in the co-authored publication, Dahl (ibid) analysed primary data gathered with the help of a translation questionnaire for a total of 64 languages. The striking overall similarity of their discoveries led these scholars to integrate their work and to develop what has come to be referred to as the 'Bybee & Dahl approach' (Dahl 2000), the groundwork for which they laid in a joint paper published in the end of the 1980s (Bybee and Dahl 1989). In this article, the authors show that tempo-aspectual notions not only generally tend to find expression in grammatical rather than in lexical means, but they also tend to be encoded by similar verb-relating grammatical morphemes ('grams') across various languages. In fact, the grouping of language-specific markers according to the meanings they express results in a restricted set of cross-linguistic types ('gram-types'), each of which appears to manifest a clear predilection for certain regular means of expression which have developed along similar pathways from very similar lexical sources.

In the multidimensional space of tempo-aspectuality, gram-types thus constitute focal areas which are very likely to be grammatically encoded in the languages of the world. To the extent that these gram-types are indeed idealised cross-linguistic constructs, they can be introduced into our theory of linguistic comparison, where they can function as a valid tertium comparationis. In fact, the adoption of these gram-types effectively helps us to meet two important methodological requirements. Firstly, it provides us with the necessary stable parameters through which we can evaluate and compare the language-specific categories that we are interested in. Secondly, it supplies a full-fledged metalanguage, i.e. an inventory of cross-linguistically valid labels, in which we can phrase our statements about the selected languages without running the risk of using incommensurable terms.

Cross-linguistic gram-types thus enable and facilitate comparison. They allow us to determine which language-specific forms can be compared meaningfully and list a number of potential semantic and formal properties against which we can check these forms. While any large-scale typological investigation would probably come to a halt at this rather superficial level of analysis, due to the elevated number of languages under scrutiny, it is a great advantage of more narrowly circumscribed comparative studies, such as this one, that greater attention can be paid to even the subtler peculiarities of the relevant language-particular markers. On the one hand, such an in-depth analysis allows for the determination and detailed description of the extended semantic space that a language-specific item covers and of which the cross-linguistic focus typically constitutes but the central part. On the other hand, it can help identify alternative strategies which a particular language may employ in order to reveal certain tempo-aspectual notions and which, consequently, are in constant competition with the canonical marker under investigation. In addition, the extended meaning area encompassed by a certain particular tempo-aspectual marker in one language can then be projected onto the other language(s),

whereby parallel semantic extensions and/or functional overlaps might be uncovered. The detection of such multi-dimensional correspondences can shed light onto inter-linguistically recurring connections between conceptual categories and linguistic structures. While these connections might perhaps not qualify as linguistic universals, they can nevertheless help create new and challenging cognitive perspectives.

3 THE EXPRESSION OF 'PAST-PERFECTNESS' IN ENGLISH AND ITALIAN

3.1 The gram-type PRF-PST

Cross-linguistic investigations into the expression of tempo-aspectual reference have shown that in addition to the six major gram-types, namely PFV (perfective), IPFV (imperfective), PROG (progressive), FUT (future), PST (past) and PRF ([present] perfect),[8] many languages possess a dedicated marker for the codification of the notion of pre-past. Formally, these constructions appear to be analysable as straightforward combinations of the gram-types PRF and PST. While scholars such as Thieroff (1994) and Bybee et al. (1994) treat language-specific grams of this kind in exactly this simplified way, Dahl and Velupillai (2005:271) point out that, semantically, such markers have a "relatively strong tendency to develop noncompositional readings; that is they become semantically independent of pasts and perfects." In this paper, we will recognise the afore-mentioned formal parallels to other gram-types by choosing the composite PRF-PST (past perfect) label rather than the abbreviation PLPFCT (pluperfect) that was introduced by Dahl (1985). In our semantic analysis, however, we will not assume compositionality throughout, but include 'noncompositional meanings', too.[9]

In general typological terms, the gram-type PRF-PST typically indicates that "there is a reference point in the past, and that the situation in question is located prior to that reference point" (Comrie 1985:65). This relation of pure anteriority may, in certain contexts, imply that the situation is also relevant to the past reference time. The fact that this relevance can be of different kinds is reflected by the various specific uses to which the language-particular markers belonging to the gram-type PRF-PST can regularly be put. The experiential use, for instance, indicates that, due to pre-past experiences, certain qualities can be ascribed to the agent at a past reference point. And while the inclusive past use represents a pre-past situation as leading up to a past reference point and maybe beyond it, the resultative use points to the persistence of the result of a pre-past situation at such a past reference time. If all these contexts, which share relevance as a semantic

[8] The upper case denominations serve as labels for cross-linguistic gram-types. While typologists often make up their own abbreviations, these labels have been adopted from the 'List of Standard Abbreviations' provided in Comrie et al. (2004). The use of square brackets in the unabbreviated denomination of the gram-type PRF highlights the fact that though this gram-type is simply called PERFECT, what it is usually taken to designate is the cross-linguistic category of present perfect.

[9] Incidentally, this seems to be the strategy also followed by Johanson (2000), who chooses to use a composite label, i.e. his very own '+PAST (+POST)', for the cross-linguistic gram-type in question, yet explicitly states that "so-called Pluperfects do not have the same semantic structure as so-called Perfects" (ibid, 107).

feature, are perfectal and thus attributable to the common meaning component PRF, there are a number of additional, non-focal uses which are not characteristic of PRF itself. On the one hand, markers of PRF-PST often tend to be employed in reference to situations which are located in the distant past (cf. Binnick 2001:561). On the other hand, they frequently co-occur with definite time adverbials, thereby allowing for the pre-past situation to be explicitly anchored in the pre-past period or, as Johanson (2000:108) terms it, to be referred to 'historically' rather than 'diagnostically'.

The extended semantics which typological studies assign to the gram-type PRF-PST are often explained on the grounds of the cross-linguistically typical morphosyntactic features as well as the systemic values by which the various language-specific manifestations of this gram-type are characterised. In general, PRF-PST grams tend to be combinations of perfect and past. In fact, analogous to markers of PRF, instances of PRF-PST are rather consistently expressed periphrastically, involving an auxiliary in combination with a past participle (or similar form) of the lexical verb. The additional past meaning component essential to the gram-type PRF-PST is carried by the auxiliary of the construction, which thus may itself be an instance of the gram-types PST, PFV or IPFV. While a PST gram is the only option for languages that have no PFV:IPFV distinction, all languages that do make this distinction could in theory form two different markers of PRF-PST. However, typological studies have revealed a strong tendency for the regular use of only one past perfect construction, at least with respect to European languages (Johanson 2000:120). This implies that markers of PRF-PST, unlike those of PRF, frequently lack competing grams and that they are thus likely to constitute functional parallels of both the perfect and the past in the pre-past stratum.

Typological literature also supplies more detailed information about the grammaticalisation of PRF(-PST) grams. Diachronically, (past) perfects appear to be derived from at least three different sources, namely from (1) resultative constructions involving a past participle with or without a copula, (2) transitive possessive constructions and (3) constructions comprising words such as 'finish', 'come from', 'throw away' or 'already' (cf. Dahl and Velupillai 2000). While these lexical sources represent the first stages of a common grammaticalisation path leading towards perfect grams, interesting observations have been made with respect to the most probable continuation of this path. There is, in fact, a tendency for PRF and PRF-PST grams to develop into markers of recent and remote past, respectively.

We can now systematise these typological insights by means of the comparative tool which we developed in section 2.2. Around the typological meaning label PRF-PST, we can thus build the cross-linguistically typical core section of the 'meta-category of past-perfectness' (figure 1) by associating the regularly recurring meanings (or uses) as well as the underlying conceptual space to one side of the model and by supplying empty slots towards the other side into which any language-particular denominations and constructions can be inserted.

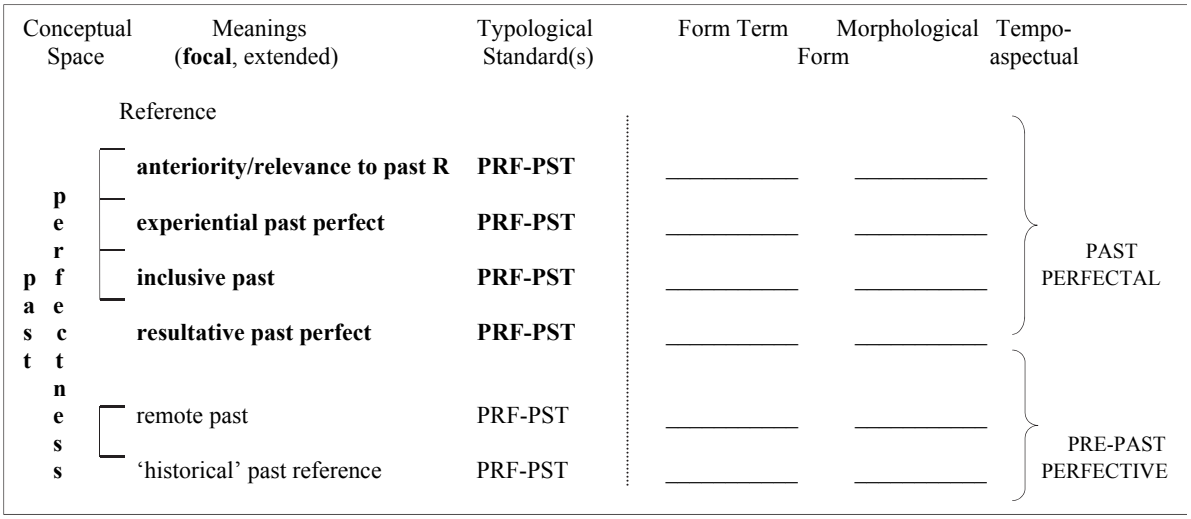

Figure 1: *The cross-linguistic standard PRF-PST as characterised in typological research*

As can be seen, the above figure constitutes a simple graphical template which summarises the general tendencies that characterise the codification of the basic cognitive category of past perfectness in a large number of the world's languages. We can now apply this template in parallel fashion to our selected languages in order to show the similarities and differences regarding the particular restructurings and extensions of this essentially universal area of conceptual space in English and in Italian. The following subsections of this paper reflect the fact that such a practical application can be based on two different types of data, namely (1) secondary data gained from published language descriptions and (2) primary data obtained by working with native speaker informants. In what follows we will not only present the relevant information that these sources reveal, but we will also discuss the relative appropriateness of both sources.

3.2 The 'meta-category of PAST PERFECTNESS (PRF-PST)'

3.2.1 Secondary data

English and Italian undoubtedly belong to those languages whose tempo-aspectual systems have been described extensively. Nevertheless, if this were to lead us to expect to find a vast pool of pre-processed data relevant to our comparative study, we would soon be proven wrong. In fact, Salkie's (1989:1) statement about the "relatively little attention" that scholars had paid to the English marker of past perfectness by the time he was writing his article appears to be valid even today. What is more, it seems to apply equally well to the literature available on Italian. While this marked scarcity of in-depth studies constitutes a potential source of descriptive gaps,[10] we can fruitfully integrate the few available texts with the condensed accounts given in English and Italian reference grammars as well as with the brief remarks that typological scholars make about these

[10] Notable exceptions are the already mentioned Salkie (1989) as well as Declerck (2006) for English, Bertinetto (1986) for Italian and Squartini (1999) for both languages.

two languages. Such a combination of different secondary sources will allow us to compile a detailed state-of-the-art report. If the systematisation of the available secondary data is carried out according to the conventions of our comparative tool, all observations can be phrased in a uniform meta-language. Moreover, the resulting descriptive account remains flexible enough to incorporate any improvement and extension that a subsequent study of primary data is likely to suggest.

A first projection of the cross-linguistic standard PRF-PST (cf. figure 1) onto the grammatical system of English clearly identifies the morphologically composite construction *had V-en* as the relevant language-particular manifestation form. On closer analysis, this verbal complex, which freely combines with verbs of all actionality classes, consists of the Simple Past form of the auxiliary *have* followed by the past participle of the lexical verb. The English Past Perfect thus turns out to conform closely to the cross-linguistic tendencies regarding the formal make-up of PRF-PST markers. The specific choice of *have* as the only possible auxiliary in present-day English[11] points towards the form's diachronic origin in a transitive possessive construction and identifies it as an instance of the so-called 'have' (past) perfects (cf. Lindstedt 2000:367).

While *had V-en* thus constitutes the only dedicated marker of PRF-PST in English, the Italian tense and aspect system shows a greater variety of forms. The application of the cross-linguistic standard to Italian results in the identification of two relevant constructions. The composite *aveva V-ato*, on the one hand, constitutes another instance of a 'have' (past) perfect, this time with the auxiliary *avere* ('have') conjugated in the Imperfetto (a past imperfective tense).[12] The construction *era V-ato*, on the other hand, has the auxiliary *essere* ('be'), again marked for the Imperfetto, precede the past participle of the lexical verb, which exhibits gender and number agreement with its subject.[13] It can thus be regarded as a 'be' (past) perfect (cf. Lindstedt 2000:367), whose diachronic source can be traced back to a resultative construction involving a copula and a past participle. The co-existence of these two composite markers of PRF-PST does, however, not usually result in a direct competition of these constructions, since their distribution is strictly dependent on the lexical verb and, therefore, complementary.[14] Both constructions, in fact, are traditionally considered to be instantiations of the Italian Trapassato Prossimo (or Piuccheperfetto), a tempo-aspectual form which freely combines

[11] A detailed account of the history of the *have V-en* construction is given in Bybee et al. (1994), where some mention is made of a parallel *be V-en* construction which, however, no longer exists as a regular formation.

[12] The form *aveva V-ato* represents the third person singular. While the past participle is the same for all persons, the auxiliary is conjugated as follows: *avevo, avevi, aveva, avevamo, avevate, avevano*.

[13] The cited form of the past participle, *V-ato*, represents the form used with a masculine singular subject. The remaining forms are *V-ata* (feminine, singular), *V-ati* (masculine, plural) and *V-ate* (feminine, plural). The conjugational paradigm of the auxiliary *essere* in the Imperfetto is the following: *ero, eri, era, eravamo, eravate, erano*.

[14] In general terms, the copula-based construction *era V-ato* is used with all reflexive and pronominal verbs, while *aveva V-ato* regularly occurs with all transitive verbs. While most intransitive verbs typically select either the one or the other construction, verbs expressing "meteorological or atmospheric conditions… may take either auxiliary" (Maiden and Robustelli 2000:267).

with verbs of all actionality classes and has the defining characteristic of featuring an auxiliary marked for the imperfective rather than perfective past. Italian thus clearly exhibits a basic PFV:IPFV distinction and, in accordance to what we observed in section 3.1, a formally analogous construction involving *avere* or *essere* in the Passato Remoto (a perfective past tense) is indeed a possible formation. However, there are good reasons against counting these two complementary Trapassato Remoto constructions as manifestations of the cross-linguistic gram-type PRF-PST. On the one hand, unlike *aveva/era V-ato*, the forms *ebbe/fu V-ato* are extremely rare in Modern Italian and virtually absent from everyday language (cf. Bertinetto 1986:467). On the other hand, even the few and distinctly archaic instances of these forms which might occur in high register literary texts are subject to severe actionality restrictions and strict syntactic rules. Due to the very specific relational meaning expressed by the Trapassato Remoto, namely that of a completed past event that is adjacent to a subsequent past event, the two relevant constructions only select telic (or contextually telicised) verbs in temporal subordinate clauses which are introduced by a subordinating conjunction suggesting immediate anteriority with respect to a situation encoded by the Passato Remoto in the main clause. A brief check against the cross-linguistic standard as described and illustrated in section 3.1 makes clear that any form with such a limited distribution and usage cannot qualify as a regular manifestation of the gram-type PRF-PST. We will therefore ignore this form in what follows and code possible occurrences of it as <PRF-PST, i.e. as a construction which is similar, but not close enough to the cross-linguistic standard PRF-PST. Not only do these observations on Italian confirm the typological tendency towards the regular use of only one marker of PRF-PST per language, but they also suggest that the Italian Trapassato Prossimo is indeed a general past perfect despite the aspectually circumscribed imperfective morphology exhibited by its auxiliaries. Focusing on the semantic analyses found in secondary literature, the following sections will clarify this point.

As we have seen in the preceding paragraphs, both English and Italian feature one language-specific tempo-aspectual category which, according to morphological parameters, closely corresponds to the formal tendencies discerned for the cross-linguistic standard PRF-PST. However, as is commonly emphasised by typologists and argued for in this paper with regard to the Passato Remoto, morphological criteria alone do not suffice in order for an item to qualify as a marker of a certain gram-type. On the contrary, such formal features rather "appear to be a regular correlative of the specific semantics of these forms" (Schneider 2009:288). Hence, it is essential that the two identified constructions closely comply with the focal semantic features ascribed to the cross-linguistic standard. In reference grammars of English and Italian, we find very similar descriptions of the central meaning expressed by the Past Perfect and the Trapassato Prossimo, respectively. Both categories are, in fact, understood to represent situations which are anterior to a past reference time, i.e. a reference time which is anterior to the time of utterance (cf. Dardano and Trifone 1995:356 for Italian, Huddleston and Pullum 2002:140 for English). This univocal definition, formulated against the background of two different language-particular tense and aspect systems, repeats almost literally the cross-linguistic definition cited in section 3.1. Paying closer attention to the contexts in which the Past Perfect and the Trapassato Prossimo are shown to occur, it becomes clear

that both forms cover all of the focal uses listed for the gram-type PRF-PST (figure 1) – i.e. they typically encode the relational meanings of anteriority and relevance and are regularly found in past experiential, past inclusive and past resultative contexts. Due to their common relational value, both language-particular markers of PRF-PST are very likely to appear in temporal subordinate clauses. In this specific syntactic environment, they represent situations as anterior and relevant to the situation expressed by the predicate in the main clause, which may be marked for any of the language-specific past tenses. It is interesting to note that in cases where the temporal conjunction itself explicitly encodes the anteriority relation, the Past Perfect and the Trapassato Prossimo are sometimes substituted by the Simple Past (PST) and by the Passato Prossimo (<PRF-PRS), respectively (cf. Leech 1971:43).

Despite their predilection for syntactically subordinate positions, the English and the Italian PRF-PST markers are also frequently found in independent sentences where they either rely on sentence-internal temporal adverbials or on the linguistic co-text for their past reference times. A closer look at the specific functions of these adverbials reveals that while it is true that they are a common means for providing the relevant past reference times from which anteriority relationships are computed, in some contexts they may also specify the specific times at which the pre-past situations represented by the PRF-PST constructions had obtained. Both language-particular forms can thus refer diagnostically as well as historically to pre-past situations. Squartini (1999), relying like many other scholars on the terminology introduced by Comrie (1976:56), adopts these two general uses as the so-called 'perfect-in-the-past' and 'past-in-the-past' functions into his analysis of the English Past Perfect and the Italian Trapassato Prossimo.[15] He also adds a third semantic value, namely the establishment of 'past temporal frames', which he shows to be a rather common feature of the Italian PRF-PST marker. What is especially interesting is the fact that in this specific usage the Trapassato Prossimo no longer appears to express the relational meaning of anteriority, but rather to locate a situation directly in what, strictly speaking, should be a pre-past period. Since such contexts, however, typically lack an intermediate past reference time, the Trapassato Prossimo is interpreted as underlining the relative remoteness of the time at which the speaker perceives the encoded situation to have obtained.[16] Interpreting the term 'remoteness' as a measure of psychological rather than exclusively temporal distance, the 'remote past' meaning clearly features among the extended semantics encompassed by the Italian Trapassato Prossimo. While, in this respect, Squartini remains rather vague in his remarks on English, Comrie (1985:68/69) provides the relevant information about the Past Perfect,

[15] In his paper, Squartini (1999) actually uses the term 'Pluperfect' in order to refer to the cross-linguistic gram-type as well as to the relevant language-specific categories, thereby conflating theoretical concepts belonging to two different descriptive levels in one single term. Since such broadly defined technical terms may easily be the source of misinterpretations, we will stick to our strategy of distinguishing carefully between these levels, not only from the conceptual, but also from the terminological point of view.

[16] Since this particular usage of the Trapassato Prossimo is not very frequently described, the following examples are adopted from Squartini (1999:58) for sake of clarity: *Quel disegno lo avevo fatto io il primo giorno che lavoravo all'istituto.* ('I made (lit., had made) that drawing on the first day I worked at the institute.'); *Chi avevi conosciuto, quando eri stata a Pisa?* ('Who did you meet (lit., had met), when you were (lit., had been) in Pisa?').

stating that its use "to indicate temporal remoteness when there is no intervening reference point available from the context will simply disorient the English speaker."

The English, unlike the Italian, PRF-PST marker thus fundamentally depends on the existence of a past reference time, which must be recoverable from the surrounding context. This, however, does not mean that the relevant reference time must be mentioned explicitly in the linguistic co-text. One usage in particular adequately demonstrates that the implicit presence of a past reference time in the general discourse situation may in some cases suffice. Relying on Declerck's (2006:508) analysis of English, we can describe this specific use as referring to "a durative situation [which] has never actualized in a period up to t_0 but is actualizing at t_0" ('t_0' being the time of utterance). Squartini (1999:57), attesting referring to instances of the Trapassato Prossimo in very similar contexts, gives a more condensed description of this extended usage, observing that it expresses 'reversed results'.[17] Neither of the two authors, however, claims an obligatory use of the respective PRF-PST marker in these particular contexts. On the contrary, the Present Perfect (PRF-PRS) and the Passato Prossimo (<PRF-PRS) are cited as possible (even if not strictly synonymous) language-particular alternatives.

In addition to these temporal meanings, the English and Italian markers of PRF-PST also cover a number of modal notions. The specific areas of modal meaning they encompass and the syntactic environments in which these occur, however, differ to a rather large extent. In fact, while the Past Perfect constitutes the canonical means for the expression of hypothetical situations in the protases of counterfactual sentences, the Trapassato Prossimo may occur in a similar position only in distinctly informal discourse. In this case, it is often also employed in the accompanying apodoses. Complement clauses of desiderative verbs constitute yet another syntactic environment in which the English marker of PRF-PST may be used to represent hypothetical situations which, if actualised, would have obtained before the moment of utterance. While the Trapassato Prossimo never occurs in such contexts, it has free access to another modal notion which is only rarely encoded by the English Past Perfect. Italian speakers, in fact, may employ the PRF-PST marker in order to represent their current hopes, intentions or desires in a less direct, less pressing way. This so-called attenuative use of the Trapassato Prossimo (and the Past Perfect) thus allows the speaker to formulate polite indirect requests. A similar courteous overtone may, however, also be achieved by the Imperfetto (IPFV) and the Simple Past (PST), respectively.

[17] As before, here are two examples adopted from Declerck (2006:508) and Squartini (1999:57) that illustrate this somewhat rarely described usage of the Past Perfect and the Trapassato Prossimo, respectively: *I had never dreamed of meeting these people before.*; *Me lo aveva promesso, ma adesso fa finta di non ricordarsene.* 'He did promise (lit., had promised), but now he pretends not to remember it.' Note that while the English sentence, in accordance with Declerck's definition, contains a durative predicate, the Italian example features a non-durative verb in the Trapassato Prossimo, suggesting the existence of subtle inter-linguistic differences with respect to this usage. Our analysis of primary data in section 3.2.2 will help us to throw some light on this problem.

If the English and the Italian manifestations of PRF-PST have been shown to differ slightly with respect to the semantic space they cover as well as to the syntactic environments they may occur in, a further difference can be noted on the morphosyntactic level. Focusing on the general compatibility of these forms, we can observe that only the English Past Perfect may co-occur with an additional tempo-aspectual marker, namely the Progressive (PROG). This complex construction is typically observed in past inclusive contexts, where it suggests that a situation which had begun in the pre-past continued on up to the past reference time and beyond it.

3.2.2 Primary data

The study of secondary sources in the previous section has helped us to identify the language-particular forms that are most relevant to our investigation into the linguistic expression of past perfectness in English and Italian. What is more, it has resulted in a general outline of the major similarities and differences between these constructions, showing that while there is a basic congruence between the two at the level of their focal meanings (this congruence having been the reason for identifying these markers as the relevant language-specific manifestations of PRF-PST in the first place), important differences pertain in the extended, more marginal meaning areas they cover. Apart from the few uncertainties which were shown to be a direct result both of the relative scarcity of secondary material as well as of the vagueness of some descriptions, we now have quite clear a picture of what the Past Perfect and the Trapassato Prossimo are capable of expressing. But do native speakers actually use these constructions or are they just optional devices which can and usually are replaced by alternative language-specific forms in natural discourse? Coseriu (1972:56) rightly points out that in order to draw a comprehensive comparison between two or more languages, it is not sufficient that we know what a speaker might be able to say, but we must also know what s/he is most likely to say in a particular context.[18] Not only can primary data help us to acquire exactly this kind of knowledge, but it can also cross-check, illustrate, refine and complete the global theoretical information provided by secondary sources.

In order to obtain detailed primary data regarding the codification of tempo-aspectual notions in English and Italian, an elicitation questionnaire was constructed and then translated into both languages. Modelled on the cross-linguistic survey conducted by Dahl in 1985 and on the various *EUROTYP* questionnaires published in a volume edited by Dahl in 2000, the *ATAM*-questionnaire[19] used here consisted of 230 sentences and short texts which were accompanied by brief indicators of context and whose predicates were supplied in the infinitive (printed in capitals). In a field study, the English and Italian versions of the questionnaire were circulated at random to university students in the

[18] The original statement on which this translation is based runs as follows: “Es genügt also nicht zu wissen, was man in einer Sprache sagen könnte, man muß auch wissen, was normalerweise in bestimmten Situationen gesagt wird” (Coseriu 1976:56).

[19] This denomination employs the acronym *ATAM* introduced by Bertinetto and Nocetti (2006), which aptly summarises the four dimensions that together form the semantic domain of verbal time, namely A(ctionality), T(emporal Reference), A(spectuality) and M(odality).

United Kingdom, the United States of America, Canada and Italy, who were asked to complete each of the sentences with the form of the verb that seemed most natural to them. The following discussion of primary data is based on a random sample of ten of these questionnaires per language.[20]

The analysis of the English and Italian questionnaire samples has revealed significant inter- as well as intra-linguistic variation in the frequency of occurrence of the language-particular PRF-PST markers. English informants employed *had V-en* 16 times on average (with individual totals ranging from a minimum of 9 to a maximum of 24 occurrences). By contrast, Italian speakers used *aveva/era V-ato* between 4 and 13 times, thus averaging only 10 instances per speaker. While the overall low number of occurrences of the PRF-PST markers can be partly explained by the conceptual complexity of the pre-past and by the fact that human beings have a naturally stronger preoccupation for all situations that make up, or directly influence, their present moment of experience (both factors, of course, directly influenced the questionnaire design), the gap between the respective average for the two groups suggests that there may be indeed no absolute functional equivalence between the English and Italian markers of PRF-PST. In addition, the fact that intra-linguistic variation is shown to more than double (in English) or even more than triple (in Italian) the minimum counted representatives of PRF-PST suggests that individual and/or regional preferences may also influence the selection of PRF-PST devices.

Analysing in detail the questionnaire sentences in which language-specific markers of PRF-PST occur, it becomes apparent that, quite predictably, most of the focal meanings are rather consistently expressed by the Past Perfect and the Trapassato Prossimo, respectively. The first example given below, which elicited PRF-PST markers throughout, features a situation which is not only anterior and relevant to another past situation, but at the same time part of a past habitual scenario, illustrating that both language-specific forms are easily compatible with habitual meaning:[21]

(1) [The speaker used to meet his friend once a week. Nowadays he never sees him:]
   a. Every time I met him in those years, he would tell me about the film he *had* just *seen*. [10/10]
   b. Ogni volta che lo incontravo in quegli anni mi parlava del film che *aveva* appena *visto*. [10/10]

[20] The English sample comprises one informant from each of the following cities: Cardiff (GB), Dublin (IRE), Edinburgh (GB), Edmonton (CA), Leeds (GB), London (GB), New York (USA), Nottingham (GB), Reading (GB) and West Bromwich (GB). As regards the Italian informants, there are two speakers from Udine, and one speaker from each of the following Italian cities: Brindisi, Genoa, Lecce, Pisa, Rome, Salerno, Venice and Vicenza.

[21] Though directly adopted from the *ATAM*-questionnaire, some of the sentences reproduced in this paper are likely also to have appeared in the previously published surveys on which this questionnaire has been modelled. For reasons of space, the contexts accompanying the questionnaire sentences are supplied here in English only, while answers are cited verbatim in both languages. Square brackets will provide the number of occurrences of the PRF-PST marker.

The counted occurrences of the English and Italian PRF-PST markers, however, turn out to be distinctly lower in cases where the anteriority relation is explicitly spelled out by some other form in the linguistic context. Sentence (2) is an example of a relevant anterior situation encoded in a subordinate clause which is introduced by the temporal conjunctions *after/dopo che*. As the informants' answers show, the conceptual redundancy of an additional marker of anteriority rather frequently results in a substitution of the Simple Past (PST) or Passato Prossimo (<PRF-PRS) for the respective language-particular PRF-PST constructions:

(2) a. (Yesterday,) Mary came home after John *had arrived* / arrived. [05/10]
b. (Ieri,) Maria è tornata a casa dopo che Giovanni *era arrivato* / è arrivato. [07/10]

As we noted earlier, the notion of relevance at a past reference time can be of different kinds, resulting in a number of distinguishable uses of PRF-PST. The following sentence constitutes an example of an experiential context. While both the English and the Italian groups display a decided preference for the respective language-specific PRF-PST marker, two of the English informants alternatively resort to the Simple Past (PST) and one of the Italian informants to the Passato Prossimo (<PRF-PRS). By doing so, these speakers seem to treat the encoded pre-past situation as mere fact rather than to explicitly assert its relevance at the given past reference time:

(3) [Q: When you came to this place a year ago, did you know my brother? A:]
a. (Yes,) I *had met* / met him at least once before I came here. [08/10]
b. (Sì,) l'*avevo incontrato* / l'ho incontrato almeno una volta prima di venire qua. [09/10]

A very interesting phenomenon can be observed with respect to another of the fundamentally perfectal focal meanings, namely past inclusivity. As we noted earlier, secondary sources on English typically list such contexts as paradigmatic environments of the complex Past Perfect Progressive (PRF-PST-PROG). The questionnaire sentence given in (3), however, illustrates that some speakers prefer to use the non-progressive Past Perfect construction in these contexts:

(4) a. When I found her (yesterday), she *had* already *knocked* / *had* already *been knocking* at our neighbour's door for half an hour. [02+08/10]
b. Quando l'ho trovata (ieri), *aveva bussato* / stava bussando alla porta del nostro vicino già da mezz'ora. [02/10]

The juxtaposed Italian data is even more remarkable. While the Perifrasi Progressiva *stava V-ando* (PROG-PST), i.e. the Italian periphrastic marker of progressivity, here marked for the Imperfect, was employed by most informants, two instances of the Trapassato Prossimo could be recorded in this distinctly inclusive context. Asking those informants who had not used the PRF-PST marker to judge the relative acceptability of this alternative choice, they usually pointed out that the temporal adverbial introduced by *da* ('for', indicating an interval which is essentially open with respect to its terminal

point) made the use of the PRF-PST construction highly unlikely, since this verbal form suggested an interruption of the encoded situation at the past reference point and would thus rather have to combine with a temporal adverbial introduced by *per* ('for', indicating a closed interval that measures the duration of the situation from its initial to its final point). For these speakers, the Trapassato Prossimo thus turned out to be blocked in cases where the evaluation period was demarcated as extending beyond the reference time. Back-checking with the two informants who did employ the PRF-PST marker, their answers invariably contained the Trapassato Prossimo, suggesting the existence of speaker-related semantic extensions.[22] As the following example illustrates, instances of the Italian PRF-PST marker can be observed to multiply in those contexts where the situation is understood as leading up to but not beyond the past reference point (past-up-to-then). The English sentence shows that such a contextual change may elicit some instances of the Simple Past (PST):

(5) a. When John retired at the age of 70, he was tired because he *had worked* / *had been working* / worked hard all his life. [07+01/10]
b. Quando Aldo è andato in pensione all'età di 70 anni era stanco perché *aveva faticato* / ha faticato tutta la vita. [07/10]

The resultative use is yet another of the focal meanings typically encompassed by PRF-PST markers. The questionnaire shows that such contexts consistently elicited the use of the *had V-en* and *aveva/era V-ato* constructions if the past reference time was given in the immediate linguistic co-text, as illustrated in (6). A delegation of the relevant past reference time to the wider linguistic context significantly reduced the number of counted PRF-PST forms and elicited instances of the Simple Past (PST) and the Passato Prossimo (<PRF-PRS), as shown in (7):

(6) a. When I came home yesterday, he *had written* two letters [finished before I arrived]. [10/10]
b. Quando sono arrivato a casa ieri, *aveva scritto* due lettere [finite prima del mio arrivo]. [10/10]

(7) [Q: Did you find your brother at home? A:]
a. (No, we did not, we were unlucky.) He *had left* / left (just before we came). [07/10]
b. (No, non l'abbiamo trovato. Siamo stati sfortunati.) *Era partito* / È partito (appena prima che noi arrivassimo). [07/10]

[22] The fact that the two informants who allow for the PRF-PST marker in (3) are from the Italian cities of Lecce and Salerno might suggest that this semantic extension is a phenomenon more typical of the Southern than of the Central or Northern Italian varieties. However, since the primary data presented in this paper is based on a mere ten questionnaires per language, it is difficult to make any reliable statements about regional variation. What is more, the Southern Italian speaker from Brindisi does not employ the PRF-PST marker and thus runs contrary to the observed tendency.

An even more pronounced avoidance of the PRF-PST marker can be observed among the ten English informants in what secondary sources refer to as the 'reversed result' use. As noted in section 3.2.1, these specific contexts lack explicit mentioning of an appropriate past reference time and rather rely on an implicit reference time provided by the general discourse situation. Sentence (8) gives an example of this particular use. Analysed in detail, it presents a durative situation which has never actualised before but is actualising at the time of utterance. Judging from the counted occurrences of the language-particular PRF-PST markers, the Past Perfect, unlike the Trapassato Prossimo, proves to appear only very sporadically in these contexts:

(8) [A and B are in a room of B's house. Leaving the room, B asks A:]
  a. *Had* you *been* / Were you / Have you been in this room before? [01/10]
  b. *Eri stato* / Sei stato in questa stanza prima? [07/10]

Interestingly, the number of English PRF-PST markers can be observed to increase slightly in (9), where a telic rather than an atelic situation is referred to. What is especially interesting with respect to this particular sentence is that the past reference time appears to be established by the help of a physical image of the past, i.e. the picture that the interlocutors are looking at. The use of the PRF-PST marker in this specific context explicitly locates the situation it refers to prior to the time which is immortalised in the picture and thus seems to insert it into a kind of temporal frame situated in a relative remote past. Quite predictably, the implicitness of the intermediate past reference time in this as well as in the preceding example allows for other tempo-aspectual forms to occur, such as the Simple Past (PST) and the Present Perfect (PRF-PRS) in English and the Passato Prossimo (<PRF-PRS) as well as the rarer Passato Remoto (PFV) in Italian:

(9) [Looking at a picture of a house which has been torn down:]
  a. Who *had built* / built this house? [02/10]
  b. Chi *aveva costruito* / ha costruito / costruì questa casa? [06/10]

The questionnaire also elicited several occurrences of the English PRF-PST marker encoding distinctly modal meanings. In an example such as (10), the Past Perfect is employed to encode a counterfactual condition. While some informants avoided the PRF-PST construction in this sentence and employed the Simple Past (PST) instead, the vain wish expressed in (11) elicited no alternative tempo-aspectual forms among the English speakers. The ten Italian informants, by contrast, consistently resorted to an analytical marker of the subjunctive mood, namely the Congiuntivo Trapassato (SUBJ-PRF-PST), in order to encode these modal notions:

(10) [The speaker knows that the boy was expecting money and that he did not get it:]
  a. If the boy *had got* / got the money (yesterday), he would have bought a present for the girl. [07/10]
  b. Se il ragazzo avesse ricevuto i soldi (ieri), avrebbe comprato un regalo per la ragazza. [00/10]

(11) [Yesterday, A went shopping with her boyfriend. They saw a beautiful but much too expensive dress. Today, A tells her best friend about the dress and exclaims:]
   a. (Yesterday in the shop,) if only he *had had* enough money on him! [10/10]
   b. (Ieri nel negozio,) se solo avesse avuto abbastanza soldi con sé! [00/10]

No instance of a Trapassato Prossimo expressing a modal notion could be elicited by the 230 sentences that make up the questionnaire. Of course, this does not imply that the Italian PRF-PST marker is never actually used to encode modal meaning. It rather makes us aware of a potential shortcoming of questionnaires used as a methodological tool for gathering primary data. No questionnaire, in fact, will ever be long enough to include all the phenomena that an in-depth study of tempo-aspectuality should be able to account for. Notwithstanding this weakness, the questionnaire method has been shown to give valuable insight into the use of the PRF-PST constructions in English and Italian. Not only has the highly comparable data yielded by the *ATAM*-questionnaire confirmed the observations made in the secondary literature, but it has also helped us to refine and extend this set of data.

4 CONCLUSION

Coseriu (1972:41), whom we have already cited several times in this paper, makes the interesting observation that the fact that 'a language B can express the same contexts as a language A does not imply that language B needs to encode these meanings with similar means or needs to encode them at all.' Language B, in fact, may either not possess devices that are similar to those encountered in language A, or it may possess yet not employ them in the same way, due to the existence of alternative and/or semantically more general codification strategies. Applied to the topic we have treated in this paper, these words translate into the following central statement: while both English and Italian are able to express the notion of 'past perfectness', they might not encode it by similar means nor encode it explicitly on all occasions. At this point, i.e. after the detailed application of the 'meta-category' as a methodologically sound apparatus of linguistic comparison, created through the strict implementation of a typologically guided comparative framework, we are able to confirm and corroborate this statement.

As this paper has shown, the conceptual space of 'past perfectness' is accessible by means of a dedicated PRF-PST marking device in both English (Past Perfect) and Italian (Trapassato Prossimo). While English speakers quite consistently employ this marker to encode all of the focal past perfectal meanings, the respective Italian marker only occurs very sporadically in truly inclusive contexts, where the continuance of the situation after the past reference point favours the choice of an explicitly progressive construction (PROG-PST), a tendency which is also notable in English, where the PRF-PST marker combines with progressive morphology. Even in the expression of the remaining focal meanings, and even in the case of English, the PRF-PST construction rarely constitutes the only possible marking strategy, but is more or less frequently replaced by the language-specific present perfect (PRF-PRS, <PRF-PRS) or past tense markers (PST, PFV). The language-particular manifestations of PRF-PST thus lose some of their

potential occurrences within the core meaning areas to other tempo-aspectual forms. At the same time, however, they gain functional load outside the semantic focus. In fact, while the Trapassato Prossimo, significantly more frequently than the Past Perfect, registers extended uses expressing 'relatively remote' past perfective reference, the Past Perfect canonically extends to encode counterfactual meaning. Italian, unlike English, possesses dedicated subjunctive markers, which are typically used in such modal contexts. The Trapassato Prossimo does thus not usually occur in such modal contexts, though informal and colloquial speech may provide instances of the Italian PRF-PST construction encoding counterfactual meaning.

The practical application of the 'meta-category' has thus resulted in a comprehensive parallel description of the grammatical constructions used in two specific languages, namely English and Italian, to encode 'past perfectness' and (closely) related notions. The fact that the 'meta-category' is an illustratable tool represents an additional advantage. As shown in the Appendix, the insertion of the comparative data (both secondary and primary) into the graphical template offered by the 'meta-category' results in a very easily consultable record of (1) the grammatical devices which encode the notion of 'past perfectness' in English and in Italian, and (2) the ways in which the language-specific markers identified as manifestations of the cross-linguistic standard PRF-PST extend beyond this focal meaning. What is more, the graphical representation of the 'meta-category' proves to be an essentially open structure. Not only can it accommodate any additional variations or changes that may develop in language use, but it may also be extended to fit the peculiarities of any language-particular system. It is this global adaptability that renders the 'meta-category' a perfect tool for linguists to better understand the regularities of both cross-linguistic as well as language-particular structures.

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ABBREVIATIONS

COND-PRF	conditional perfect
FUT	future
IPFV	imperfective
PFV	perfective
PRF	perfect
PRF-PRS	present perfect
PRF-PST	past perfect
PRF-PST-PROG	past perfect progressive
PROG	progressive
PROG-PST	past progressive
PST	past
SUBJ-PRF-PST	past perfect subjunctive

APPENDIX

The 'meta-category of PAST PERFECTNESS (PRF-PST)' in English and Italian

CS	Meanings (**focal**, extended)	Cross-linguistic Category-type(s) in English	Form Term in English	Cross-linguistic Category-type(s) in Italian	Form Term in Italian	Tempo-aspectual Reference
past perfectness	**anterioriy/ relevance to past-R**	**PRF-PST** PST	Past Perfect Simple Past	**PRF-PST** <PRF-PRS {<PRF-PST}	Trapassato Prossimo Passato Prossimo Trapassato Remoto	PAST PERFECTAL
	experiential past perfect	**PRF-PST** PST	Past Perfect Simple Past	**PRF-PST** <PRF-PRS	Trapassato Prossimo Passato Prossimo	
	inclusive past	**PRF-PST** PRF-PST-PROG	Past Perfect Past Perf. Prog.	{**PRF-PST**} PROG-PST	Trapassato Prossimo Perifrasi Progressiva all'Imperfetto	
	past up-to-then	**PRF-PST** PRF-PST-PROG PST	Past Perfect Past Perf. Prog. Simple Past	**PRF-PST** <PRF-PRS	Trassato Prossimo Passato Prossimo	
	resultative past perfect	**PRF-PST** PST	Past Perfect Simple Past	**PRF-PST** <PRF-PRS	Trapassato Prossimo Passato Prossimo	
	reversed result	**PRF-PST** PRF-PRS PST	Past Perfect Present Perfect Simple Past	**PRF-PST** <PRF-PRS	Trapassato Prossimo Passato Prossimo	
past	**past in the past ('historical' past reference)**	**PRF-PST**	Past Perfect	**PRF-PST**	Trapassato Prossimo	PRE-PAST PERFECTIVE
	(remote) past temporal frame	**PRF-PST** PST	Past Perfect Simple Past	**PRF-PST** <PRF-PRS PFV	Trapassato Prossimo Passato Prossimo Passato Remoto	
modality	counterfactual conditioning sit.	**PRF-PST** PST	Past Perfect Simple Past	{**PRF-PST**} SUBJ-PRF-PST	Trapassato Prossimo Congiuntivo Trapassato	HYPO-THETICAL PERFECTAL/ PERFECTIVE
	counterfactual conditioned sit.	COND-PRF	Cond. Perfect	{**PRF-PST**} COND-PRF	Trapassato Prossimo Condizionale Passato	
	counterfactual desires	**PRF-PST**	Past Perfect	SUBJ-PRF-PST	Congiuntivo Trapassato	
	attenuative statements	**PRF-PST** PST	Past Perfect Simple Past	**PRF-PST** IPFV	Trapassato Prossimo Imperfetto	

[PRF-PST (PAST PERFECT); P(a)ST; PRF-PRS (PRESENT PERFECT); PRF-PST-PROG (PAST PERFECT PROGRESSIVE); PROG-PST (PAST PROGRESSIVE); P(er)F(ecti)V(e); I(m)P(er)F(ecti)V(e); SUBJ-PRF-PST (PAST PERFECT SUBJUNCTIVE)]
['<' close, but not good enough instance of typological standard; '{}' rarely attested instances; 'CS' Conceptual Space]

CHAPTER 4

ARE CREOLES TENSELESS LANGUAGES?
A REVIEW OF THE CREOLE TENSE AND ASPECT SYSTEM

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Following the seminal work of Bickerton (1975; 1981), the Tense and Aspect (TA) system of creoles has been invariably described as consisting of three preverbal markers expressing relative tense, mood and aspect. However, more recently, it has also been claimed that creoles are tenseless languages which mark only aspectual and mood distinctions in the verb phrase (Binnick 1991). The analyses of data from four different creoles, Guyanese Creole English (Guyanese CE), Haitian Creole French (Haitian CF), Papiamentu Creole Spanish (Papiamentu CS) and Kituba, suggest that creoles are aspect-prominent languages, tending to display a tripartite system of perfective, past imperfective and present imperfective. Following the views of Sankoff (1990) and Sidnell (2002), the differences among the four creoles analysed could be explained by the different stages of grammaticalisation of their markers.

1 INTRODUCTION

Despite its relatively short life, creolistics has been a quite divided field. As Winford (1996:97) expressed, 'creolists sometimes seem to take more than their fair share of delight in disagreement, and appear almost proud of the fact that no two creolists appear to agree on anything'. One of the major bones of contention in the field is the definition of creole itself and the classification of different contact varieties under such a label.

On one hand, authors such as Mufwene (1996, 1997) have argued that 'creole' represents a sociohistorical label, bonding together languages that were born from similar extreme situations of multilingual contact. On the other hand, there is the view that creoles are definable in terms of specific structural features, due to some universal linguistic principles involved in the genesis of the creole, a view held by Bickerton (1975, 1981) and McWhorter (1998) who in his paper defined 'creole' as a typological class synchronically distinguishable from other languages.

Bickerton's influential theories relied heavily on the common patterns that unrelated creoles show in their Tense and Aspect (TA)[23] systems. Bickerton claimed that creoles shared a system of three preverbal markers expressing:[24]

(i) Relative past tense, also termed anterior tense, which expresses past tense with statives and past-before-past with nonstatives.
(ii) Non-punctual aspect, later re-named imperfective aspect, which is restricted in use to nonstatives and the range of meanings that it covers is described by Bickerton as 'progressive-durative plus habitual-iterative' (Bickerton 1981:58.).
(ii) Irrealis mood, which expresses future and unrealised conditions.

This system is illustrated below by examples provided by Bickerton (1975, 1981) from Guyanese Creole English (Guyanese CE):

(i) Example of the relative past tense marker *bin.* In the first instance, *bin* accompanies the stative verb *gatu* 'to have to' and has a past reference. In the second instance, it accompanies the nonstative *hapn* 'happen' and adds the meaning of past-before-past:

(1) (Example 2.51 in Bickerton 1975:36)
*Dem **bin** gatu get we an kom dis said, lef di plees an get we, bikaz terabl ting **bin** hapn wid dem chiren*[25]
'They had to get away and come over here, leave the place and get away, because terrible things had happened to their children.'

(ii) Examples of the non-punctual marker *a*. Example (2) has a progressive reading while example (3) has an habitual reading:

(2) (Example 2.3 in Bickerton 1975:29)
*mi na no wai dem **a** du dis ting*
'I don't know why they are doing this.'

(3) (Example 2.45 in Bickerton, 1975:34)
*evri de mi **a** ron a raisfiil*
'Every day I hurry to the ricefield.'

(iii) Example of the Irrealis marker *go* with a future reading:

(4) (Example 2.80 in Bickerton 1975:42)
*Fraidi awi **go** mek*
'We'll make [some] on Friday.'

[23] TA will be used throughout the paper as an acronym for Tense and Aspect.
[24] Bickerton uses auxiliary, marker and particle interchangeably. I have decided to use marker throughout this paper since it has become the most popular term in the creole literature.
[25] When no interlinear gloss has been provided by the authors, I have highlighted the TA markers for easier reference.

Moreover, he established that the meaning of the unmarked verb stem depended on the inherent lexical aspect of the predicate. In example (2) above, *no* is a stative verb and it is unmarked, therefore it is interpreted as making reference to a present state.

The prototypical creole TA system proposed by Bickerton is summarised in Table 4.1. The Irrealis marker will not be analysed along tense and aspect in this paper and it has not been included in the following table.

	Stative verb	**Nonstative verb**
Progressive and habitual	Ø	Non-punctual marker
Past reference	Relative past tense marker	Ø Relative past tense marker: past-before-past

Table 4.1: *The prototypical creole TA system according to Bickerton (1975)*

Bickerton's theories spurned a wealth of publications on creole TA systems in the early and mid-eighties and more and more creoles were cited as fitting Bickerton's prototype. These subsequent analyses mostly rejected the innate explanation for the creole TA system proposed by Bickerton, the so-called Language Bioprogram Hypothesis, but adopted without further questioning both the terminology and the morphosyntactic analysis of Bickerton. Muysken (1981), for example, identifies the three preverbal markers in at least thirteen creoles, comprising both Atlantic (i.e. Jamaican) and Pacific creoles (i.e. Indo-Portuguese).

Importantly, Bickerton's analysis would distinguish creoles from non-creoles. In the latter cases, a marker of relative past tense will rarely be found. When compared with cross-linguistic studies of TA systems such as the ones conducted by Bybee *et al*. (1994) and Dahl (1985), it is evident that 'relative past' (or 'anterior') tense does not constitute a cross-linguistic category found in other languages. Is that proof that creoles display a tense distinction not found in other languages? Two scholars came to a different conclusion in subsequent years; namely that Bickerton's relative past tense marker is indeed another aspectual marker, concretely a perfective marker. Andersen (1990) reached this very conclusion in his analysis of Papiamentu, a Spanish-based creole, while Binnick (1991) takes the analysis further when classifying creoles as tenseless languages. However, only a brief section of Binnick's general volume on tense and aspect is devoted to creoles and it is unclear how Binnick arrived at such a conclusion.

The aim of this paper is to investigate the claim that creoles constitute tenseless languages which mark only aspectual and mood distinctions in the verb phrase, a claim found in Binnick (1991). Such a claim could constitute an important typological claim regarding creoles but it is not found in the creole literature. In addition, it could solve the main inadequacies of Bickerton's theories. In the first place, it is important to note that this claim does not imply that all creoles mark the same aspectual distinctions or by the same

strategies, allowing room for variation among creoles provided that such variation is still within the category of aspect. Secondly, it proposes a valid parameter for language comparison, since all languages have some marking of either tense or aspect or both, with the exception of restricted pidgins.

For this purpose, data from four different creoles Guyanese Creole English (Guyanese CE), Haitian Creole French (Haitian CF), Papiamentu Creole Spanish (Papiamentu CS) and Kituba will be analysed.[26] Section two gives more details on the sample chosen. Section three contains a discussion of the data within a neo-Reichenbachian theory of tense and aspect (Binnick 1991:115f.) and the final conclusions are presented in section four.

It is important to note that only the markers previously identified as fitting Bickerton's model are analysed in this paper. The four creoles studied have further verbal markers, such as completive markers or infinitive markers. Interested readers can consult the excellent volume *Comparative Creole Syntax,* edited by John Holm and Peter Patrick (2007), in which the grammars of 18 creoles are outlined. Please note that the creole TA system has been analysed following Bickerton's theories in this volume.

2 SAMPLE

The data used in my analysis comes from published works. The four creoles analysed were chosen on the basis of availability of scholarly research and learners' grammars, while trying to include as much variety as possible with regards to typological classification of superstrate and substrate languages, different degrees of contact with the superstrate or other prestigious languages, and differences in the sociolinguistic status of the languages. The remainder of this section includes a brief description of the language contact situation that gave birth to the creoles and of the synchronic sociolinguistic situation of each creole. Bibliographic details of the data sources have also been included.

2.1 Guyanese CE

Guyanese CE, or Creolese as the Guyanese themselves call it, is widely spoken in the former colony of British Guyana, in which it co-exists with endangered Amerindian languages (Holbrook and Holbrook 2001). Ethnologue (Gordon 2005) reports a figure of 650,000 speakers for Guyanese CE.

English remains the national language of Guyana. All teaching is in English[27] and Creolese is not used, for the most part, in television or radio broadcasting, although a

[26] I have followed Holm (1988) in the denomination of these four creoles. With the exception of Kituba, the name of each creole is followed by a reference to the lexifier language. The acronyms used are CE: Creole English, CF: Creole French, and CS: Creole Spanish.

[27] Data from the Barometer of Human and Trade Union Rights in Education, elaborated by Education International.

large percentage of the population does not have adequate competency in Standard English (Holbrook and Holbrook 2001). From all the creoles analysed, Guyanese is the one with a lesser prestige.

Guyana only became a British colony at the end of the 18th century and, in quite a short period of time, a large influx of slaves was brought to the colony from West Africa and from other Caribbean colonies, such as Barbados, Antigua and Jamaica. The creole was probably imported by these slaves from elsewhere in the region (Holm 1989).

Data sources: Most of the data is taken from Bickerton (1975) although a more recent revision of the expression of habituality and imperfectivity by Sidnell (2002) has also been reviewed. Bickerton provides an account of the three layers of variation in the creole (basilect, mesolect and acrolect), but only data from the basilect has been taken into account.

2.2 Haitian CF

Kreyòl, the official name of Haitian CF, is spoken by more than seven million people in the former Caribbean French colony of Haiti. Most Haitians are monolingual in Kreyòl, with only about one-fifth of the population proficient in French. French is used almost exclusively as the language of writing in all domains, from education to politics, although the creole is taking on new functions in school (Holm 1989, DeGraff 2007).

Lefebvre (1998) calculates that the period of creation of Haitian CF lies between 1680 and 1740, a period along which Haiti became a classic plantation colony and consequently the number of slaves increased dramatically, reaching 92% of the population in 1791. The slaves spoke languages from the Niger-Congo group, particularly from the Kwa (Gbe speakers are estimated to have formed half of the slave population) and Bantu language families.

Haitian CF coexisted with African languages for about a hundred years, while the ongoing stream of newly arrived slaves continued (Lefebvre 1998). Bickerton (1981) considers Haitian CF as a characteristic radical creole, while McWhorter (1998) has equally described it as the Caribbean French Creole least affected by French.

Data sources: Spears (1990) deals with the TA system of Haitian CF, while Lefebvre (1998) constitutes a comprehensive analysis of this creole in the light of the substrate theory of creole genesis. No reference is made by any of these scholars regarding the level of formality of the language variety portrayed, although both studies are based on data collected in the field. The more recent contribution of DeGraff (2007) to a collected volume on creole syntax has also been consulted.

2.3 Papiamentu CS

Papiamentu is spoken in Curaçao, Aruba and Bonaire, three islands belonging to the Netherlands Antilles. The Antillean islands enjoy a high degree of multilingualism in

Dutch, Spanish, English and Papiamentu. This creole has been classified as a semi-creole by many creolists due to its extensive contact with European languages (McWhorter 1998).

Perl (1999) estimates that 90% of the communication in the three islands is in Papiamentu. The creole was also learned and used by the white settlers, which explains its high prestige nowadays. It is spoken by all social classes and used in the media and education.[28]

The genesis of Papiamentu remains a mystery. It was not born in a plantation, as Curaçao was mainly used as a holding camp for slaves who were later sent to other Caribbean destinations (McWhorter 2000). Holm (1989) and McWhorter (2000) consider Papiamentu a Spanish-based creole, while Maurer (1998) describes it as a creole of a mixed lexical base (both Spanish and Portuguese). Holm's analysis and terminology have been followed in this paper.

Data sources: Andersen (1990) analyses the TA system of the basilectal variety of Papiamentu. The more recent contribution of Kouwenberg & Ramos-Michel (2007) to a collected volume on creole syntax has also been consulted.

2.4 Kituba

Kituba is a widely spoken language in the area at the mouth of the Congo River. Kituba is mostly spoken in the southern provinces of the Republic of Congo and is one of the three national languages of that country, along with Lingala and French. It is also spoken in the north-west provinces of the Democratic Republic of Congo (formerly Zaire), although it is not an official language in that country (Ethnologue, Gordon 2005).

Ethnologue (Gordon 2005) reports that Kituba has more than four million speakers and 800,000 second language users. It was used by French and Belgian colonisers, which led to its identification with the language of the administration (Swift & Zola 1963:x). As a national language in the Republic of Congo, it is used in radio and television, but not in education (Woods 1994). Most of its speakers are therefore multilingual (Woods 1994). Holm (1989) reports that Kituba has the prestige of a big-city language associated with modern life and Woods (1994) reports that it is increasingly being used in more social domains, unlike French.

Also known as Kikongo-Kituba, Kituba seems to have arisen out of a need for intercommunication between speakers of Lingala and speakers of Kikongo, which is considered its lexifier (Swift & Zola 1963:x). Lingala and Kikongo are typologically similar languages, agglutinating Bantu languages (Mufwene 1990:97).

[28] Data from the Barometer of Human and Trade Union Rights in Education, elaborated by Education International.

Data sources: Mufwene (1990) has described the TA system of the eastern dialect of Kituba, which is not in contact with Kikongo. The manual of Swift & Zola (1963) represents the western dialect and it probably portrays the most standard variety of the language, as its aim is to serve as a self-taught manual to learn the language by foreigners. Three of these languages (Guyanese CE, Haitian CF and Papiamentu CS) comply with the sociohistorical profile defined by McWhorter (1998:791), that is, they constitute 'spoken languages that were created via rapid adoption as a *lingua franca* by slave populations five hundred years ago or less' and have also traditionally been classified as Atlantic creoles (Holm & Patrick 2007:v). The superstrate of these three languages constitute three different European languages.

The sociohistorical circumstances that led to the birth of Kituba are very different from those of the above Atlantic creoles, as it arose as a regional *lingua franca* (Swift & Zola 1963:x). Kituba has remained on the edge of creolistics and is considered by some scholars a koiné (Mufwene 1997).

3 DISCUSSION

3.1 Modern Reichenbachian approaches to tense and aspect

Following modern Reichenbachian approaches to tense and aspect as described by Binnick (1991:115f.), we can define tense and aspect in terms of three independent points on a timeline:

- S, the time of speech or writing;
- E, the time when the event or state takes place; and
- R, the more abstract reference point from which E is seen, the temporal 'point of view'.

As illustrated by Figure 1, tense represents the relationship between speech time (S) and reference point (R) while aspect encodes the relationship between event (E) and reference point (R) (Binnick 1991:115).

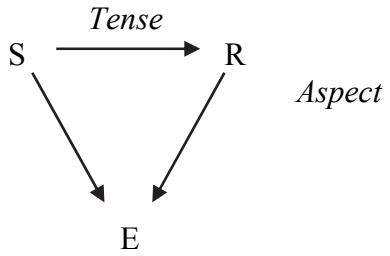

Figure 4.1: *Neo-Reichenbachian approach to tense and aspect* (Binnick 1991:115)

In many languages, the expression of aspect is not independent of tense. To represent adequately these TA systems, it has been proposed to use two pairwise orderings of E and R (aspect) and R and S (tense) (Binnick 1991:115).

Simple or absolute tenses represent the relationship between the times of events or states (E) and the time of speech (S), they are therefore 'regarded purely from the point of view of the present (the moment of speech or writing)' (Binnick 1991:40). To represent simple tenses, R and E always coincide and both either precede S (simple past), coincide with S (simple present) or follow S (simple future) (Binnick 1991:111). The sentence

(5) *I had pizza for lunch*

could therefore be represented as R,E:R-S. The reference point (R) coincides with the event (E, 'eating the pizza') and both precede the speech time (S, now).

Aspect is defined by Chung & Timberlake (1985:213) as 'the relationship of a predicate to the time interval over which it occurs', that is, aspect describes how an event (E) develops in relation to a reference point (R), independently of the speech time (S). For example, in the sentence

(6) *John was reading all night*

the event (E, 'reading') is ongoing at R ('all night') and that reference point precedes the speech time. Example (6) is represented as R-E:R-S.

Aside from simple tenses and aspectual distinctions, it is also possible to distinguish relative tenses. Dahl (1985:25) and Comrie (1976:5) define a relative tense as a tense always regarded from the point of view of another tense, in itself established in relation to speech time. Relative tenses are restricted to subordinate clauses and non-finite clauses. See Dahl (1985:25) and Comrie (1976:5) for further reference.

3.2 Perfective/imperfective

The aspectual distinction between perfective and imperfective plays an important role in many verb systems. In English, such distinction is not marked explicitly (Binnick 1991:296), while in languages such as Rendille, they are (Dahl & Velupillai 2008b). See the following examples:

(7) (Example 1 in Dahl & Velupillai 2008b)
a. *khadaabbe chiirta.*
letter.pl write. IPFV
'He writes/is writing/wrote/was writing/will write letters.'

b. *khadaabbe chiirte.*
letter.pl write. PFV
'He wrote letters.'

Traditionally, the imperfective is described as looking at the action as a development over time, as ongoing (Binnick 1991:212). In Reichenbachian terms, the imperfective

represents the situation in which an event partly overlaps with the reference time but its termination follows the reference time (R-E).

In the following representation of aspect, the arrows represent possible reference times, while event time is illustrated by the brackets:

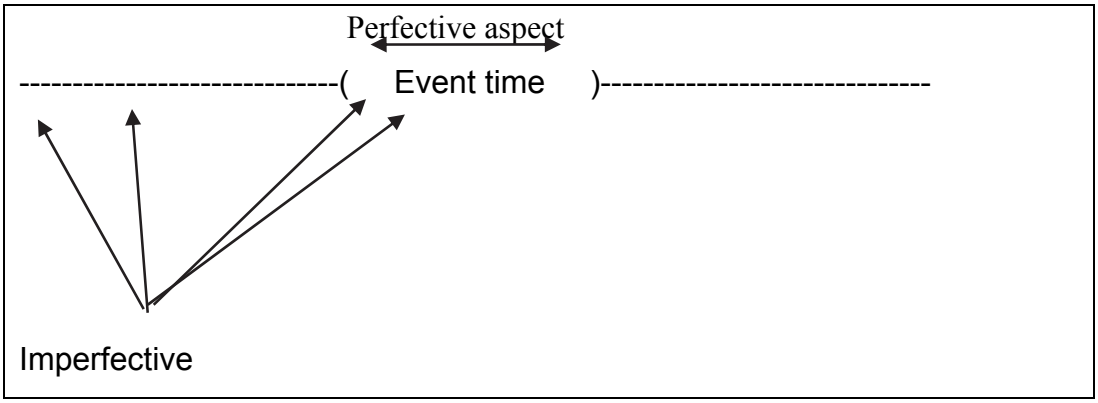

Figure 4.2: *The representation of aspect* (adapted from Binnick 1991: 210)

The imperfective views the event as incomplete or in-progress while the perfective presents the event as an unanalysable whole. In example (7a) above, the event of writing is ongoing at the reference time, whether the reference time is the time of speaking, the past or the future.

The perfective aspect denotes that an event is contained in its totality within the reference time (E,R) (Binnick 1991:210). According to Cruse (2004:288), the perfective is described as viewing an event holistically, without paying attention to the event itself; that is to whether it is a punctual or a durative event. Example (7b) presents the event as completed at the reference time.

Since the perfective describes events as complete or bounded, it is natural that such events are past events (Dahl & Vellupillai 2008a). Bybee *et al.* (1994:51) acknowledge that since pasts and perfectives both develop from the same sources and in much the same way, they have very similar semantic content. What is conveyed in one language by the perfective aspect, is conveyed in another by the past tense (Cruse 2004). Example (7b) above is translated into English as the past tense sentence *He wrote letters.*

As hinted above, a way of differentiating the perfective aspect from the past tense is how they are integrated in a linguistic system. The perfective is the contrast partner of the imperfective (see example 7 above), while the past can co-occur with the imperfective (Bybee *et al.* 1994:84). The sentence *He was writing letters* is an example of a past imperfective in English.

3.3 Bickerton's anterior marker is a perfective marker

	Guyanese CE	Haitian CF	Papiamentu CS	Kituba
Perfective marker	*bin*	*te*	*a*	- *á(k)a* (suffix)[29]

Table 4.2: *Summary of markers discussed in this section*

There is enough evidence from the four creoles analysed to support the view that these creoles mark the perfective/imperfective distinction. In the four creoles analysed, the perfective marker, which in Kituba is a suffix, incorporates a perfect and a simple past reading depending on the context. The function of such marker in the four creoles is to denote completion, whether in relation to S or to R, as it is shown by the following examples.

(8) Example from Haitian CF (example 4 in DeGraff 2007:103)
Bouki te konn repons lan
B PFV know answer DEF [30]
'Bouki knew the answer.'

(9) Example from Haitian CF (example 5 in DeGraff 2007:103)
Bouki te ale (anvan Boukinèt vini)
B PFV go before B come
'Bouki had left (before Boukinèt came).'

Comparison of examples (8) and (9) reveals that the same marker *te* indicates a past event in relation with the time of speaking (example 8) and a past event in relation with another reference point (example 9). Similar readings of the marker termed Anterior tense by Bickerton are found in the other three creoles, as becomes clear from the following examples. Compare examples (10) and (11) for the two readings of the marker *a* in Papiamentu and the two instances of the suffix *-áka* in example (12):

(10) Example from Papiamentu CS (example 24 in Kouwenberg & Ramos-Michel 2007:312)
Mi a lubida ariba dje
1s PFV forget on 3s
'I forgot about it.'

[29] Segments into brackets are written but not pronounced.
[30] I have used the abbreviations IPFV (imperfective), PFV (perfective) and IPFV_PAST (past imperfective) in the interlinear gloss for the Tense and Aspect markers. In all other respects, the gloss provided by the authors have been faithfully reproduced.

(11) Example from Papiamentu CS (example 25 in Kouwenberg & Ramos-Michel 2007:312)
Mi a kome bonchi kaba
1s PFV eat bean already
'I've already eaten beans.'

(12) Example from Kituba (example 2d in Mufwene 1990:99)
Na ki+ntéte ngé tub+áka nde María kwend+á(k)a na
LOC 9+Monday you-sg say+PFV COMP Mary go+PFV LOC

ki+sálu mazóno.
9+work yesterday[31]
'On Monday you said that Mary had gone to work the day before [Sunday].'

Example 1 above, reproduced below for easier reference, includes two instances of Guyanese CE *bin.* This marker can similarly have a past reading in relation with the time of speaking (*Dem **bin** gatu get we)* and a past-before-past reading (*bikaz terabl ting **bin** hapn)*:

(1) Example from Guyanese CE (example 2.51 in Bickerton 1975:36)
*Dem **bin** gatu get we an kom dis said, lef di plees an get we, bikaz terabl ting **bin** hapn wid dem chiren.*
'They had to get away and come over here, leave the place and get away, because terrible things had happened to their children.'

It seems that the simple past reading is preferred with statives, but this might be due to the fact that the perfect is more frequent with nonstatives (Bybee *et al* 1994:69).

The only difference among the creoles is that in two of the creoles analysed the perfective marker is not always obligatory. In Kituba and Papiamentu CS, the markers are obligatory and the verb stem is unacceptable in most environments, aside from a group of statives. On the contrary, in Haitian CF and Guyanese CE, the perfective marker appears in variation with the unmarked verb stem. Especially with activity-type predicates, as in examples (13) from Guyanese CE and (14) from Haitian CF, the interpretation of the unmarked verb stem could entail a certain degree of difficulty, as it could have both a completed event reading or a present habitual meaning. Cf. example (13) with example (1) and example (14) with example (8).

(13) Example from Guyanese CE (example 19 in Sidnell 2002:163)
I se shi dadii Ø taak nais wid am.
'He said that her father talks/talked nicely to him.'

[31] The digit before the gloss refers to the noun class.

(14) Example from Haitian CF (example 57 in Lefebvre 1998:134)
Mari prepare pat.
Mary prepare dough
'Mary (generally) prepares/ prepared dough.'

In Haitian CF and Guyanese CE, the perfective marker is only obligatory to convey a perfect reading, such as in example (9) above.

3.4 The creole imperfective marker

	Guyanese CE	Haitian CF	Papiamentu CS	Kituba
Tenseless imperfective marker	*a*	-	*ta*	-
Present imperfective marker	-	*ap*	-	*ke*
Past imperfective marker	-	*ta*	-	*vandá(k)a*
Perfect progressive/past imperfective	*bina*	-	*tabata*	-

Table 4.3: *Summary of markers discussed in this section:*

As stated above, the perfective is the contrasting partner of the imperfective. While the perfective marker denotes completion, the four creoles analysed display a range of markers denoting an ongoing event at the reference point.

In Guyanese CE and Papiamentu CS there is an imperfective marker covering both the progressive and the habitual meanings. Cf. examples (15) and (16) below for Guyanese CE:

(15) Example from Guyanese CE (example 2.59 in Bickerton 1975:37)
*Mi tel am wa mi **a** du*
'I told him what I was doing.'

(16) Example from Guyanese CE (example 2.47 in Bickerton, 1975:34)
*Evribadi **bin** gatu wach aut an evribadi **a** de aal abaut a rood, striit, dam.*
'Everybody had to be on the watch and everyone used to be all over the place, on roads, streets, dams.'

In example (15), the progressive expressed by *a* entails that the event (*du*) fills the reference time (the time when *Mi tel am)* but it may terminate after the reference time, that is, the activity expressed by *a du* 'doing' may carry on after the action of *Mi tel am* 'I told him'. In neo-Reichenbachian terms, it is represented as R-E:R-S. In example (16), the marker *a* qualifies a stative verb. *a de* 'used to be' makes reference to a past habitual state. Once again, the event (*a de*) is ongoing at the reference time, which precedes the speech time, that is R-E:R-S[32]. Guyanese CE *a* groups the meanings of progressive and habitual and it is tenseless. In the examples above, the tense reference of the clause containing the marker *a* is established by the previous clause.

Papiamentu CS marker *ta* has a present reading in example (17) and a past reading in example (18), both sharing the feature of on-going action at the reference time. As Guyanese CE *a,* the Papiamentu marker is also tenseless. It is important to note that in Papiamentu *ta* incorporates the readings of progressive, habitual and even future. The Guyanese imperfective mark appears in variation with the unmarked verb stem to express habituality (see example (13) above).

(17) Example from Papiamentu CS (example 17 in Kouwenberg & Ramos-Michel 2007:310)
Wan ta kanta / awor-aki / tur dia / otro luna
W IPFV sing/ now-Dem/ every day/ next month
'Wan sings [Generic]/ is singing right now [Prog] / sings every day [Hab] /will sing next month [Fut]'.

[32] According to Binnick (1991), the habitual implies that the event happens at some time during the reference time, but with gaps while the progressive implies that the action is ongoing without gaps. See the following examples (from Binnick 1991: 459):
(a) *Mr Blandings was building his dream house*
(b) *Mr Blandings builds his dream house (on Wednesdays)*
In (b), the event of building is punctuated by the Thursdays to Tuesdays gaps.

(18) Example from Papiamentu CS (example 4 in Andersen 1990:70)
Antó el a weta un hòmber yongotá ei bou, ta saka
then he PFV see a man kneeling there below, IPFV remove

awa ku un makutu basha den un bari sin bom.
water with a bucket empty in a barrel without bottom
'Then he saw a man kneeling down below, taking out water with a bucket (and) pouring (it) in a bottomless barrel.'

In addition, Guyanese CE and Papiamentu CS have developed a perfect progressive marker, which in both languages is spreading to mark past state. Guyanese CE displays a perfect progressive marker, *bina*, probably derived from the combination of *bin* + *a*, that is the perfective marker *bin* and the imperfective marker *a.* Such combinations are found in other creoles and are further discussed below. The following example (19) contrasts with example (15) above, reproduced below for easier reference.

(19) Example from Guyanese CE (example 2.60 in Bickerton 1975:37)
Mi tel am wa mi ***bina*** *du*
'I told him what I had been doing.'

(15) Example from Guyanese CE (example 2.59 in Bickerton 1975:37)
Mi tel am wa mi ***a*** *du*
'I told him what I was doing.

Guyanese CE *bina* appears in variation with the tenseless imperfective marker *a* to express past habitual. Compare example (20) below with example (16) above, reproduced here for easier reference. The perfect progressive marker has extended its meaning in Guyanese CE to include a past habitual meaning, that is, an imperfective meaning restricted to past reference.

(20) Example from Guyanese CE (Example 2.57 in Bickerton 1975: 37)
wan blakman an i waif ***bina*** *liv abak*
'A negro and his wife used to live inland. '[and they live there no longer]

(16) Example from Guyanese CE (example 2.47 in Bickerton, 1975:34)
Evribadi ***bin*** *gatu wach aut an evribadi* ***a*** *de aal abaut a rood, striit, dam.*
'Everybody had to be on the watch and everyone used to be all over the place, on roads, streets, dams.'

Similarly, in Papiamentu, we can also find a past imperfective marker, which is compulsory for the expression of perfect progressive (as in example (21) below). *Tabata* is also the default option to mark statives with past reference (as in example (22) below):

(21) Example from Papiamentu CS (example 3 in Andersen 1990:69)
El a haña un hòmber sintá den port'e kamber.
he PFV find a man seated in door_of room

e hòmber ku ta'ata yena awa ku makutu
the man who IPFV_PST fill water with bucket
'He found a man sitting in the doorway. The man who had been filling a bucket with water.'

(22) Example from Papiamentu CS (example 15 in Kouwenberg & Ramos-Michel 2007:310)
Mi ta / tabata malu
1s IPFV / IPFV_Past sick
'I am/was sick.'

In Kituba and Haitian CF, on the other hand, there is an imperfective marker restricted in its tense reference to the present progressive and they have also developed a past progressive marker. In example (23) below, the Haitian CF marker *ap* has a progressive reading, but it is restricted to present reference.

(23) Example from Haitian CF (example 4c in Spears 1990:121)
M ap pale ak Mari.
1sg IPFV talk with Marie
'I'm talking to Marie.'

To mark past progressive, the perfective marker is combined with the progressive marker (*t a* or *t ap* from *te* + *ap*), as in example (24), in a similar way to Guyanese CE *bina*. This could lead us to classify the Haitian CF perfective marker as a past marker instead, since it co-occurs with the progressive marker. However, the fact that *te* also has a perfect reading makes it difficult to classify it as a past marker (cf. example (9)). The combination of perfective and imperfective marker is further discussed below.

(24) Example from Haitian CF (example 24 in Spears 1990:134)
M t a mande kòman li t ap ... kòman l apr
1sg IPFV_PAST ask how 3sg IPFV_PAST how 3sg IPFV
ale la a.
go there DET
'I was asking him... how he was going to move.'

Kituba also displays a present imperfective marker *ke,* which combines reference to present state for statives and progressive for nonstatives, including future reference, as in example (25). However, Kituba also has another marker, *vand+á(k)a* (spelled *wandaka* by Swift & Zola 1963), with exclusive reference to past progressive, as in example (26).

(25) Example from Kituba (example 7a in Mufwene 1990:104)
Yándi ké kwísa mbási.
He IPFV come tomorrow
'He comes/is coming tomorrow.'

(26) Example from Kituba (example in Swift & Zola 1963:193)
Yandi wandaka fimpa nzutu na munu yonso.
He/she IPFV_Past examine body LOC me all
'He was examining my whole body.'

To sum up, the four creoles analysed share a perfective marker with the same range of meanings. However, the spectrum of the imperfective is divided differently by each creole. More importantly, there are aspectual markers restricted in their tense reference, such as the Kituba past progressive or the Haitian CF present progressive. Table 4.4 below exemplifies the range of meanings of the imperfective markers in the four creoles.

	Guyanese CE	Haitian CF	Papiamentu CS	Kituba
Imperfective marker	Tenseless progressive + tenseless habitual + future	Present Progressive + future	Tenseless progressive + present state	Present progressive + present state
Past imperfective marker	Perfect progressive. Past habitual	Past progressive	Perfect progressive + past state	Past progressive

Table 4.4: *Imperfective markers*

Creole imperfective markers may incorporate the meanings of progressive and habitual (Papiamentu CS and Guyanese CE), it may be restricted to progressive meaning (Haitian CF) or it may be compulsory for present reference, aside from a restricted group of statives (Papiamentu CS and Kituba).

4 CONCLUSIONS

4.1 Are creoles tenseless languages?

To conclude, we can generally define the creole TA system as aspect-prominent, since it incorporates the imperfective/perfective distinctions. However, the four creoles analysed are not tenseless since tense restrictions are commonly found in the spectrum of the imperfective. Binnick's claim that creoles are tenseless languages is not substantiated by

the data. The prediction, found in Bybee *et al.* (1998:83), that tense distinctions are only relevant in the imperfective is born out in the data of these creoles.

Taking this into account, the Creole TA system shows important similarities to the tripartite system represented in Table 4.5.

Perfective	**Imperfective**	
	Present imperfective	**Past imperfective**

Table 4.5: *Representation of the major TA markers in creole*

However, the above TA system is not unique to creoles. It is found in many Indo-European languages and Semitic language (Dahl 1985:189). Nonetheless, if supported by further analyses of other creoles, the TA system could be one piece of evidence to defend the theory that creoles constitute a typological class, the main differences among creoles lying in the obligatory nature of the markers and the range of meanings of the imperfective marker.

4.2 Differences among the creoles analysed

In Haitian CF and Guyanese CE the verb stem is acceptable in affirmative, simple sentences but its interpretation relies heavily on context. According to Sankoff's view (1990), the use of the bare verb stem can constitute an historical residue of the pidgin stage, in which the creole markers had not yet evolved. The evidence here suggests that in Guyanese CE and Haitian CF the progressive and the perfect are the only environments in which the TA markers are fully grammaticised, while in other environments the TA markers are in variation with the unmarked verb stem. In Haitian CF and Guyanese CE, the unmarked verb stem of nonstatives can include all of the following meanings: simple past, present perfect, present habitual or past habitual, whilst the unmarked verb stem of statives can have both a present habitual and a present state reading. As a consequence, the imperfective/perfective markers are not obligatory to express such meanings.

It would be reasonable to consider then that Kituba and Papiamentu CS's markers correspond to a further stage in the grammaticalisation of the TA markers since in both creoles the markers are obligatory and the verb stem is unacceptable in most environments, aside from a group of statives. The different level of grammaticalisation of their markers would explain some of the differences found in the TA system of the above creoles.

The suggestion that these creoles' TA markers present a different stage of grammaticalisation begs the question of whether the TA markers are following equivalent paths of grammaticalisation in each language. We can tentatively point to some data that may shed some light on the issue, although this is by no means a thorough claim, but more an indication of future research.

Sidnell (2002:53) reports that in Guyanese CE the imperfective marker emerged through the grammaticalisation of a locative expression consisting of the locative copula *de* (derived from English '*there')* and the preposition *a* (derived from English *at)* into a tenseless progressive (marker *a)*. The tenseless progressive marker could have later been adopted to express tenseless habitual, as in example (16).

Sidnell's description for Guyanese CE constitutes a well attested path of grammaticalisation and Bybee *et al.* (1994:129) claim that the majority of progressive forms in their database derive from expressions involving locative elements, such as a verbal auxiliary or an adposition. Haitian CF, Papiamentu CS and Kituba could have followed a similar pattern, since the three of them present locative auxiliaries as markers of imperfective aspect. In Kituba and Papiamentu CS, the imperfective marker could have further developed into a present marker.

The perfect has also been identified as the source of pasts and perfectives (Bybee *et al.* (1994:56). The perfect is, along with the progressive, the other environment in which the TA markers are fully grammaticised in Guyanese CE and Haitian CF. This could be evidence that the perfect marker is in the process of incorporating a perfective reading in these two creoles and such a process could have taken place also in Kituba and Papiamentu CS.

The original meanings of progressive and perfect is clear from the combination of both markers, which rendered *bina* in Guyanese CE (*bin* + *a*), compulsory to express perfect progressive (Cf. example (19). Such combination must have taken place before the progressive became an imperfective (combining the meanings of progressive and habitual) and before the perfect became a perfective (combining the meanings of perfect and past). The perfect progressive seems to be spreading to mark past habitual in Guyanese CE (see example (20).

The perfect progressive could havebeen the source of the past imperfective marker in Haitian CF. In this creole, the marker *t a* (or *t ap)* is derived from the perfective marker *te* and the imperfective marker *ap*. It is not clear whether *t a* incorporates a perfect progressive reading, since there are no relevant examples in the data sources consulted. The only other evidence for such process is in the Papiamentu CS *tabata,* which incorporates the meanings of perfect progressive and past state (example (22)).

This scenario seems to imply that eventually the unmarked verb stems in creoles will be used in less contexts and would explain the differences among the range of meanings of the perfective and imperfective markers in the four creoles analysed. However, more data is needed regarding the changes happening in creoles over time to substantiate such a claim. The truth is that it leaves many questions unanswered, such as why the progressive and the perfect markers are the first to be grammaticised and why creoles follow the same path of grammaticalisation. Similarly, it may not be causal that the two radical creoles analysed, Guyanese CE and Haitian CF, differ from the other two creoles in the level of grammaticalisation of the TA markers.

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CHAPTER 5

HOW SIMILAR IS A BELFAST FINAL RISE TO A CAMBRIDGE FINAL FALL?

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The phenomenon of statements with final (nuclear) intonational rises in Belfast and other Northern British/Irish regions has continually puzzled researchers. Are these 'rises' really rises at all (Cruttenden 1997)? I propose to address this with the following hypothesis: nuclear statement 'rises' in Belfast are actually more similar to nuclear statement 'falls' in Cambridge English than to Cambridge question 'rises'. This is based on the possibility that the Belfast 'rises' may have derived historically from 'falls'. However, results show that the timing of the Belfast 'rise' is actually much more similar to the timing of the Cambridge question 'rise'. The relative height of the L and H points of the Belfast 'rise' is different to both the Cambridge 'falls' and the Cambridge 'rises'. Thus, my original hypothesis is not strongly supported. However, the approach to quantification of similarity in intonation which we outline is something which has until now received very little attention.

1 INTRODUCTION

It is well-known that speakers often use intonation as one tool to distinguish questions from statements. Statements in Standard British English varieties (e.g. Cambridge English) are generally expected to end with a final pitch fall, whereas questions are typically associated with final rising pitch (Grabe et al 2000). However, in Belfast English, statements often end with a final rise. Are Belfast statements more similar to Standard English questions simply because both contain final rises? Could a rise sometimes be more similar to fall? If so, which elements would they share? Trying to start answering these challenging questions is the goal of this paper, but it is also where we reach a big gap in previous research. Recent years have seen a noticeable increase in objective measurements of phonetic similarity, particularly among vowels and consonants (e.g. McMahon et al 2007). However, intonation has usually been left to the side in these measurements (exceptions include Connolly (1997) and Gussenhoven & Rietveld (1991)). In addition, the components of a measure of segmental similarity would seem quite inappropriate for measuring intonation, especially as segmental measures tend to make heavy use of phonetic feature systems, and such features are not a standard part of the most prominent current intonational theories. I define intonation here along the lines of Ladd (2008), as the use primarily of fundamental frequency (f0) (roughly representative of pitch), but also aspects of intensity and duration to express meaning at a sentence/utterance level. Distinguishing a question from a statement is one example of a sentence/utterance level meaning contrast. This is different from lexical tone/accent, in which pitch is used to distinguish meanings at the word level (e.g. 'anden' means 'the duck' with Accent I in Swedish, but 'the ghost' with Accent II (Bruce 1977: 15).

2 HYPOTHESIS

My initial hypothesis is that Belfast statement final (nuclear) *rises* would actually be more similar to nuclear statement *falls* than to nuclear question *rises*. The primary reason I propose this hypothesis is a plausible scenario about the historical development of these Belfast statement rises. This is that they may not always have been realised as rises, but rather were originally final falling contours which changed over time into rises. The suggestion that rises of the kind associated with Belfast might be kinds of falls was explored in Cruttenden (1997, with reference to Knowles' work on Liverpool English). Of course, similarity between falls and rises is not necessarily linked with a shared background but it is a useful place to start.

2.1 Framework

A change from a fall to a rise can be accounted for very elegantly by Autosegmental-Metrical (AM) theory (see Bruce (1977), Ladd (2008), and Pierrehumbert (1980)), elements of which I use in my analysis. AM theory does not treat rises and falls as units, but rather decomposes the intonation contour down simply into high (H) and low (L) target points around prominent stressed syllables (known as pitch-accented syllables) and phrase edges in the utterance. This theory analyses the phonetic realisation of these H and L points along two key parameters, which form the main components of my intonational similarity measurements to date. These parameters are Alignment and Scaling. Alignment refers to the precise timing of the H and L points with respect to their associated syllable. Where exactly in the syllable does the f0 peak (phonetic realisation of H) occur, for example? Is it timed shortly after the vowel onset or at the end of the vowel? Scaling refers to the relative height of the H and L points, with respect to the speaker's pitch range at that part of the utterance.

2.2 Alignment and Intonational Change

It is the Alignment parameter that can easily account for a change from a 'fall' into a 'rise'. Imagine that the f0 peak (H) is located near the onset of the vowel in the most prominent stressed syllable in the utterance, which is usually also the final stressed syllable (known as the nuclear syllable). The pitch must first rise up to reach the peak. After this peak, the pitch falls off over any following unstressed syllables. So we hear a final fall. However, if the peak moves gradually rightwards, eventually it will occur beyond the stressed syllable, such that low pitch may now occur on the stressed syllable and rise up to the peak in the following unstressed syllable. The final fall part of the contour may then be truncated (see also Grabe et al 2000), as there may no longer be enough room to produce or perceive a final fall. So both L and H points of the rise before the main fall in the original contour now form what is perceived as a final rise. Though I have not analysed historical data at present (cf. Kim 2006), I illustrate this possible change from a fall to a rise with contemporary data from Cambridge and Belfast English below (data from Grabe et al 2001).[33]

[33] Figures (1)-(3) were produced using Praat (Boersma & Weenink 2009) with a script adapted from the Praat scripts of Pauline Welby (http://www.ling.ohio-state.edu/~welby/praat.html).

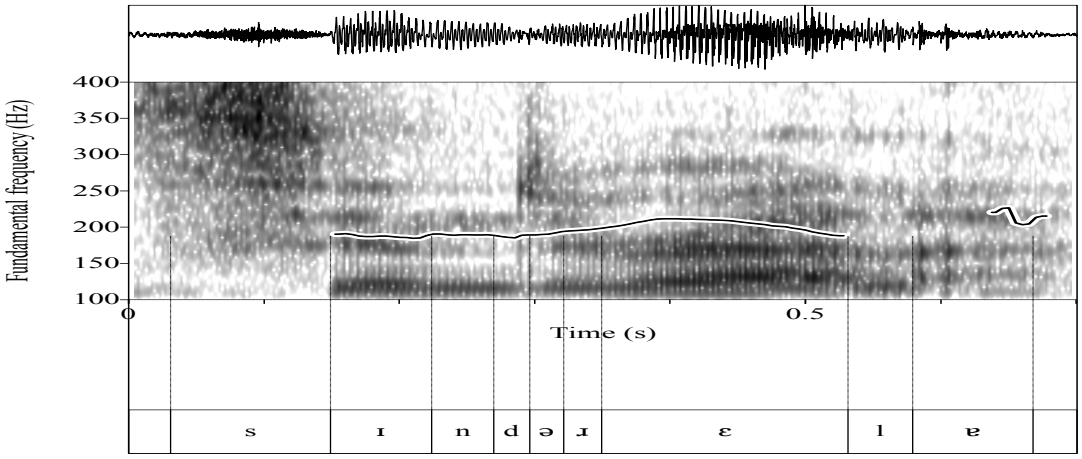

Figure 5.1: *Extract of an utterance from a female speaker of Cambridge English of the nuclear accented word 'Cinderella'. Notice the rise to reach the peak in stressed vowel, followed by the fall.*

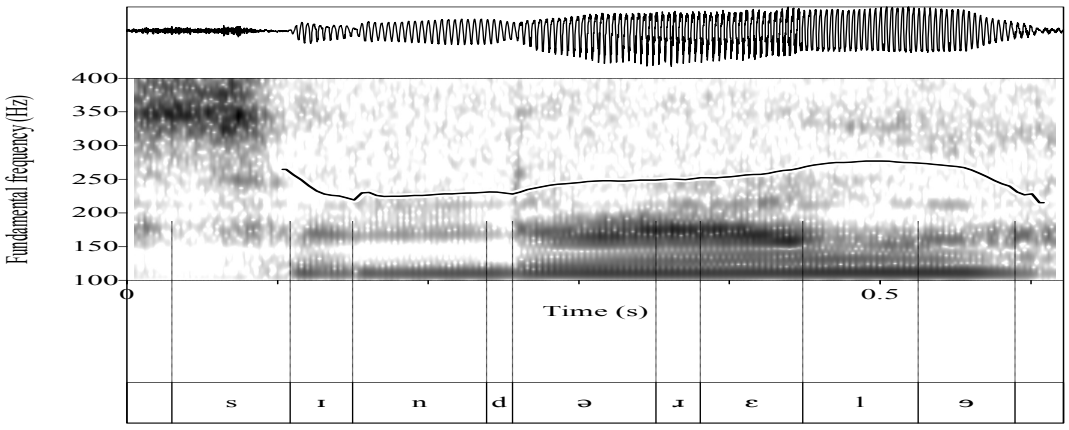

Figure 5.2: *Similar to the above, but this time spoken by a speaker of Belfast English. Notice the peak is further to the right, now timed with the segment /l/ at the boundary between stressed and unstressed syllable in 'Cinderella'*

An alignment difference like this in relation to the H has been at the heart of an account of the lexical accent distinction in Stockholm Swedish (Bruce 1977). A difference in the alignment of H can account for the presence of a rise on the stressed syllable in Accent I and the fall in Accent II. A similar alignment difference was also invoked in relation to intonational differences in the varieties of Orkney and Shetland English (van Leyden & van Heuven 2006). Crucially, an alignment difference was also briefly explored in trying to account for dialect differences in the Irish language (Dalton & Ní Chasaide 2005, Dalton 2007). A very similar phenomenon to Belfast English occurs in the Northern dialect of the Irish language where we find nuclear statement rises, in contrast to nuclear falls in the Southern dialects. Dalton & Ní Chasaide's comparison of the Northern statement rises against Southern statement falls from one dialect led to their argument that

they were not phonetically similar enough to each other to support the hypothesis that there had been a 'Re-alignment' of the H, turning the fall into the rise. However, I wished to examine how this hypothesis would hold up in Belfast English data, and I also wished to expand greatly on the theoretical treatment begun by Dalton & Ní Chasaide.

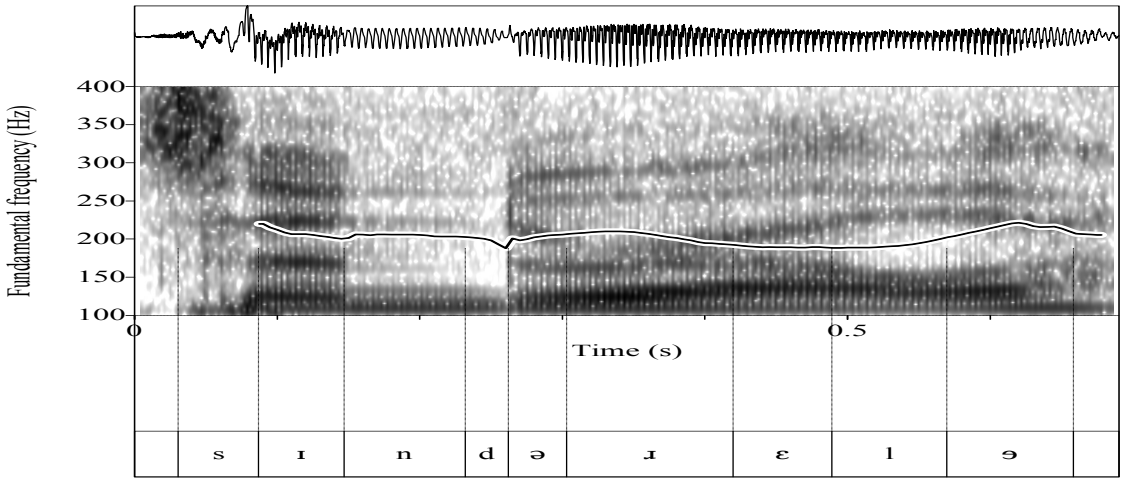

Figure 5.3: *An extract from a different Belfast English speaker, showing the peak now in the final unstressed vowel, with hardly any final fall afterwards*

3 DATA

To examine intonational similarity and potential Alignment change, I focused on the phenomenon of nuclear statement rises in Belfast English and compared them to nuclear statement (rise)-falls[34] in Cambridge English, and to nuclear question rises in both Belfast and Cambridge English. I used data from the Intonational Variation in English (IViE) corpus (Grabe et al 2001). This corpus consists of recordings of teenage speakers of 9 varieties of British and Irish English in five different speaking styles. I refer in this paper to two of these styles: the Read Sentences, in which participants read a list of declarative and interrogative (including coordination, declarative questions, y/n and wh- questions) sentences; and the Read Passage, in which participants read a version of the fairytale Cinderella. For consistency, I only examined nuclear stressed syllables in which there was just one following unstressed syllable. I measured the alignment and scaling of the L and H points on the nuclear syllable and surrounding syllables.

[34] I henceforth refer to the statement contours in Cambridge English as (rise)-falls as an important reminder of the rise up to reach the peak H in these contours.

3.1 Methodological Details

The numbers of utterances (Intonational phrases) examined in each category are listed below:

	Sentences List	Cinderella Passage
Belfast statement rises	74 Intonational Phrases (IPs) (6 male, 6 female speakers)	65 IPs (6 female, 2 male)
Cambridge statement (rise)-falls	0	67 IPs (6 female, 5 male)
Belfast question rises	92 IPs (6 male, 6 female)	0
Cambridge question rises	48 IPs (6 male, 6 female)	0

Table 5.1: *Numbers of sentences analysed*

Though statements in the Sentences list task were recorded by Cambridge speakers, it was inappropriate to analyse most of them for the present paper, as the majority contain 'downstep' i.e. "the stepwise lowering of pitch (or of pitch range) at specific pitch accents" (Ladd 2008: 76). The phonetic differences between 'downstepped' and 'non-downstepped' accented syllables would have added confounds to the Alignment and Scaling measurements I intended to make. The Cinderella Passage had very few questions, which is why the question rises come from the Sentences list only. Further, the Cambridge speakers produced some of their questions with different intonational patterns than plain rises, which explains why the number of IPs analysed here is notably less than for the Belfast questions. I emphasise that this is still very much work in progress, one reason why the number of IPs analysed is unequal between categories, between males and females, and within each speaker.

F0 contours were smoothed to reduce the effect of consonantal effects on f0. The main stressed (nuclear) syllable as well as the preceding and following unstressed syllables (prenuclear and postnuclear respectively) syllables were all labelled, as were the segments within them, mainly according to the segmentation criteria laid out in Turk et al (2006). When these critiera could not be applied, we chose midpoints of formant transitions in marking segment boundaries between sonorant segments. However, I acknowledge that several cases of segmentation were very difficult and accept that this has implications for the Alignment results below. This is because Alignment is measured in milliseconds (ms) from the beginning or end of specific segments e.g. the onset of nuclear stressed vowel. All Alignment and Scaling measurements were calculated and extracted using Praat scripts (modified versions of scripts by Pauline Welby http://www.ling.ohio-state.edu/~welby/praat.html).

Before giving details of the results, I recall the initial hypothesis: that Belfast statement rises would be more similar to the Cambridge statement (rise)-falls than to question rises, following from the possibility that the Belfast statement rises had developed from nuclear falls (see section 2 above).

4 RESULTS

I now present the results of the Alignment and Scaling measurements for each of the categories. The statistical analysis carried out so far involved One-Way ANOVAs on the Sentence/Variety types on the four dependent variables of Alignment of H, Alignment of L, Scaling of H, and Scaling of H. Where appropriate these were followed by post-hoc t-tests with the Bonferroni correction for multiple comparisons applied. Non-parametric versions of these tests gave very similar results. All statistical procedures were done with R (R Core Design Team 2009).

4.1 Alignment of H

First, I deal with the Alignment of H. H was deemed to be the f0 maximum, except where there was a clear 'elbow' in the contour marking the end of the main rise, even if the pitch continued to rise very slightly after this or level out. In the Cambridge statement (rise)-falls, the H was aligned within the nuclear stressed syllable, specifically shortly after the onset of the nuclear vowel (mean 30 ms after onset, standard deviation (s.d.) 70). In the Belfast statement rises, the H was aligned much later, this time in the following unstressed syllable, well beyond the onset of the following postnuclear unstressed vowel (Sentences List: mean 110 ms after onset, s.d. 60; Cinderella Passage: mean 101 ms, s.d.53). In the Cambridge question rises, the H was in fact aligned very similarly to the Belfast statement rises (mean 94 ms after postnuclear vowel onset, s.d. 118). In the Belfast question rises, the H was also aligned in a very similar location (mean 100 ms, s.d. 50).

There was no significant difference in the Alignment of H between Belfast statements, Cambridge questions, and Belfast questions: F (3, 275) = 0.5831, n.s. I did not test the significance of the Alignment of the H in the Cambridge statements against the Alignment of H in the other categories. This was because I had measured it against a different segmental landmark and in any case, it was obviously so much further away from the Alignment of H in the Belfast statements and in the question rises. I expected the alignment of H to be later in the Belfast statements than in the Cambridge statements, directly following from the scenario of potential Alignment change between the Belfast and Cambridge statements. However, I had not expected the H in the Belfast statements to be aligned as closely to the H in the question rises as it turned out to be. I had thought the H would be earlier in the Belfast statements. This was due to previous descriptions of Belfast statement rises as 'rise-plateaux' or 'rise-plateaux-slumps' (Cruttenden 1997, Grabe 2002, Ladd 2008), where the main rise is followed by a levelling off or slight fall, in contrast to question rises which are expected to keep rising. When there is just one unstressed syllable after the accented syllable, this proposed difference does not actually appear to be systematic, though further work is needed.

4.2 Alignment of L

The alignment of the L point beginning the rise was primarily measured with a special line-fitting script to mark the point of greatest acceleration of the rise (for further details,

see the accompanying notes on Welby's 'Elbow' scripts at http://www.ling.ohio-state.edu/~welby/praat.html and references therein). We did not focus on the true f0 minimum as often in level stretches of low pitch this corresponds merely to a random f0 value. However, if errors were made with the line-fitting script and if the true f0 minimum was in an appropriate location, then that was taken as representative of L. In the Cambridge statement (rise)-falls, the L refers to the beginning of the rise leading up to the H (NOT the final low point at the end of the fall). It was aligned in the unstressed prenuclear syllable prior to the nuclear stressed syllable (mean 38 ms after onset of prenuclear vowel, s.d. 72). In the Belfast statement rises, the L was again aligned much later, around the end of the nuclear vowel (which often corresponded to end of the nuclear syllable) (Sentences List: mean 10 ms after the vowel offset, s.d. 48; Cinderella Passage: mean 11ms, s.d. 71). The L in the Cambridge question rises (mean 6ms before the vowel offset, s.d. 87) and in the Belfast question rises (mean 19ms after the vowel offset, s.d. 40) was timed very similarly.

There was no significant difference between the alignment of L in these three categories: $F(3, 252)$ [35] = 1.586, n.s. We did not test the significance of the alignment of the L in the Cambridge statement (rise)-falls against the other categories for the same reason in relation to alignment of H above. Again, although we had expected the L in the Belfast statements to be aligned later than in the Cambridge statements, we had not expected it to be as similarly timed as the question rises. So in terms of the Alignment parameter, the Belfast statements rises are very like question rises in relation to both L and H. This goes against our hypothesis that the Belfast statement rises would be more similar to the Cambridge statement rises and therefore makes it hard to link the Belfast statement rise back easily to an original falling contour. The similarity in Alignment of the Belfast statements and Belfast questions is also different to Makarova's (2007) work on Russian, where an alignment difference between questions and statements was found.

4.3 Scaling

Now turning to the Scaling parameter, which refers to the height of the L and H points. First I measured these f0 points in the standard Hertz (Hz) scale. Then I decided to convert them to the ERB scale, which is argued to be a better approximation of perception and for the inclusion of the different ranges of male and female voices together (Arvaniti et al 2006, Glasberg & Moore 1990, Ladd 2008). In each IP, Praat scripts extracted the Hz and ERB value of the L and H points and also of the speaker's mean pitch value in that utterance. Obviously, different speakers have different pitch ranges so I normalised the L and H by dividing each by the speaker's mean ERB value (see Ladd 2008 for this and other methods of normalising the scaling). This meant that the L and H values from different speakers could be more appropriately compared with each other.

[35] The reason the degrees of freedom are not the same in the Alignment of L as in the Alignment of H is as follows: in some IPs, there were errors in the extracted measurements for the Alignment of L but not for the Alignment of H and vice versa. A similar situation occurred in relation to the Scaling measurements, which is why the degrees of freedom again will be different there.

4.4 Scaling of H

In terms of the Scaling of the H, it was highest in the Cambridge questions (mean 1.19, s.d. 0.1 normalised ERB), followed by the Cambridge statements (mean 1.14, s.d. 0.12), the Belfast questions (mean 1.1, s.d. 0.08) and the Belfast statements (Sentences List mean 1.07, s.d. 0.06; Cinderella Passage: mean 1.03, s.d. 0.07). Among these categories, there was a significant difference in the Scaling of H: F (4, 321) = 28.87, p<0.001. Post-hoc t tests with the Bonferroni correction revealed that the Cambridge questions were significantly higher in H than the Belfast questions (t 5.9052, p<0.001) and Belfast statements (Sentences List: t 7.5845, p<0.001; Passage t -9.8262, p<0.001), but not significantly higher than the Cambridge statements (t -2.5602, n.s.). The Cambridge statements were significantly higher in H than the Belfast statements (Sentences List: t 3.7038, p<0.01; Passage: t 5.9251, p<0.001) but not significantly higher than the Belfast questions (t 2.2744, n.s.). The Belfast questions were only significantly higher in H than Belfast statements from the Passage (t -5.6124, p<0.001), not from the Belfast statements from the Sentences List (t 2.2368, n.s.). Finally, among the two sets of Belfast statements, the Sentences List statements were significantly higher in scaling of H than the Cinderella Passage statements (t -3.73, p<0.01).

One of the main points that we glean from these results is that again the expected phonetic similarity of the Belfast statement to the Cambridge statement must be called into question, contrary to our original hypothesis. The Cambridge statements have H higher with respect to the speaker's mean pitch than the Belfast statements. Though the Belfast statements are different to the Cambridge questions in this way, they are more similar to Belfast questions than to either of the Cambridge sentence types. The trend here for higher scaling of H in the questions within each variety reflects a pattern observed in many languages (e.g. Yuan et al 2002).

4.5 Scaling of L

In the Scaling of the L, the highest L was in the Cambridge statements (mean 0.99 normalised ERB, s.d. 0.11), followed by the Cambridge questions (mean 0.96, s.d. 0.07), the Belfast questions (mean 0.92, s.d. 0.07) and the Belfast statements (Sentences List: mean 0.92, s.d. 0.06; Passage: mean 0.91, s.d. 0.07). Among these categories, there was a significant difference in the Scaling of L: F (4, 314)=12.19, p <0.001. Post-hoc tests revealed that there were significant differences between the varieties of Cambridge and Belfast, but not within these varieties. The Scaling of L was significantly higher in the Cambridge statements than in Belfast statements (Sentences List: t 4.5594, p <0.001; Passage t 4.8184, p <0.001) and questions (t 4.2929, p <0.001), but not higher than the Cambridge questions (t 1.3429, n.s.). Likewise, the Cambridge questions were also significantly higher in the Scaling of L than the Belfast statements (Sentences List: t 3.5971, p<0.01; Passage: t -3.9175, p <0.01) and questions (t 3.381, p<0.01). As indicated though, there was no significant difference in the Scaling of L between the Belfast statements and questions (Sentences List: t -0.5972, n.s.; Passage: t 0.0513, n.s.). Nor was there any difference between the two groups of Belfast statements (t -0.6761, n.s.).

These results reflect my own impressionistic observations of the data, such that the pitch at the beginning of the Belfast statements and questions dips down noticeably on the accented syllable, whereas in the Cambridge statements and questions, the pitch remains quite high in the speaker's range before rising further. So again we see an important difference between the Belfast statements and the Cambridge statements, which goes against the initial hypothesis. The L in the Belfast statements is lower with respect to the speaker's mean pitch than the L in the Cambridge statements. Further, the Belfast statements are extremely similar to the Belfast questions in the Scaling of L, though they are different to the Cambridge questions in this regard.

4.6 Assessment of the Results

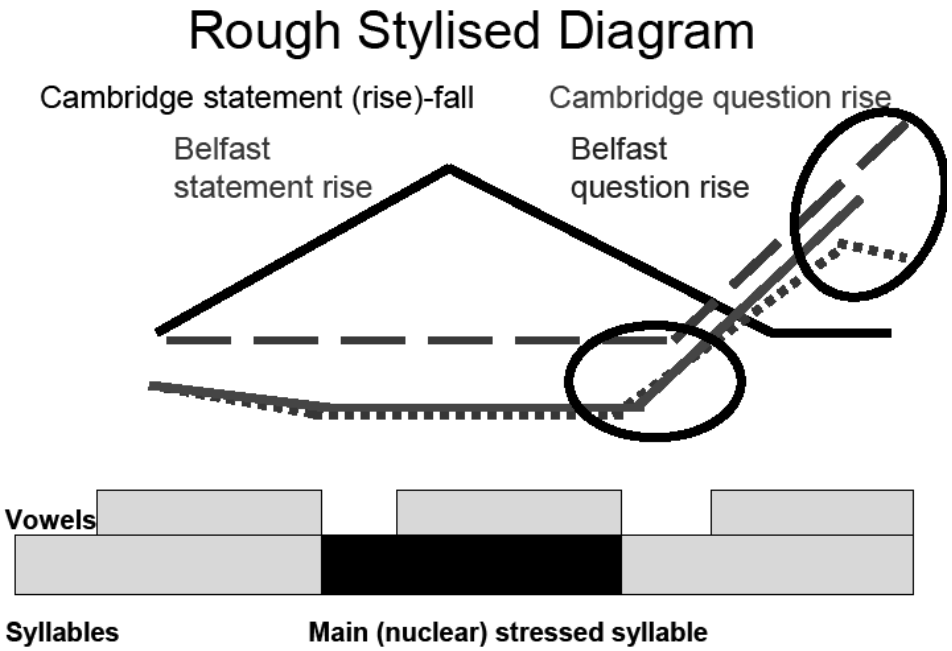

Figure 5.4: *Rough stylised diagram indicating the Alignment and Scaling of the statements and questions from Belfast and Cambridge. The two black rings are intended to show how similar the alignment of the L and H are in the Belfast statements, Belfast questions and Cambridge questions.*

In the overall assessment of similarity between Belfast statements and Cambridge statements, none of the parameters of Alignment and Scaling have pointed to a particularly close connection between them. This is contrast to the almost entirely overlapping measurements between the Belfast statements and Belfast questions. So this analysis of contemporary corpus data, rather than supporting a view of the Belfast statements rises as having formed from statement (rise)-falls, actually shows the Belfast statement rises as very similar to question rises in many respects. I have also begun to incorporate the individual Alignment and Scaling measurements into an overall composite score of similarity. Very tentative early results from this show Belfast

statements closest to Belfast questions, then to Cambridge questions and farthest from Cambridge statements.

5 THEORETICAL PROPOSALS

We conclude from this analysis of the IViE data that the concept of similarity and indications of potential intonational change need to be taken in a new direction. Therefore, our next main step was to take the Alignment and Scaling parameters and develop more theoretical proposals as to how they behave with regard to similarity and potential change from a (rise)-fall to a rise. There are three main parts to my proposals at their present stage of development.

5.1 H Drift

The first part is to do with the direction of change. Many studies of languages with a lexical tonal contrast report that H tones have a tendency to spread rightwards (e.g. Hyman 2007, Kim 2005). There is a parallel in intonational studies which have found that H target points have a tendency to drift rightwards alongside an increase in the number of unstressed syllables after the main stress (e.g. Dalton & Ní Chasaide 2005, Gussenhoven 2007, Silverman & Pierrehumbert 1990). However, I admit that it is unclear how this context could lead to change over time in intonation. Anyway, if the H peak drifts too much away from the stressed syllable, it will no longer be perceived as associated to that syllable. Therefore, some phonological reorganisation would be needed, as the nuclear stressed syllable being a tone bearing unit (TBU), requires a tone. At this point, the low pitch from the rise to the peak would become phonologised as L tone on the stressed syllable. This putative phonological change and perceptual motivations behind it may be somewhat akin to metathesis in segmental phonology (e.g. Blevins & Garrett 1998). There is some evidence to suggest that L tones need to be realised as flat stretches or broad dips down on the stressed syllable in order to be perceived (Dilley 2005). So the resulting contour would have quite a different shape to the original statement (rise)-fall. This would link with lower scaling of the L in the Belfast statements, though admittedly this also occurred in the Belfast questions.

5.2 Favoured Alignment points

The second part is my argument that there are favoured places within the syllable with which L and H target points like to align themselves. Linking with the first part of my proposals above, H target points are often aligned slightly beyond the main stressed syllable in a number of languages (e.g. Arvaniti et al 2000 on Greek). It may be easier both to produce and to perceive high pitch on the stressed syllable if H is located here (e.g. Rossi 1971, Silverman 1997, Hyman 2007). There are also arguments that for H targets that the accented vowel may be broken up into two or three domains for categorical phonological distinctions or pragmatic differences (Ladd 2008 and references therein). There is increasing recent evidence to suggest that H targets at any rate may be coordinated very closely with articulatory gestures (e.g. Mücke et al 2009). In relation to

L, a low turning point beginning the rise located at the end of the nuclear stressed syllable (similar to the Belfast statements and also the question contours) may also be a favoured alignment location from an articulatory point of view. It is possible that the L point is coordinated with the peak velocity of the maximum closure of the consonant onset of the following unstressed syllable (Mücke, p.c.). The H point in Catalan nuclear rises and Italian statements is also coordinated with this point (Mücke et al 2009, Prieto et al 2007). Overall, I extrapolate from this that if the alignment of an L or H point undergoes change that it may not just move gradually but may undergo more abrupt shifts between favoured locations (cf. Stevens (1989) on quantal relationships between articulation and acoustics in segmental phonology). The main implication of this for similarity is simple linear Alignment measurements in milliseconds may not capture perceptual similarity or the nature of change itself. By building up an inventory of these favoured locations, we would be able to express in terms of number of steps how far away the Cambridge statement H is from the Belfast statement H etc.

5.3 Tonal Crowding Effects

The third part posits a further rightward movement of the H. If the L is located around the edge of the nuclear stressed syllable and the H is just a bit beyond it in the following unstressed syllable, we may have the phenomenon of tonal crowding. This phenomenon is well-known in both languages with lexical tone and those with intonation only. When two tones are too close to each other, one or both of them may move apart. In this instance, I suggest that the H tone may move further to the right, away from the L tone. This pattern of the presence of the L tone resulting in later alignment of the following H tone has been reported by Arvaniti et al (2006) for Greek intonation, and by Kristoffersen (2007) and Peters (2007) for the lexical accent in Norwegian and Hasselt Flemish respectively. This could account for the major alignment differences between the Cambridge statements and the Belfast statements. We have tested this prediction by seeing if the later that L was aligned in the Belfast statements (Passage data), the later the H was also aligned. However, there was no significant correlation between the alignment of L and the alignment of H (Pearson product-moment correlation: t 1.1858, d.f. 59, n.s.).

6 Could Belfast rises have come from question rises?

What is clear at present is that whichever way we assess alignment (by counting steps or by taking absolute measurements), the (majority of the) Belfast statement rises remain much more similar to the question rises from either Belfast itself or Cambridge than to the Cambridge statement (rise)-falls. We had originally expected that the Belfast statement rises might have the L and H alignment more intermediate between statement (rise)-falls and question rises. However, such cases only occurred in a small portion of the data and mainly from a single speaker (extremely interesting though such cases in themselves are). Without historical data, therefore, I believe that it is not possible to claim that my results nor my theoretical proposals support an idea of an alignment change from a statement (rise-)fall to a statement rise. This is because it would be so easy to ask why the Belfast

statements could not be modifications of questions since their alignment appears so similar.

So if the Belfast statements are phonetic modifications of question rises (see Bolinger 1978 mentioned in Ladd 2008)[36], what kind of changes would have to be made to turn a question rise into a statement rise? The main change here would be in Scaling. The Cambridge questions in particular were significantly higher in their H scaling than the Belfast statements, though my results show a tendency for Belfast questions also to have higher scaling than Belfast statements. Higher scaling of H is a well-known distinguishing feature of questions from statements (e.g. Yuan et al 2002). Alignment change through rightward movement of H is well-attested in languages with lexical tone and is increasingly invoked in relation to intonation too (Dalton 2007 Gussenhoven 2007, Hyman 2007, Silverman 1997). However, are there any reports that Scaling changes can happen in languages with lexical tone or in intonation? Arvaniti & Ladd (2009) argue that alignment of H in Greek appears to be more variable than the scaling of H in a specific synchronic context (tonal crowding). So this might be a sign that height changes are less likely than alignment changes. However, in Chinese languages reductions of the height of lexical tones in terms of change over time have been attested (Chen 2000). So although much more work needs to be done on establishing how likely alignment and scaling are to change over time, we must acknowledge for the present that scaling changes are possible. This at first makes it even harder to uphold the hypothesis that this data shows that Belfast statement rises have ultimately come from statement (rise)-falls than from question rises (again without having historical data available). To turn a Cambridge question into a Belfast statement, we would have to lower the scaling of the L and the H, but could leave the alignment pretty much unchanged. To turn the Cambridge statement into a Belfast statement, we would have to lower the scaling of the L and the H, and also make extensive alignment changes.

7 CONCLUSIONS AND PROPOSALS FOR THE FUTURE

The implications of the work this paper has uncovered go contrary to the initial hypothesis, that Belfast statements would be more similar phonetically to Cambridge statements reflecting a possible shared origin. In fact, these Belfast statements are very similar to question rises, in relation to the Alignment of L and H. In scaling, they are also very similar overall to Belfast questions, but have lower scaling of L and H than the Cambridge data (both questions and statements). Of course, we should clarify that similarity and change are not always linked. There are well-attested examples from segmental phonology where two very divergent pronunciations can be shown by principled methods to have a shared background and others where two very similar forms have different backgrounds. So the big challenges that remain for this work include trying to establish what natural sound changes in intonation actually are. We now have ample data on patterns of synchronic intonational variation in different languages/varieties (e.g.

[36] Belfast statements do not function like questions though.

Grabe 2002) and through a wide range of prosodic factors (e.g. Silverman & Pierrehumbert 1990). How do these patterns link with diachronic change in intonation?

For future work, we also wish to consider other possibilities about the origin of the Belfast statement rise. Instead of being derived from a statement (rise)-fall or from a question rise, we wish to examine whether it could be a form of continuation rise, but with its function extended. We also wish to compare Belfast English with Glasgow English, and see if we would fit the potential differences between them into a potential trajectory of intonational change. This is further work. Overall, we assess that these phonetic parameters of Alignment and Scaling provide a very useful way to understand the similarities between different sentence types in different varieties. They also provide a useful starting point for exploring hypotheses about intonational change. However, in the context of Belfast statement rises and Cambridge statement (rise)-falls, it does not support this hypothesis on its own. We now need further parameters (e.g. including amplitude as well as f0 measurements), historical data, and/or much stronger theoretical arguments for showing that the changes from a (rise)-fall to a rise would indeed be more plausible than the lesser changes from questions to statement rises. Alternatively, these parameters of similarity should motivate us to accept that we do not have clear phonetic connections between Cambridge statements and Belfast statements, and we now need to look elsewhere for an explanation of why Belfast statements rise at the end. Either way, the phenomenon of Belfast statement rises does not have an uncontroversial explanation yet.

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CHAPTER 6

AGAINST THE "WEST GERMANIC SYNTAX" HYPOTHESIS
THE V-2 CONSTRAINT IN OLD ENGLISH AND OLD HIGH GERMAN

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Even though both English and German belong to the same West-Germanic group of Indo-European languages, their present word order seems to have very little in common. While practically all English clauses follow the SVO order, Modern German differentiates between V-final (in most subordinate clauses) and V-2 pattern (characteristic of main declarative clauses). This paper will focus on the so-called V-2 constraint. In the Old Germanic period, both languages tended to place their finite verb on the second position of the main declarative clause, and this – among other similarities – leads some scholars to assume that the two syntactic systems were practically identical (cf. Davis and Bernhardt 2002). In the present paper I would like to claim that the differentiation started to take place before 1066, in the Old Germanic period, and thus it is necessary to regard the syntax of Old English and Old High German as two independent systems.

1 INTRODUCTION: THE V-2 CONSTRAINT

The V-2 constraint is a phenomenon well-known to all scholars of Modern German. This language is characterised by a very specific word-order rule which says that in main declarative clauses the finite verb always takes the second position. Therefore, all grammatically correct German clauses represent the following pattern:

(1) Ich bin nach London gefahren.
[I am to London gone.]
I went to London.

(2) Gestern bin ich nach London gefahren.
[Yesterday am I to London gone.]
Yesterday I went to London.

As illustrated in example (2), when the clause is introduced by an element other than the subject, the subject and the finite verb get inverted so that the finite verb could keep its position in the clause. This is the phenomenon known as the V-2 constraint, V-2 rule, verb-seconding or *Zweitstellung*, and it is present in other Germanic languages as well (e.g. Dutch). The translations which accompany each example show, however, that English deviates from this pattern and consistently demonstrates the Subject – Verb order, no matter which constituent stands at the beginning. Nonetheless, there are some traces of the V-2 constraint in Modern English, though they are not so easy to trace:

(3) Never have I seen such a wonderful place.

Example 3 illustrates a fossilised English structure with Subject-Verb inversion caused by the negative adverb "never", an existing though rather unproductive pattern, which is in fact a remnant of the V-2 constraint that used to be present in the English system in the Old Germanic period, that is to say before the 11th century, when English was still quite similar to its Germanic cousins.

Yet, the fact that the V-2 structure is characteristic of Germanic languages does not mean that it is a rule that they have all inherited and consistently used ever since, while English was the only one that lost it almost completely. In the Old Germanic period the V-2 pattern was not yet a rule but rather a very strong tendency, and clauses illustrating it are very widespread in both Old English and Old High German corpus:

(4) Eft clipode se engel Abraham (OE, *Genesis*)[37]
[Again called the angel Abraham]

(5) Hier begin ih einna reda umbe diu tier (OHG, *Physiologus*)
[Here start I my tale about the animal]

The examples show two clauses with Subject-Verb inversion caused by the initial adverbial, which clearly indicates that some sort of the V-2 constraint operated in both languages. However, the corpus also includes numerous counterexamples:

(6) be þam man mihte oncnawan (OE, *The Battle of Maldon*)
[by that one could know]

(7) So ir selbo quhad dhurah zachariam (OHG, *Isidor*)
[so he himself said through Zacharias]

Here the situation is exactly the same, both clauses are introduced by an adverbial, but the subject and the finite verb are not inverted. This leads to two preliminary conclusions: the V-2 pattern is not an unbreakable rule in Old English and Old High German and; the

[37] All the Old English and Old High German examples quoted in the present paper come from the ENHIG database which is available on the Internet at http://ia.uni.lodz.pl/cichosz/enhig. The abbreviations OE and OHG, accompanying each example, stand for Old English and Old High German respectively.

situation in both languages seems similar, which has to be checked in a representative corpus of texts.

2 THE "WEST/OLD GERMANIC SYNTAX" HYPOTHESIS

In the only existing comparative study of Old English and Old High German syntax, Davis and Bernhardt (2002:1) claim that:

> It is meaningful to speak of a common syntax of West Germanic, which must have existed in Proto-West-Germanic and which is evidenced in the major languages in the group.

Thus, as a consequence,

> The study of the syntax of one Old West Germanic language is an indicator of the syntax of others; in particular the syntax of the better-recorded Old English acts as a guide to the syntax of Old High German (Davis and Bernhardt 2002:1).

Davis, in his latest book on comparative syntax of Old English and Old Icelandic, has modified this theory to include languages from both the North and East Germanic branch, stating that:

> The patterns of word order exhibited by all the Old Germanic languages may be regarded as identical. This is tantamount to saying that the syntax of these languages is the same in all its important points (Davis 2006: 53).

The present paper aims to question this hypothesis, showing that the two languages did demonstrate significant word order differences that need to be taken into consideration.

3 STRUCTURE OF THE STUDY CORPUS AND METHODOLOGY

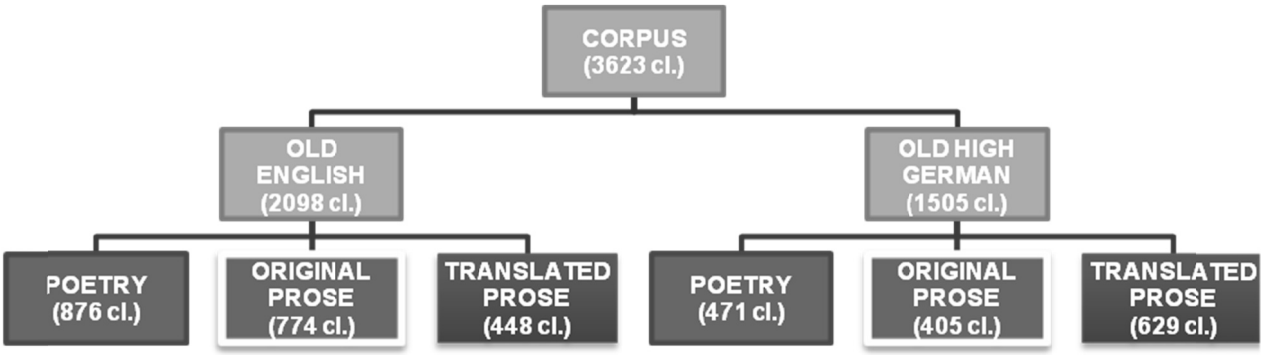
Davis and Bernhardt (2002) based their hypothesis on the analysis of two long prose works: homilies by Ælfric (late 10th century) for Old English and the so-called Tatian Gospel Translation (early 9th century) for Old High German. The problem of sources is a very important aspect of the analysis; since there are no ideally comparable texts written in the two languages and a large portion of available texts comprises poetry and translations, it is relatively difficult to create a good study corpus. As many scholars working in this field admit, it is especially problematic in the case of Old High German:

> Therefore, we have to conclude that none of the Old High German sources of a considerable size may be viewed as a good example of original prose representative for the system of the dialects spoken at the period of time (Petrova and Solf in press: 2)

> To investigate the details of Old High German word order presents some problems. The Old High German documents are numerous, but it is a problem to find corpora which are unquestionably representative of the language in terms of word order. On the one hand, the prose material is composed almost completely of translations of earlier Latin religious

> writings and follows the order of the original with only minor exceptions. On the other hand, some of the earliest poetic works are preserved only in fragments and some represent artistic experiments which may have brought into play important variations from expected word order. Of course, a study such as this must work with what is attested. I have chosen to take a very wide sampling of sentences from seven different sources in the hope that if significant idiosyncrasies do appear in any one corpus, they may be brought to light and identified by the data from the other corpora and evaluated accordingly (Smith 1971: 43).

In this study, the strategy has been to include samples from all main text types (poetry, original prose and translated prose) and thus, by numerous comparisons, to eliminate differences that are due to stylistic constraints and isolate real similarities and discrepancies between the languages (which is in accordance with the attitude taken by Smith, though his corpus is unfortunately very small). The structure of the corpus is presented below:



The texts included in the database are:

- for Old English: *Beowulf* (excerpts), Caedmon's *Hymn*, *The Battle of Maldon*, *The Seafarer*, *The Wanderer*, *Widsith*, Ælfric's homily *Alia Visio*, *Laws of Alfred* (excerpts), *The Anglo-Saxon Chronicle* (excerpts), Wulfstan's *Sermo Lupi ad Anglos*, *Genesis* translation (excerpts), *West Saxon Gospels* (excerpts);
- for Old High German: *Hildebrandslied*, Ludwigslied, Merseburger Zaubersprüche, *Muspilli*, Otfrid's *Evangelienbuch* (excerpts), *Petruslied*, *Wessobrunner Gebet*, *Old High German Physiologus*, Notker's *Prologue*, *Wessobrunner Predigt*, *Wiener Hundesegen*, *Isidor* translation (excerpts), *Straßburger Eide*, Tatian Gospel Translation (excerpts)

The database with all the texts used in the study, as well as a search tool, are available on the Internet at: http://ia.uni.lodz.pl/cichosz/enhig.[38]

5 THE FREQUENCY OF V-2 DECLARATIVE CLAUSES

If Old English and Old High German had the same syntactic systems, then we should expect similar frequencies of various word order patterns in the samples. This, however,

[38] The author would like to thank Piotr Pezik (University of Lodz), who helped to create the database and the online interface (corpus design based on Pezik, Levin and Uzar 2006).

is simply not the case. Table 6.1 shows the distribution of V-2 main non-conjoined declarative clauses (conjoined clauses must be analysed separately since in Old Germanic languages coordinating conjunctions could trigger different word order patterns).

text type	Old English		Old High German	
	%[39]	Σ	%	Σ
poetry	33	136	57	128
original prose	38	46	81	116
translated prose	64	90	41	78

Table 6.1: *V-2 non-conjoined declarative clauses (ambiguous patterns excluded).*[40]

It is apparent that the two languages do behave in a different way. The first and most important conclusion to be drawn from this table is that in two native samples, i.e. poetry and original prose, Old High German demonstrates a visibly higher frequency of the analysed pattern (57 vs. 33% and 81 vs. 38%). In translations, though, the tendency is reverse (41 vs. 64%). In order to investigate the reasons for this puzzling discrepancy, it is necessary to consider the function of the V-2 order.

6 FUNCTION OF V-2

The V-2 pattern seems to have functioned as a neutral, unmarked order of main clauses in all Old Germanic languages. According to Smith (1971), the V-2 pattern is most common in independent statements both in Old English and Old High German. Basing his conclusions on the results from a few Old Germanic languages, he claims that:

> After 600 A.D. the verb-second order seems to have attained the status of non-marked order in the Germanic dialects generally (Smith 1971: 138).

Smith analyses the three basic positions of the finite verb and comes to the following conclusions (1971: 291):

a) verb-final was the primary Germanic unmarked order, inherited from Proto-Indo-European, used mainly in subordinate clauses;
b) verb-initial was the primary Germanic marked order, also inherited from Proto-Indo-European, used in commands, conjoined clauses and dramatic sentences;
c) these two orders which Germanic inherited from Proto-Indo-European were finally supplemented by a third pattern – verb-second – which came as a strong innovation.

[39] The corpus contains 1328 clauses of the analysed type.
[40] Ambiguous patterns are short, structurally ambiguous clauses consisting of the finite verb only (which makes it impossible to decide whether they should be classified as V-1 or V-final) or a constituent followed by a finite verb (which makes it impossible to decide whether they should be classified as V-2 or V-final).

Nonetheless, this basic distinction does not explain the exceptional behaviour of translations. What can be useful here is the study of discourse relations in Old High German translated prose, conducted by a team at the Humboldt University of Berlin. The scholars analysed the relation of V-1 and V-2 clauses and discovered that:

> … verb-initial structures establish coordinative discourse relations whereas verb-second clauses signal subordinating linkage to the previous discourse part. In this sense, a verb-initial occurrence within the text, even involving an already established discourse referent, may be perceived as a signal that the utterance quits a previous passage of subordination and returns to the main line of the discourse (Hinterhölzl and Petrova 2005: 3).

This observation is very significant, as it shows that the relative frequency of V-1 and V-2 main clauses depends on the structure of the narrative, not on the language itself. Thus, it is the sum of V-1 and V-2 clauses that should be considered as the basis for further analyses, and the statistics are presented in Table 6.2.

	OE poetry		OHG poetry	
	%	Σ	%	Σ
V-1	25	104	22	50
V-2	33	136	57	128
Total	58	240	79	178
	OE original prose		OHG original prose	
	%	Σ	%	Σ
V-1	12	15	1	2
V-2	38	46	81	116
Total	50	61	82	118
	OE translated prose		OHG translated prose	
	%	Σ	%	Σ
V-1	5	7	29	54
V-2	64	90	41	78
Total	69	97	70	132

Table 6.2: *The interdependence of the V-1 and V-2 pattern in main non-conjoined declarative clauses (ambiguous patterns excluded).*

It is interesting to observe that after summing up the frequency of V-1 and V-2 clauses, the two translation samples demonstrate practically identical proportions (69 vs. 70%). Therefore, it is only logical to assume that the apparent difference in the frequency of V-2 clauses is directly related to discourse relations and various narration techniques, with Old High German translations employing the V-1 pattern relatively often (29%) and Old

English translations clearly avoiding it (5%).[41] In the other samples, however, the summed frequencies are still higher for Old High German, which suggests a stronger influence of the V-2 constraint on this language.

As the position of the finite verb is not enough to draw any definite conclusions, it is now necessary to analyse another important phenomenon related to the V-2 constraint, namely subject inversion.

7 SUBJECT INVERSION

As it was shown in example 2, in a language with the V-2 constraint the subject and the finite verb are inverted when the clause is introduced by another constituent (most often an adverbial). This results in a relatively high number of V-S clauses. Figure 6.1 presents the relative frequencies of S-V and V-S patterns across the samples.

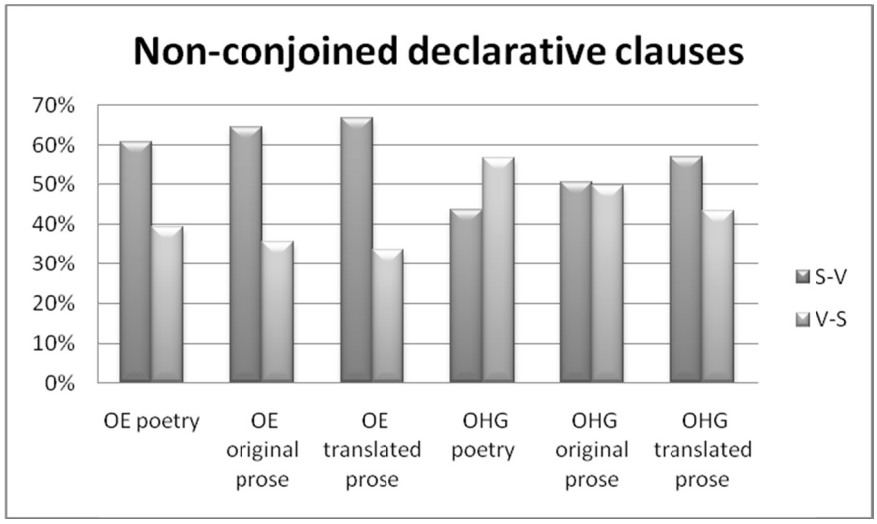


Figure 6.1: *The rate of V-S inversion in main non-conjoined declarative clauses.*

It is visible that all the three Old English samples are very homogenous, the S-V order clearly dominates, though there is a substantial number of V-S clauses present. In Old High German, however, the frequencies of V-S clauses are much higher and the two patterns seem to be rather balanced, which is in accordance with the earlier observations pointing to the stronger position of the V-2 rule in Old High German. Table 6.3, which presents the frequency of subjects that avoid inversion, in yet another confirmation of this preliminary conclusion.

[41] The difference between the frequency of V-1 clauses in Old English and Old High German translations is not the topic of this paper, but a detailed explanation can be found in Cichosz 2009. Suffice it to say that the discrepancy is most probably related to a diachronic development (the OHG translations analysed for the purpose of this study come from the 9th century, the OE translations were created later, at the end of the 10th century).

text type	Old English		Old High German	
	%	Σ	%	Σ
poetry	42	91	17	14
original prose	42	29	13	9
translated prose	28	27	30	22

Table 6.3: *S-Z clauses introduced by an element other than the subject.*

When another constituent is placed at the beginning of the main declarative clause, the subject still precedes the finite verb in a substantial portion of the Old English sample (42% in poetry and original prose), whereas in Old High German such a situation is rather rare (only 17% in poetry and 13% in original prose). Translations behave in a very consistent way, which suggests a similar influence of Latin on the samples.

Examples 8-10 illustrate the lack of inversion:

(8) Æfter ðisum ic wearð gebroht (OE, *Alia Visio*)
[After that I was brought]

(9) be þam man mihte oncnawan (OE, *The Battle of Maldon*)
[by that one could know]

(10) Þær ic ne gehyrde butan hlimman sæ (OE, *The Seafarer*)
[there I could hear nothing but the roar of the sea]

It is necessary to point out here that all the three subjects in the clauses presented above are light; the issue of weight will be discussed in detail in section 7.

As mentioned before, the inversion of the subject and the finite verb is usually caused by an adverbial. According to the "West Germanic Syntax" hypothesis, it is even an obligatory phenomenon:

> Where there is an initial adverbial word the word-order pattern is altered; the subject follows the verb, and object and complement words follow the subject (Davis and Bernhardt 2002: 63).

Figure 6.2 shows how often the initial adverbial triggers inversion in the study corpus used in the present analysis.

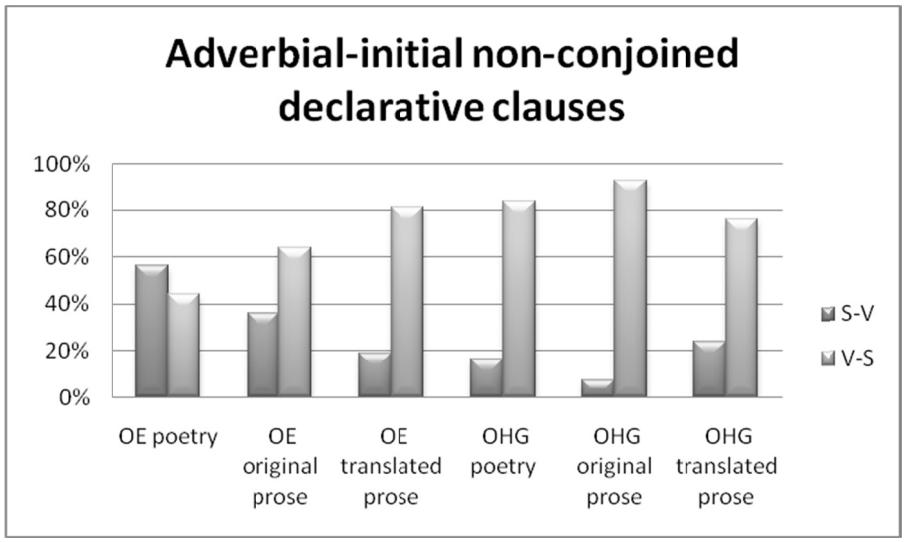


Figure 6.2: *The rate of V-S inversion in main non-conjoined declarative clauses introduced by an adverbial.*

It is clear from table 2 that the rate of inversion is highest in the case of two native Old High German samples: poetry (82%) and original prose (92%). Whereas the two translation samples once again demonstrate similar proportions, the two native Old English samples invert definitely less often (44% in poetry and 62% in original prose).

On the whole, it appears that the mechanism of inversion is relatively strong in Old High German, with both heavy (lexical) and light (pronominal) phrases behaving according to the same rule, as in the examples presented below:

(11) Hier begin ih einna reda umbe diu tier (*AHD Physiologus*)
[Here start I my story of an animal]

(12) mit geru scal man geba infahan, ort widar orte (*Hildebrandslied*)
[with weapon should one gifts accept, sword against sword]

(13) Thanne sprah hluduig (*Ludwigslied*)
[Then spoke Ludwig]

At this point, the difference between Old English and Old High German is quite evident. Davis and Bernhardt (2002: 55), however, claim that in clauses with an initial adverbial 71% of OE and 75% of OHG main non-conjoined declaratives demonstrate the V-S order. The results obtained during the present study are completely inconsistent with this observation, with frequencies ranging from 44% (OE poetry) to 92% (OHG original prose). Thus, it seems that the distribution of this structure is very much dependent on text type and a different structure of the study corpus made the results totally incomparable. The present analysis suggests that, apart from the word order in translations, the V-2 constraint operated more efficiently in the Old High German sample.

8 THE INFLUENCE OF WEIGHT

The last factor that needs to be included in the analysis is the influence of subject weight. Numerous studies of Old English indicate that subjects and objects tend to appear in different positions depending on their weight, with light pronominal phrases located more towards the beginning of the clause and heavier phrases "postponed":

> Main clauses introduced by a constituent other than the subject show an interesting quirk: while inversion takes place with all types of finite verb in a large majority of cases when the subject is nominal, a personal pronoun subject remains in preverbal position (Fischer at al. 2000: 49).

In the case of inversion, this means that light subjects should be inverted less often than heavier subjects. Table 6.4 shows the rate of inversion of light subjects across all the samples.

text type	Old English				Old High German			
	inverted		non-inverted		inverted		non-inverted	
	%	Σ	%	Σ	%	Σ	%	Σ
poetry	30	21	70	50	84	41	16	8
original prose	42	16	58	22	85	41	15	7
translated prose	44	19	56	24	50	7	50	7

Table 6.4: *The behaviour of light subjects in non-conjoined declaratives*

It is apparent that in all Old English samples most light subjects were not inverted, though the phenomenon is most evident in poetry (70% stay on the second position). On the other hand, in Old High German light phrases were inverted in the vast majority of cases (84% in poetry and 85% in original prose). The behaviour of Old High German translations must be ignored since only 14 light subjects were discovered in the sample[42], and this number is not enough to draw any reliable conclusions. Yet, when we compare all the other samples, it becomes clear that in Old High German the V-2 constraint was strong enough to exert an influence on all subjects regardless of their weight, whereas in Old English light phrases were less liable to conform with the rule.

9 CONCLUSION

The present analysis has proven that the V-2 constraint was present in both languages under investigation, but the degree of its influence was different. In Old High German the phenomenon of verb-seconding was visibly stronger than in Old English, which is illustrated by the higher incidence of V-2 declaratives in general, the greater rate of subject inversion and a substantially weaker impact of weight on the word order of main

[42] This is related to the very high incidence of subjectless clauses in Old High German translations (pronominal subjects were usually unexpressed and therefore it is impossible to investigate their typical position in the clause).

clauses. It may be safely assumed that the V-2 constraint was already a well-developed phenomenon in Old High German, whereas in Old English it never reached the status of a rule and after a period of constituting a visible tendency it started to lose strength and disappear from the syntactic system of English.

This observation is in accordance with the analysis of Old High German conducted by Katrin Axel:

> ... I will argue extensively in the present study that some crucial steps toward the verb-second grammar, such as the generalisation of verb movement in root clauses, has already been taken in OHG (Axel 2007: 1)

and Marian Bean who claims that Old High German:

> (...) looks remarkably like the V-2 language of modern German: the verb is in second position in main clauses preceded by any single element and in final position in subordinate clauses (Bean 1983: 52)

Bean even claims that English was never really on its way to acquire the V-2 rule since according to her theory: "X'VS is a narrative device rather than a sign of a developing verb-second constraint" (Bean 1983: 137).

The differences between languages discussed above can also be used to refute the "West Germanic Syntax" hypothesis. The discrepancies between Old English and Old High German word order exist and they cannot be seen as occasional deviations from "tendencies approaching the status of rules" (Davis and Bernhardt 2002). Of course, the syntax of Old English and Old High German exhibited many similarities; they were two closely related languages from the same group that were bound to resemble each other after only a few centuries of isolation. Even though the two languages were still quite similar, significant differences started to appear they should not be disregarded; the discrepancies are present in the corpus and clearly show that the "West Germanic Syntax" is a theoretical construct which does not reflect the textual, and – as a consequence - linguistic, reality of Old English and Old High German.

Another important conclusion that may be drawn from the present analysis is the fact that Old English and Old High German started to differentiate before the end of the Old Germanic period, i.e. before the 11th century. This means that the changes which took place in the English system have to be attributed to some mechanisms which started to operate already in the Old Germanic period. What was the real reason that triggered the change is a question that goes beyond the scope of the present study. One can only speculate as to other foreign influences (Old Norse spoken in the Danelaw being the most obvious candidate) or some internal mechanisms which started the chain reaction described by Bean (1983) as "phonological-process-leading-to-morphological-loss-leading-to-syntactic-change". Yet, the view that the loss of case markings was the source of all the syntactic changes has recently been questioned, with the new theory suggesting a more parallel mechanism:

> The two case studies examined here do not support the view that the fixing of word order in English was driven solely by the loss of case inflections or the assumption that at every stage of English, there was a simple correlation between less inflection and more fixed word order. This is not to say that deflexion did not play an important role in the disappearance of some previously possible word orders. It is reasonable to suggest that although it may have been pragmatic considerations which gave the initial impetus to making certain word orders more dominant than others, deflexion played a role in making these orders increasingly dominant. It seems likely that the two developments worked hand in hand; more fixed word order allowed for less overt case marking, which in turn increased the reliance on word order (Allen 2009: 220).

Whatever the reason for all the changes that affected English, they started to take place before the 11th century and thus differences between the two languages under investigation started to appear already in the Old Germanic period, which points out that any overgeneralisations like "the Old Germanic syntax" need to be treated with caution and checked in a varied sample of texts before being widely accepted.

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CHAPTER 7

WHICH-PHRASES DO MOVE

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Since Pesetsky (1987) it is widely accepted that d-linked wh-phrases (DWH) lack operator status. Van Craenenbroeck (2008) is an attempt to frame this insight into a syntactic analysis separating the element bearing wh-morphology from the operator-function. A number of shortcomings make it appropriate to refine this analysis. First, there are problems with respect to theta-assignment, selection, and reconstruction since van Craenenbroeck takes the DWH itself to be base-generated in the left-periphery. Second, the analysis does not take into account any other recurrent claims on the nature of *which*-phrases (e.g. that DWH are topics). It is shown why the proposal in van Craenenbroeck (2008) is problematic and an alternative analysis is sketched which does not run into these problems. This alternative analysis tries to incorporate the existing work on DWH and the original idea of van Craenenbroeck that the wh-word and the syntactic operator are separate items.

1 INTRODUCTION

It is a well known fact that *which*-phrases show a number of properties that set them apart from other wh-phrases.[43] One of these properties concerns the operator-status of *which*-phrases. Although it is widely accepted that all wh-questions involve an operator-variable dependency, *which*-phrases are claimed not to be syntactic operators (cf. Pesetsky 1987).

Van Craenenbroeck (2008) - henceforth VC – is an attempt to make sense of this contradiction. To do so, he presents seven sets of data from Germanic (some of them new to the literature on *which*-phrases). His basic claim is that *which*-phrases are base-generated in the C-domain (and at the same time there is an operator first-merged in the argument position which is later moved to a position in the CP to check of its operator-feature), whereas other (simplex) wh-phrases are base-generated in the VP.

[43] A note on terminology: van Craenenbroeck (2008) uses the term 'complex wh-phrases' but all of his examples (except one) involve *which*-phrases. Since these are generally taken to be inherently discourse-linked wh-phrases (DWH), I will use the terms *which*-phrases and DWH in alternation throughout this chapter. For ease of exposition, the term 'simple wh-phrases' will be used to refer to wh-words like *who* and *what*.

I refrain from classifying all non-monomorphematic wh-phrases as belonging to a single group. This would include such diverse items as *which N*, *whose N*, *how many Ns* etc. Although I believe the differences are encoded in the morphosyntax of these expressions, it does not seem reasonable to extend the claim about the separation of the lexical wh-item and the operator (see below) to all of them.

The aim of this chapter is threefold: First, I want to show that most of the data discussed in van Craenenbroeck (2008) do not force an analysis based on the idea that *which*-phrases are base-generated in the C-domain. Some of the data simply show that *which*-phrases end up in a position higher in the C-layer than other wh-phrases do. Others can easily be explained without claiming that *which*-phrases are base-generated in the C-domain. Second, despite this, I want to maintain what I think is the most important insight in VC (besides the very interesting new data). Namely that separating the operator and the wh-element is the right strategy to account for some of the special properties of *which*-phrases. Third, I want to sketch an analysis which incorporates this idea and at the same time is able to account for other properties of DWH not touched on by van Craenenbroeck (2008). These include the licensing of resumptive pronouns by DWH and the lack of superiority-effects with DWH.

I start with a brief summary of VC's analysis of *which*-phrases in section two. Section three lists a number of conceptual arguments against this analysis as well as criticism concerning the analyses of particular data-sets VC uses to justify his claims. In the forth section, I lay out the basics of my alternative analysis and present empirical and conceptual arguments supporting it. Section five concludes this chapter.

2 BASE-GENERATION OF WHICH-PHRASES IN CP: VAN CRAENENBROECK'S (2008) ANALYSIS

In his 2008 paper "*Complex wh-phrases don't move: On the interaction between the split CP-hypothesis and the syntax of wh-movement*", van Craenenbroeck proposes that CP is split into (at least) two projections:

(1) a. Wh-features are checked in CP_1
b. Operator-features are checked in CP_2[44]

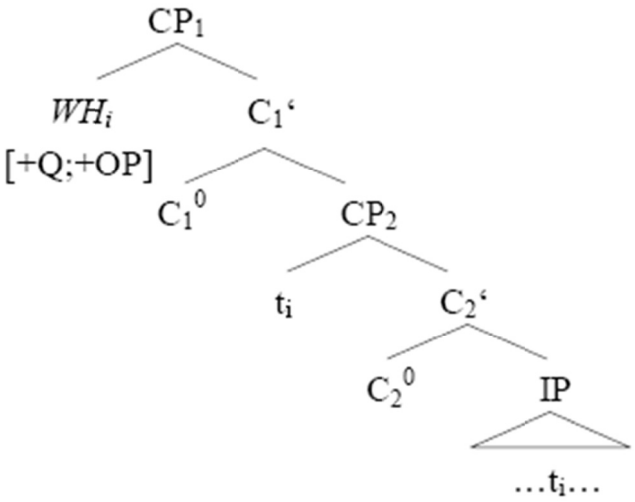
Additionally, it is claimed that *which*-phrases behave differently because of (2):

(2) With DWH the operator is not a genuine part of the wh-phrase

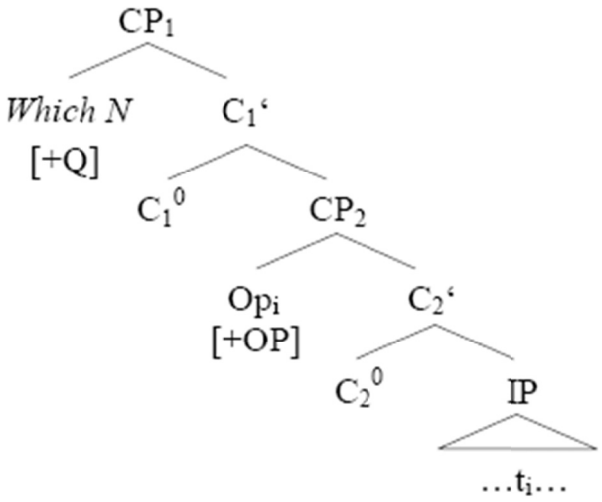
Based on these assumptions, the following derivations for simple wh-phrases and DWH are proposed (I will refer back to (4) as analysis A1):

[44] What the general properties of such an operator-feature should be is left open in VC (and by many other authors who assume it). It is not a trivial move to decide whether the property of being an operator can be encoded by a feature under any conception of this notion or not.

(3) *simple wh-phrases*



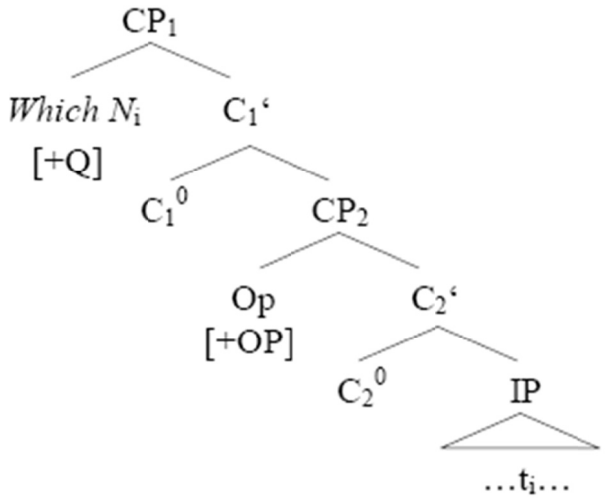
(4) *which-phrases (A1)*



Van Craenenbroeck (2008) himself admits that only two of the data-sets he presents lead one to assume an analysis like A1 – especially the claim that *which*-phrases are first-merged in $SpecCP_1$. He offers an alternative in which the operator is base-generated in the CP-domain and the *which*-phrase base-generated inside VP (I will refer back to (5) as analysis A2):[45]

[45] Note that this is in a sense a recast of Pesetsky's (1987) original analysis of DWH in terms of unselective binding of the *which*-phrase by a Q morpheme in the C-layer.

(5) *which-phrases (A2)*



According to van Craenenbroeck, the two empirical facts that are problematic for such an approach are: (i) the wh-copying construction in German; and (ii) preposition stranding in Dutch. Since the main aim of this chapter is to show that *which*-phrases are base-generated in VP like any other argument-wh-phrase and A2 is compatible with this claim, most of the criticism that follows concerns analysis A1 (exceptions are marked).

3 PROBLEMATIC ASPECTS OF ANALYSIS OF A1

There are a number of problematic aspects for an analysis like A1. I list them here with only brief explanations as to why I think they are real shortcomings. In the next section I elaborate my criticism on some of them and try to show how my own analysis of *which*-phrases offers possibilities to overcome these problems.

3.1 Conceptual Problems

3.1.1 Selection by the verb

The (restriction of the) *which*-phrase is an argument of the verb (i.e. it is selected by the verb), and under standard assumptions should be base-generated inside the VP to receive its theta-role (or case; see below). One could oppose this criticism of analysis A1 by claiming that (for example) Aoun and Li (2003) make a similar claim about certain wh-constructions in Lebanese Arabic. Superficially, this seems to be true, but there is an important difference between the data discussed in these two works. In contrast to the fact that in all examples in van Craenenbroeck (2008) the DWH is only displaced clause-internal, the examples in Aoun and Li (2003) (for which the authors claim base-generation of the *which*-phrase in the C-domain) involve dependencies across clause-boundaries (and islands in particular) and the wh-phrase is ‘taken-up’ by a resumptive pronoun in the argument-position in the lower clause. In other words, Aoun & Li’s analysis is rooted in widespread assumptions about general properties of movement and its connection to islands and (one particular type of) resumption.

Another related problem with base-generation of DWH inside the C-domain is case-assignment. How does a *which*-phrase receive case - either inside VP or in IP - if it never occupies a position this low? The following data from German show that the nominal restriction as well as the lexical element which can bear case-morphology:[46]

(6) a. [Welches Mantels]$_{GEN}$ hat sich der Typ entledigt?
Which-GEN coat-GEN has REF the guy get-rid-of
'Which coat did the guy carry out?'
b. [Welchen Mädels]$_{DAT}$ hat Peter eine Uhr gegeben?
Which-DAT girls-DAT has Peter a watch given
'Which girl did Peter give a watch to?'
c. [Welches Buch]$_{ACC}$ hat Jens gelesen?
Which-AKK book-AKK has Jens read
'Which book did Jens read?'

3.1.2 Reconstruction

If DWH never occupy a position in the IP (and VP), it is not possible to interpret it there at LF under standard assumptions of reconstruction (as an activation of a lower copy/trace at LF).[47] Even a simply example like the following is a problem for an analysis of this kind:

(7) [Which pictures of himself$_j$]$_i$ did John$_j$ like t_i?

If the *which*-phrase is base-generated in its surface position (as in analysis A1), then there is no possibility for *John* to bind the anaphor *himself* inside the wh-phrase (under standard Minimalist assumptions about binding of anaphors; see e.g. Radford 2004: 93, 197).

The selection- and the reconstruction-problem for analysis A1 just described are essentially the same Boeckx (2003) determined for the analysis of wh-in-situ and wh-resumption constructions in Lebanese Arabic in Aoun & Li (2003). Boeckx writes:"[…] such an approach would lead to the conclusion that the very same elements can be licensed by being bound (in situ) or by binding (resumption). I know of no other element that can be both a binder and a bindee in identical configurations. In addition, a non-movement approach would have to posit two different First-Merge mechanisms for the very same elements (either [*who*] or [*which X*] are base-generated in their theta-position or they are base-generated in SpecCP). Such a theory would then lose any hope of regularizing First-Merge operations ("base structures" in a pre-theoretic sense) (23)".

[46] Thanks to Andreas Blümel (p.c.) for encouraging me to include these data.
[47] Van Craenenbroeck (2008: 17) admits that reconstruction is a problem for analysis A1 and hints at a semantic reconstruction mechanism to overcome it but leaves open as to how such a mechanism works.

3.1.3 No reference to other work on which-phrases

There is a huge amount of literature on d-linking in which a number of additional properties of DWH are discussed. For example, Rizzi (2000), Polinsky (2001) and Grewendorf (2008) claim that *which*-phrases are syntactic topics. Taking these findings into consideration, some of the data used in VC to justify analysis A1 can receive a different analysis and therefore are no longer corroborating A1. The differences between *which*-phrases and other wh-phrases most often reported in the literature are the following three phenomena:

(a) DWH can escape weak islands
(b) DWH are able to/must licence resumptive pronouns
(c) DWH are immune to superiority

Admittedly, if *which*-phrases are base-generated in the CP it seems to follow naturally that they can obviate superiority. A problem for such reasoning is the fact that the ability of DWH to appear before a 'superior' wh-word is in most cases only optional. The *which*-phrase can also follow the 'superior' wh-element in the left-periphery (or even stay in-situ).

At one point of his paper, van Craenenbroeck claims that *which*-phrases are not necessarily base-generated in the C-layer: "[…] while the complex wh-phrase is merged in $SpecCP_1$ in [(4)], in a multiple wh-question (where it is not required to type the clause) it can just as easily be merged in an argument position (2008: 6)". This implies a 'look-ahead-mechanism', because at the point of the derivation the argument of the verb is first-merged, the computational system needs to "know" if the sentence is a multiple-wh-question or not (among other things). It is also not obvious how the *which*-phrase and the operator can be merged together in the argument position under the assumptions on which analysis A1 is based.

3.2 Problems with the Analyses of Particular Empirical Phenomena

Besides these more general problems, I also identified a number of problems with van Craenenbroeck's (2008) particular analyses of the data-patterns he presents. These are listed below:

3.2.1 Doubly filled COMP phenomena in Frisian and dialectal Dutch

The first two sets of data are from Frisian and dialectal Dutch. The patterns are virtually identical. Therefore, I will illustrate my criticism only by using the Dutch data. The relevant examples come from Strijen Dutch:

(8) a. Ik weet nie <**of**> met wie <**of**> Jan oan et proate was.
I know not if with who if John on it talkINF was
'I don't know who John was talking to.'
b. Ik weet nie **of** met wie **dat** Jan oan et proate was.
I know not if with who that John on it talkINF was
'I don't know who John was talking to.'
c. Ik vroag me af <***of**> welke jonge <**of**> die maisjes gistere gezien hebbe.
I ask me PRT if which boy if the girls yesterday seen have
'I wonder which boy the girls saw yesterday.'
d. * Ik vroag me af **of** welke jonge **dat** die maisjes gistere gezien hebbe.
I ask me PRT if which boy that the girls yesterday seen have
INTENDED: 'I wonder which boy the girls saw yesterday.'

The data in (8) do not show any connection to the operator-status of the wh-elements involved (and therefore cannot be used to argue for an analysis like A1). They only illustrates that *which*-phrases end up in a position rather high up in the C-domain (they can only precede *of*), whereas other wh-phrases can occupy this position or a lower one (preceding *dat* and following *of*). Furthermore, (8a/c) and (8b/d) do not form minimal pairs: (8a) and (8b) involve wh-PPs and (8c) and (8d) do not. Without more data, one could not decide whether the differences in grammaticality are due to this additional factor.

3.2.2 Swiping in English

Swiping is an acronym for "Sluiced Wh-word Inversion In Northern Germanic". Sluicing in general is the deletion of the complement of a wh-item in embedded wh-sentences. Swiping is exceptional because the wh-word is followed by an inversed preposition. It is restricted to simple wh-phrases, i.e. *which*-phrases are excluded, as Merchant (2002) originally observes:[48]

(9) a. Ed gave a lecture, but I don't know what about.
b. *Ed gave a lecture, but I don't know which topic about.

VC takes this as a proof for the claim that *which*-phrases occupy a smaller number of positions in the C-domain than other wh-phrases. He claims that the preposition in (9a) gets stranded in $SpecCP_2$ with the wh-element moving higher up to $SpecCP_1$. Since DWH never occupy $SpecCP_2$ in analysis A1, it looks as if it can easily explain why (9b) is ungrammatical. But again, nothing hinges on the fact that DWH are base-generated in the C-layer. Analysis A2 – in which $SpecCP_2$ is occupied by an empty operator – can explain the differences in (9) without appealing to base-generation of the *which*-phrase in $SpecCP_1$.

[48] Looking at the list of wh-elements that can partake in swiping in Merchant (2002), the term 'complex wh-phrases' seems to be justified in this case. But as the short summary of Merchant's proposal in the text below should make clear, this has nothing to do with the operator-status of the wh-phrases involved.

Looking at Merchant's (2002) original analysis for these facts, it seems reasonable to explain the difference in (9) by reference to the different internal structures of monomorphematic wh-elements and *which*-phrases. Merchant's analysis is based on the claim that swiping involves head-movement and incorporation of a wh-head to the P-head. Since *which*-phrases are always phrases (they obligatorily take a noun-complement; with bare *which* this can be phonologically empty) they cannot raise to the P-head and incorporate into it.[49]

And finally, proposal A1 predicts that *which*-phrases can never strand a preposition in the IP/VP-domain, since they never occupy a position that low in the structure. This prediction is not borne out as the following data from Radford (2004: 192) show:

(10) a. IKEA only actually has ten stores [from which to sell from]
b. The hearing mechanism is a peripheral, passive system over which we have no control over.

3.2.3 *Wh*-Copying in German

Wh-copying as illustrated by (11a) is generally taken to result from the multiple spell-out of copies of a wh-phrase (which is usually taken to be base-generated in the subordinate clause). To account for the difference in (11), VC proposes that *which*-phrases "do not undergo movement at all throughout the derivation (2008: 10)". Therefore, they cannot leave a copy in the lower clause which could be spelled-out.

(11) a. Wen glaubt Hans wen Jakob gesehen hat?
WhoACC thinks Hans whoACC Jacob seen has
'Who does Hans think that Jacob saw?'
b. * Welches BuchACC glaubst du welches BuchACC Hans liest?
Which book think you which book John reads
'Which book do you think Hans reads?'

The problem that arises for analysis A1 is essentially the same as mentioned in section 3.1: how does the computational system come to know that in these cases, the *which*-phrase is not first-merged in the argument position?

[49] Merchant (2002) takes this head-movement to occur after spell-out. But in his footnote 12, he sketches some possibilities to analyze it as taking place in syntax proper. Since this issue is orthogonal to the topic of this section, I will not discuss the pros and cons of a "head-movement in syntax" approach to swiping.

Besides this, the wh-copying paradigm in German is more complex than the data in van Craenenbroeck (2008) suggests. There are even simple wh-phrases that cannot participate in this construction:[50]

(12) a. *?Wem glaubst du wem Hans das Buch gegeben hat?
Who$_{DAT}$ think you who$_{DAT}$ Hans the book gave
'Who do you think Hans gave the book to?'
b. *?Wie glaubst du wie Hans geschlafen hat?
How think you how John slept has
'How do you think Hans has slept?'

So it seems as if there are external factors governing the appearance of wh-items in this construction. It does not suffice to recur to the operator-status of the wh-elements involved or the first-merge site of the elements under examination. This leads me to the conclusion that at this point wh-copying cannot be used to decide whether an analysis of *which*-phrases is more appropriate than another.

As a last point it should be mentioned that verb-second (in Germanic) is usually taken to be a reflex of (in the relevant cases) wh-movement. Take the data in (13):

(13) a. Du glaubst, Hans liest die Zeit.
You believe John reads the Times
'You believe that John is reading the Times.'
b. Welche Zeitung glaubst du liest Hans?
Which newspaper believes you reads John
'Which newspaper do you believe John reads?'
c. *Welche Zeitung glaubst du Hans liest?
Which newspaper believes you John reads
'Which newspaper do you believe John reads?'

If the *which*-phrase is base-generated in the C-domain, why does the finite verb in the embedded clause obligatorily surface clause-initially in (13b) (the position it occupies in V2-sentences) and not clause-finally as in (13c)?[51]

[50] Note that the degree of grammaticality of wh-copying also varies among speakers of German. (i) is judged as grammatical in Van Craenenbroeck (2008: 10) and this is taken as evidence for the claim that the difference between e.g. *wer* (*who*) and *welch-* (*which*) does not depend on the head-phrase-distinction:

(i) *Mit wem glaubst du mit wem Hans spricht?
'Who do you think Hans is talking with?'

For me, being a native speaker of German, this sentence is clearly ungrammatical (or at least highly marked) and this fact is supportive of the idea that some kind of the head/phrase distinction is at work here.

[51] Again, thanks to Andreas Blümel (p.c.) for reminding me of this fact.

3.2.4 Preposition-stranding in Dutch

Van Riemsdijk (1978) observes that Dutch is a partial preposition-stranding language, inasmuch as only R-pronouns and empty operators can strand a preposition. VC claims that *which*-phrases can also strand a preposition in Dutch, whereas other wh-phrases cannot:

(14) a. * Wie wil je niet mee samenwerken?
Who want you not with cooperate
INTENDED: 'Who don't you want to cooperate with?'
b. ? Welke jongen wil je niet mee samenwerken?
Which boy want you not with cooperate
'Which boy don't you want to cooperate with?' (Dutch)

In an proposal like van Craenenbroeck's, which takes an empty operator to be involved in the derivation of *which*-phrases, van Riemsdijk's generalization can be retained: The preposition is stranded by the empty operator, not the element *which*.

I follow VC in taking this observation as evidence for the fact that with DWH, the operator is not part of the genuine wh-word. But as with the first two data-sets, nothing hinges on the assumption that *which*-phrases are first-merged in $SpecCP_1$. It would suffice to show that the operator(-feature) is not part of the lexical element *which*, but rather occupies its own position inside the DWH.

3.2.5 Free relatives in Dutch

In a number of languages (e.g. Dutch, German, English) free relatives cannot be introduced by *which*-phrases. The following examples are from German:

(15) a. Wer das nicht versteht, ist ein Idiot.
Who this not understands is an idiot
b. *Welcher Mensch das nicht versteht, ist ein Idiot.
Which human this not understands is an idiot

In order to enable his analyses (both A1 and A2) to derive these facts, van Craenenbroeck proposes that with free relatives, "we are dealing with a truncated C-domain, in which CP_2 is present, but CP_1 is not (2008: 12)". Since DWH never occupy CP2, they are not able to occur in free relatives.[52]

The assumption that CP_1 is missing with free relatives gives rise to another problem: If VC is right and CP_1 is the locus of wh-feature-checking, how is the wh-feature on a

[52] Van Craenenbroeck (2008: 12) gives an example from Dutch to support his claim. Remember that in Dutch, *dat* occupies CP_2 and *of* occupies CP_1. Now, only *dat* can occur with free relatives in Dutch, *of* is not possible. This argument relies on the idea that *dat* in free relatives is the same element as the *dat* in the embedded sentences in Dutch or occupies the same position. If not, the example mentioned does not support the claim about the truncated CP with free relatives.

simple wh-phrase in $SpecCP_2$ checked in free relatives in Dutch? This seems to be a nontrivial problem to me, if one assumes that the wh-movement in relatives is also due to the checking requirement of the wh-feature/morphology (cf. den Dikken 2003 and Šimík 2007).

3.2.6 Spading in dialectal Dutch

The last construction discussed in VC is spading (Sluicing Plus a Demonstrative In Non-insular Germanic) in dialectal Dutch. Again, *which*-phrases are excluded from spading (the examples are from Wambeek Dutch):

(16) a. Jef eid iemand gezien, mo ik weet nie wou dat.
Jeff has someone seen but I know not who $that_{DEM}$.
'Jeff saw someone, but I don't know who.'
b. *Jef eid ne student gezien, mo ik weet nie welke student dat.
Jeff has a student seen but I know not which student $that_{DEM}$.
'Jeff saw a student, but I don't know which student.'

VC analyzes spading as follows: The demonstrative originates in SpecIP and focus-moves to $SpecCP_2$. Then, the wh-element raises out of the VP, "tucks in" under the demonstrative in $SpecCP_2$ (cf. Richards 2001) and moves further to $SpecCP_1$ in the course of the derivation. To explain why DWH are excluded from spading, it is argued that with *which*-phrases, the ellipsis site under sluicing is CP_2 and not IP. This will delete the demonstrative and the contrast in (16) is derived. This assumption is grounded in Merchant's (2001) observation that sluicing deletes the complement of the C-head which hosts the wh-phrase. But an important caveat is in order here: Since both simple wh-phrases and DWH end up in $SpecCP_1$ in analysis A1, it is not clear why the demonstrative is not deleted with simple wh-phrases either.

4 Components of an Alternative Analysis

4.1 Preliminaries

Summing up the previous section, van Craenenbroeck's (2008) analyses (no matter if one looks at A1 or A2) seem to be able to account for the data-sets he presents. On closer inspection, however, this is only achieved by a range of assumptions which seem to be only motivated by the analysis. In addition, some of the data-sets can easily be explained without the claim that *which*-phrases are base-generated in the C-layer (as in analysis A1).

Before I continue, I want to highlight that I agree with van Craenenbroeck on three things: (i) With *which*-phrases, the lexical wh-element is not the (wh-)operator; (ii) The differences between DWH and other wh-phrases are structural (VC's footnote 1); and (iii) A split-CP offers a way of accounting for these differences (page 4 of VC 2008). In addition to that, van Craenenbroeck's (2008) paper offers a range of very interesting new data which every analysis of *which*-phrases has to explain.

4.2 Basic Claims

I want to begin to lay out the basics of my own proposal by noting that I believe the two positions van Craenenbroeck calls CP_1 and CP_2 are of a different nature than he claims. In my view, it is appropriate to say that CP_2 is FocP and CP_1 is TopP.

There are several reasons for this assumption. First, it is standard to assume that whereas FocP has operator-properties, TopP does not (cf. Grewendorf 2004; Benincà & Poletto 2004). So the idea that the (wh-)operator targets a position low in the C-domain can be maintained. Second, identifying CP_2 as FocP brings the additional benefit of being a manifestation of the idea that focus and wh are (at least in a large array of languages) closely tied (following a long tradition based on Horvath 1986). So what VC calls an operator-feature can be analyzed as a focus-feature.[53][54] Third, TopP is generally taken to sit higher in the structure than FocP (see Benincà & Poletto for arguments against a topic-position below FocP). Fourth, it seems to be the case that there are different positions targeted by wh-elements – not only in different languages but also in a single language itself, depending on the kind of wh-movement examined. Nevertheless, the focus-position seems to be the locus of wh-feature checking in the majority of cases (or at least it is involved in the derivation of most wh-questions). This opens up the possibility to analyse CP_1 as the projection of another formal-feature, the topic-feature, and not of the wh-feature.

The idea that the derivation of *which*-phrases involves a topic-feature (i.e. that DWH are syntactic topics) can be found in Comorovski (1996), Rizzi (2000), Polinsky (2001), Richards (2001) and Grewendorf (2008). Following Erteshik-Shir (1997) and Rizzi (2000), I take the topic-feature to be located on the lexical restriction of the *which*-phrase. The restriction is contextually-given like topics (i.e. it is presupposed/specific).[55] Together with the idea that CP_1 is really TopP, and that TopP is located higher in the structure than FocP, this topic-feature can account for the fact that DWH can move up to a higher position in the C-domain than other wh-items.

The second main point of my analysis is that DWH are headed by a null D-head. The idea of a null D-head with *which*-phrases goes back to the semantic analysis by Rullmann & Beck (1998). They observed that *which*-phrases project presuppositions the same way a non-wh-definite would. Boeckx & Grohmann (2004) expand on this and claim that this empty D-head can get stranded in the base-position and can be spelled-out as a resumptive pronoun. Through this move, they are able to account for the obligatory

[53] VC himself writes: "[…] the demonstrative focus-moves to specCP*2*" (2008: 16).

[54] This move also circumvents the conceptual problems that the assumption of an operator-feature faces. Maybe it is more appropriate to assume that certain positions in the C-layer are marked for being operator-positions (cf. Boeckx & Grohmann 2004) and to justified the features that drive movement to this positions on independent grounds (like the focus-feature).

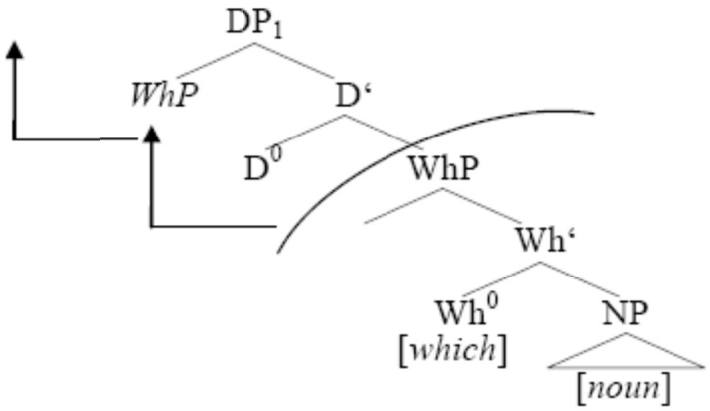
[55] Cinque (1990: 53) notes that *which*-phrases and topicalized elements are very similar in their referentiality-status (the semantic notion he assumes to be the basis of d-linking).

presence of resumptive pronouns with *which*-phrases in languages like Romanian (cf. Dobrovie-Sorin 1993; see also Doron 1982 and Sharvit 1999 for Hebrew).

Concerning the relation of the lexical item *which* and the operator, for the purpose of this chapter I follow the claim that the operator is base-generated in CP. Another possibility would be to follow Hagstrom (1998) and Bošković (1998) in assuming a Q-morpheme that can be generated together with different wh-elements in a multiple-wh-question. Note that both alternatives are compatible with the view that the lexical item *which* is not the bearer of what could be called operator-properties.

I suggest the following internal structure for *which*-phrases: On top of the structure, there is an empty D-head. This D-head takes the wh-element *which* (bearing the wh-feature) as its complement. At the bottom of the structure we find the (nominal) restriction of the wh-element which bears a topic-feature. In cases of movement of the wh-phrase, the WhP raises out of the DP via SpecDP. The corresponding tree looks like (17):

(17) Internal structure of *which*-phrases

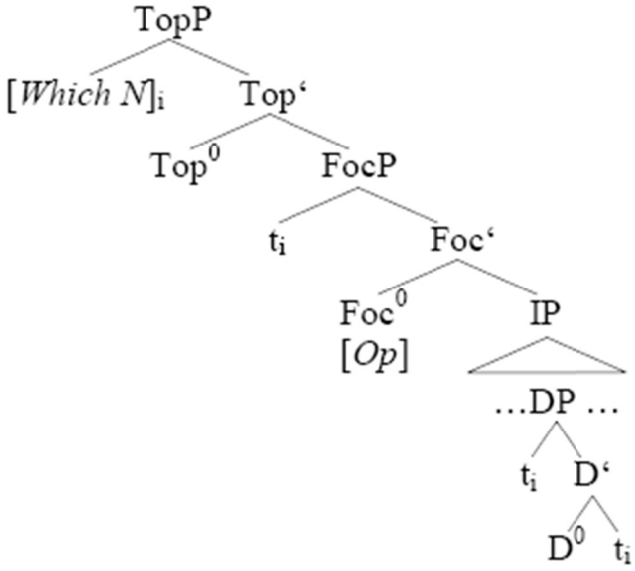


I depart from the structures for *which*-phrases proposed in Boeckx & Grohmann (2004) and Boeckx (2003) and assume an additional projection, called WhP here, between the DP and the NP headed by *which*. With this I follow, among others, Radford (2004) in assuming that *which* heads its own projection.[56]

The derivation of *which*-phrases according to my analysis is illustrated in (18). The operator is first-merged in Foc_0 - this can vary depending on the language/construction under examination. From this position it is able to bind the variable that is represented by the whole DP in the base-position (recall that the D-head can get a spell-out as a resumptive which also needs to be bound by an operator in A'-position). I assume clause typing to be able to occur via Agree, i.e. the wh-phrase does not have to rise to the specifier of a designated position to check its wh-feature. Independent of this issue, it is most plausible to assume that the wh-feature is located in the wh-word itself.

[56] The exact label is of no importance for the present chapter.

(18) Derivation of DWH:



To summarise the main points of the proposed analysis so far:

(a) DWH have a complex DP-structure. They are headed by an empty D-head which can be stranded and spelled-out as a RP.
(b) The restriction of a DWH is endowed with a topic-feature.
(c) The operator with DWH is not identical with the lexical element *which.*

In the next two subsections, I present a range of empirical arguments that corroborate the first two claims. In subsection 4.5. I will go through the data-sets discussed in section 3 and show how an analysis along the lines sketched above could be able to account for them).

4.3 Supporting Evidence I: DWH as topics

Since Horvath (1986), it has been claimed that all non-echo-wh-phrases are endowed with a focus-feature and therefore, one may ask if it is tenable to assume a *which*-phrase to bear a topic feature. In a sense, focus and topic seem to exclude each other. But independent of DWH, it has been claimed that the notion of topic is involved in the derivation of some instances of wh-questions (cf. Grohmann 2006 for German). This possibility for a wh-phrase to act as a topic is illustrated by the Chinese example from Wu (1996) in (19b) with a topicalized wh-phrase.[57] Chinese is a wh-in-situ language, so the

[57] Not surprisingly, the sentence can only be used in a situation that exactly fits the definition of d-linking: It can only be uttered if the possible answers can be drawn from a set preestablished in the context/discourse.

fronting of a wh-element is exceptional, and one way to account for this is assuming a topic-layer which the dislocated wh-item can target:

(19) a. Zhangsan mai-le shenme?
Zhangsan buy-ASP what?
‚What did Zhangsan buy?‘
b. Shenme Zhangsan mai-le?

Strong syntactic evidence for the assumption that DWH are syntactic topics can be found in Tsez (Polinsky 2001). This language exhibits a construction (long-distance-agreement/LDA) which forces a matrix verb to agree with the absolutive argument of the embedded clause. The absolutive argument must also bear a topic-marker:

(20) a. Enir [uza magalu **-gon** bac'ruli] b-iy-xo.
Mother boy bread**.ABS.III-TOP** ate **III-**know-PRS(present tense)
'The mother knows that the bread, the boy ate'
b. *Enir [uza magalu **-gon** bac'ruli] r-iy-xo.
Mother boy bread**.ABS.III-TOP** ate **IV-**know-PRS
c. *Enir [uza magalu **-kin** bac'ruli] b-iy-xo.
Mother boy bread**.ABS.III-FOC** ate **III-**know-PRS

An embedded *nasi N* (*which N*) must trigger LDA. This contrasts with NDWH which may not trigger LDA:

(21) a. Dar [nasi kec' nesir b-ati-ru-li] b-iy-x-anu
Me.DAT which song.**III.ABS** him.DAT III-like-past part-NL **III-**know-PRS-NEG
'I don't know which song he liked
b. *Dar [nasi kec' nesir b-ati-ru-li] r-iy-x-anu
Me.DAT which song.**III.ABS** him.DAT III-like-past part-NL **IV-**know-PRS-NEG

Grewendorf (2008) observes that in German the degree of grammaticality of extraction from wh-islands is the same for movement of DWH as for movement of topics:

(22) a. ?[Welches Buch]$_i$ weißt du nicht, [wem du t_i geben sollst]?
Which book$_{acc}$ know you not who$_{dat}$ you give should
b. ?[Radios]$_i$ kann ich mich nicht erinnern, [wie man t_i repariert].
Radios$_{acc}$ can I refl. not remember how one repairs
c. *Was$_i$ weißt du nicht, [wem du t_i geben sollst]?
What$_{acc}$ know you not who$_{dat}$ you give should

Furthermore, Grohmann (2006) claims that all instances of wh-fronting in German are instances of topic-movement. Interestingly, German does not display superiority-effects in general. Grohmann's claim can be compared to Bošković's (2002) analysis of

multiple-wh-fronting in Slavic, due to which only the fronting of the superior wh-phrase is an instance of wh-fronting, all other wh-phrases moving to check their focus-features (cf. Sabel 1998; Grewendorf 2008: 11). See Reglero (2003) for an analysis of superiority in Basque which heavily relies on the contrast between wh-foci and wh-topics.
So the absence of superiority with DWH seems to depend on the fact that the topic-positions in the left-periphery are located higher than the focus-checking position (in general) and that DWH can target this position(s), whereas other wh-phrases cannot.[58]

4.4 Supporting Evidence II: The null D-head

As has already been mentioned, the idea that *which*-phrases are headed by a null D-head goes back to the semantic analysis of DWH by Rullmann & Beck (1998). Besides their semantic reasoning, there are a number of languages that realize the D-head with DWH overtly. The following Albanian example is taken from Kalluli (1999):

(23) Cil-et libra (i) solli Ana?
Which-the books them bought Ana.
'Which books did Ana buy?'

In Portuguese, the appearance of the overt definite determiner *o* in front of *quê* (*what*) is obligatory if this receives a d-linked interpretation (as it does in the in-situ example in (24) from Boeckx 2003):

(24) A Maria viu *quê/o quê.
The Maria saw what/the what
'Which thing did Maria see?'

In addition, Boeckx (2003) points to the fact that forms like Archaic Dutch *hetwelk* (*the-which*) and Bavarian *an waichan* (*the which-one*) can as well be taken as instances of the overt spell-out of the D-head. So, there is empirical syntactic evidence for the possibility of the structure Rullmann & Beck (1998) proposed on semantic grounds.

And finally, I take the proposed D-head to explain the specific nature of DWH as they have been identified by cf. Kiss (1993). In this context it is worthwhile to point to the fact that in Enç's (1991) influential (semantic) theory of specificity, the definition of specificity is exactly the one Pesetsky (1987) gave for d-linking (as Enç himself observes in her footnote 8). This connection of d-linking and specificity gains more plausibility in light of the following facts: (i) the element *pe* in Romanian (which is obligatory with DWH) is only preceding elements supporting a definite/specific reading (Boeckx 2003: 36); and (ii) resumptive pronouns (which are obligatory with DWH in some languages) appear to trigger a specific reading on the antecedent (Boeckx 2003: 19, 32).

[58] Bošković (2002: 360) and Boeckx & Grohmann (2004) observe a number of similarities between DWH and (long-distance) scrambled phrases (e.g. lack of superiority-effects, insensitivity to weak islands, obligatory reconstruction, triggering of clitic-doubling). If Grewendorf (2005) is right and scrambling is not an instance of optional (stylistic) reordering of constituents but due to the checking of discourse-related features like topic and focus, this correlation is expected.

4.5 How my analysis can account for the data in Van Craenenbroeck 2008

4.5.1 Doubly filled COMP phenomena in Frisian and dialectal Dutch

Which-phrases have to move to TopP and cannot stay in FocP. Therefore, they can only licence *of* (being the complementizer in the head-position of TopP). The fact that *wie* is also able to move to TopP can easily explained by the possibility of wh-elements like *who* to receive a d-linked interpretation, i.e. to act as syntactic topics (cf. Grewendorf 2008, among others).

4.5.2 Swiping in English

As has already been mentioned in section 3.2, the exclusion of *which*-phrases in swiping seems to depend on the more complex structure of *which* compared to bare wh-items like *who*. The internal structure of *which* renders this element an XP and prevents it from head-moving to P_0 (and incorporating into the preposition). This ban can be accounted for by something like the 'structure-preservation principle': an XP cannot move to an X_0 position (cf. Radford 2004).

4.5.3 Wh-copying in German

Although I do not have an account for this construction (at least none which is relevant for the topic of this chapter), I argued in section 3.2 that wh-copying cannot be used to decide whether an analysis of *which*-phrases is more appropriate than another. Because of this, I do not take the lack of an analysis on my part as a possible counter-argument against my view on the derivation of *which*-phrases (especially that they are first-merged inside the VP).

4.5.4 Preposition-stranding in Dutch

If one is not reluctant to expand van Riemsdijk's (1978) generalization about the elements that can strand a preposition in Dutch to *which*-phrases, there seems to be no problem for an analysis along the lines sketched in the previous section. I do not think the inclusion of DWH complicates the generalization (as VC does). At the moment, I do not have anything to say about why simple wh-phrases are not able to strand a preposition in Dutch.

4.5.5 Free relatives in Dutch

On the one hand, I have to admit that my analysis has nothing to say about the fact that *which* (and its cognates) cannot appear in free relatives in English, German and Dutch. But on the other hand, it does not run into the problems for VC's analysis I mentioned. Even if one accepts VC's claim that CP1 is missing with free relatives, the problem how to check the wh-feature does not arise in my analysis: Since I take CP_1 to be TopP, truncating it would not interfere with wh-feature-checking.

Research on the distribution of wh-items as relative-pronouns in German and English may shed light on this problem: In German, *wer* (*who*) cannot introduce a relative clause, but *welch-* (*which*) can. Even the use of *was* (*what*), being a genuine wh-operator (Grewendorf 2008) is restricted in colloquial German and not allowed in more formal registers. In English, *who* can appear in headed relative clauses but *what* cannot. Explaining these differences seems to me to be the first step to explaining why *which* cannot appear in free relatives.

4.5.6 Spading in dialectal Dutch

As far as I can see, there is a simpler way to account for the contrast in (16). If the demonstrative is base-generated together with the wh-element, one could exclude the demonstrative with DWH by claiming that the internal structure of *which*-phrases does not include a position for the demonstrative: the lexical element *which* obligatorily takes a noun complement (in case of a bare *which*, this receives a null spell-out) that cannot take the demonstrative as a complement itself. Therefore, the demonstrative in spading is ungrammatical with DWH.

5 Conclusion

The analysis of *which*-phrases I proposed in the preceding section does not face the conceptual problems analysis A1 faces. In particular, my analysis: (i) is compatible with standard assumptions about argument selection; (ii) has no problem with reconstruction; (iii) can explain the data discussed in section 3 in accordance with standard assumptions on wh-movement (i.e. it does not rely on assumptions like '*which*-phrases never move').

By connecting van Craenenbroeck's (2008) claim (2) with the insights gained in the already existing work on *which*-phrases (e.g. the topic character of DWH and the specific interpretation of *which*-phrases), the analysis supported in section 4 is potentially able to account for other phenomena associated with DWH: (i) the lack of superiority effects (wh vs. focus vs. topic); (ii) the licensing of resumptive pronouns (D-head); and (iii) possibly the insensitivity to weak islands (topic-status and D-head).

Since this is work in progress, there are naturally some issues to be more thoroughly investigated. Besides the problems for my analysis I have identified in section 4.4., questions to be asked (and hopefully answered) in my future research include:

(a) *Can [TOP] and [FOC] appear on the same element/in the same phrase?*

Although I have argued for a positive answer to this question on syntactic grounds, semantic and information-structural considerations have to be evaluated, too.[59]

(b) *What is the role of the operator in wh-questions and (how) is it encoded syntactically?*

[59] See also Krifka & Féry (2009) for additional arguments supporting the claim that focus and topic are not mutually exclusive.

The discussion so far should have made clear that the biggest puzzle concerns the operator-status of *which*-phrases and how to implement differences to other wh-phrases in a theory. This is tightly connected to the question whether the bearer of operator-properties are lexical elements or syntactic positions. Maybe both is correct, but then the question discussed in note 13 (is there an operator-feature?) gains even more prominence.
(c) *What is the connection between the focus-feature and the wh-feature?*

As has been said already, it is often assumed that the wh-feature is often accompanied by a focus-feature. On the other hand, they are definitely different items. If DWH are endowed with a topic-feature, do they also really bear a focus-feature and what are the details of the interaction of both (or all three)? I just roughly sketched the way my analysis can account for the obviation of superiority with DWH, but surely, for my account to be gaining explanatory power, the intricate interplay of the features under discussion in different languages has to be explored in more detail.

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CHAPTER 8

ADULT ROOT INFINITIVES

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Adult Root Infinitives (ARIs) are a variety of infinitival structures occurring in root (i.e. main clause/independent) contexts. A central feature that distinguishes ARIs from other root infinitives (RIs, e.g. infinitival *wh*-questions) is their pragmatic meaning: a speaker's incredulity towards the proposition of a previous utterance. Other notable aspects are the cross-linguistic availability of ARIs (an Indo-European phenomenon), and the morphosyntactic variation across these languages (e.g. variable Subject Case, or an optional coordinator). As an apparently impoverished and idiosyncratic syntagm, ARIs have often been put forth to argue against generativist-derivational theories of syntax (e.g. Fillmore et al. 1988, Lambrecht 1990). Taking sides with Etxepare & Grohmann (2002 et seq.), I argue that the ARI can well be subsumed under a generalised derivational principle like those of Minimalist Syntax (cf. Chomsky 1995 et seq.). The more general discussion of various aspects of the ARI is followed by a sketch of a syntax of (non)finiteness formulated within a phase-based minimalist framework.

1 INTRODUCTION

This paper deals with a syntactic construction referred to as *Adult Root Infinitive* (ARI; cf. Etxepare & Grohmann 2002 et seq.). Section 2 is a survey of the grammatical properties of the ARI, mainly a condensed version of Wenger (2008). It touches on the discourse-pragmatics and the prosodic characteristics of the ARI, as wells as on its relation to child language (2.1.). In addition, three morphosyntactic properties are explored: the restriction to embedded domains, cross-linguistic variation/distribution, and Subject Case (2.2.). The subsection on Subject Case (2.2.3) anticipates the syntactic analysis in section 3 (formulated in the theoretical framework of phase-based minimalism; cf. Chomsky 2001 et seq.), where it will be shown that the key to understanding the syntax of ARIs lies in the concept of nonfiniteness and its epiphenomena (Subject Case[60], verb inflection, syntactic dependence). It concludes that ARIs most likely constitute Tense phrases (TP/IP).

[60]Technical terms in caps (e.g. '*C*ase') refer to the generative definition of a given notion. 'Case', e.g., is structural Case, i.e. case assigned to a nominal by another element in its syntactic environment (e.g., Nominative by T(ense)).

2 GRAMMATICAL PROPERTIES

2.1 Discourse-pragmatics, prosody, semantics & ontogenetic variation

As shown in the following mini-discourse (speaker A – speaker B), the illocutionary force of the ARI is to express incredulity (orthographically marked by '!?') towards a previously uttered proposition (within a reference turn; cf. Bücker 2008; *Incredulity Response Construction* in Lambrecht 1990). Typically, it is preceded by another, simplex interjection of incredulity (*What!?*), and/or followed by a dissentive expression confirming the incredulity raised by the preceding ARI.

(1) A: I heard Quagmire's preparing a paper for the forthcoming MLC18 proceedings…– B: What!? *Him prepare a paper*!? No way, dude! He's got other things on his mind…

The incredulity expressed by the ARI also correlates with a distinct prosodic structure: the Subject obligatorily bears focal stress (represented by caps), and the intonation contour of ARIs is final-rising (a global rise, typical of open interrogatives; represented by '[↑]')[61].

(2) HIM prepare a paper [↑]!?

Another property of the ARI, reflected in its attribute *adult*, is that it is restricted to adult registers. This is an important qualification since root infinitives (RIs) are far from uncommon in *child* language – indeed, at least during one stage of language acquisition, Child Root Infinitives (CRIs) make up the majority of utterances (cf. Rizzi 1993; (3) from Radford 1990).

(3) a. Baby eat cookies. – CRI
b. The baby eat cookies!? – ARI

However, despite the formal resemblance of CRIs to ARIs, they differ in one crucial respect: CRIs may in principle have one of a whole range of aspectual, temporal, and modal, as well as illocutionary meanings – a degree of polysemy (or, grammatical underspecification) that presumably needs (post-syntactic) disambiguation based on contextual information (cf. Avrutin's 1999 approach to RIs). Accordingly, (3) may be variably translated into adult English as 'The baby eats/is eating/ate/should eat/… cookies'. ARIs, on the other hand, are rather specialised in that they can only carry what

[61] There seems to exist a prosodic variant with falling intonation (orthographically marked by '...' instead of '!?') and unfocussed Subject: *Yeah, yeah… Him like books...Whatever you say....* In this case, however, the ARI expresses non-genuine incredulity. The *syntactic* (pragmatics notwithstanding) analysis presented in sections 3 should carry over to it.

might be dubbed *incredulitive force* (as discussed above). Interestingly, the functional domains of CRIs and ARIs seem to be mutually exclusive: CRIs can express almost any of the aforementioned meanings, with the exception of incredulity, to which, in turn, ARIs are restricted. This opposition is also reflected in the relative frequency of ARIs vs. CRIs in natural discourse: While CRIs – as pointed out above – are an omnipresent phenomenon of child language, ARIs seem to occur considerably less frequently in adult speech[62]. Finally, in addition to its special incredulitive force, there is another feature that distinguishes ARIs from CRIs, which is the irrealis semantics typical of infinitives: they denote situations/propositions evaluated w.r.t. a non-actual ('unreal', hence *irrealis*) world. CRIs, on the other hand, may be realis in that they can be used to assert[63].

With this rough outline of the prosodic and discourse-pragmatic properties of ARIs, including a brief comparison of ARIs with CRIs, I now turn to the morphosyntactic characterisation of ARIs.

2.2 Morphosyntax

2.2.1 Restriction to root domain

The attribute *root* of the ARI refers to the fact that ARIs occur as independent main clauses only (clauses forming the root (domain) of an upside-down syntactic tree graph). This is noteworthy insofar as nonfinite structures (infinitives, gerunds, participles, etc.) appear to be restricted to dependent/subordinate contexts, as the following examples of nonfinite complements show (which yield ungrammatical sentences standing alone, e.g. *My thesis finished*; cf. (d)):

(4) a. I'll make [him like books]. – CAUSATIVE (BARE INFINITIVE)
b. I want [him to like books]. – VOLITIONAL (*TO*-INFINITIVE)
c. I saw [him reading]. -- PERCEPTIVE (PRESENT PARTICIPLE)
d. I consider [my thesis finished]. – 'SMALL CLAUSE' (PAST PARTICIPLE)

ARIs, on the other hand, not only are restricted to root contexts, but moreover, they cannot be embedded at all (under equivalent – i.e. incredulitive, or dubitative – predicates). They are a root phenomenon[64].

(5) *I doubt/wonder/don't believe [*him like books*].

[62] ARIs seem to be restricted to oral speech (cf. Bücker 2007, 2008 for a number of attested German ARIs from internet newsgroups).
[63] There is a heated debate on the semantics of CRS in terms of their modality. Some authors maintain that CRIs do exclusively express irrealis modality (cf. Hoekstra & Hyams 1998).
[64] There exist yet other types of RIs, such as infinitival *wh*-interrogatives (cf. Reis 2003 for German): *Warum nur Linguistik studieren?* 'Why (only) study linguistics?'. Ultimately, these (and other) RIs should share a derivational commonality, the additional domain of variance having to do with illocutionary meaning.

While the restriction of ARIs to root domains is already exceptional within a language-specific system (like English), even more interestingly, this oddity seems to be available to numerous Indo-European languages, as sketched in the following typological section[65].

2.2.2 Cross-linguistic distribution

As shown by Etxepare and Grohmann (2002 et seq.) and Bücker (2008:7), the ARI is no phenomenon restricted to central European languages[66]. For the following languages the availability of the ARI is attested: Germanic (German, Dutch, English, Swedish, Norwegian), Romance (French, Spanish, Portuguese, Galician, Catalan, Italian), Slavic (Polish, Russian, Latvian), Uralic (Hungarian)[67].

Although the ARIs of different languages seem to share a set of core characteristics, they do differ along specific dimensions. As Grohmann and Etxepare (2003) and Etxepare and Grohmann (2007) show, for instance, variation exists in the compatibility with quantificational Subjects, the permissibility of discourse-fronted material (topics, etc.), or the availability of temporal-aspectual modification (e.g. deictic adverbials, perfect auxiliaries).

Instead of elaborating on the typological dimension (cf. Wenger 2008 for more discussion), I would like to take one step back in what follows, and examine the ARI from a more basic angle, discussing whether the ARI constitutes a unified, integrated syntagm that can be subjected to syntactic analysis at all.

2.2.3 Subject Case

The common characterisation of the morphosyntax of infinitives (and of nonfinite structures in general) includes the absence of Subject-verb agreement (SVA), of verbal tense inflection, and of overt nominative (NOM) Subjects. Evidently, the latter criterion is only partially met in ARIs, which *do* have overt Subjects, which in English, however, surface in the accusative (ACC) form (visible if pronominal)[68]:

(6) *Him*$_{[ACC]}$/*He$_{[NOM]}$ prepare a paper!?

As in generative theory it is required for overt Subjects (all DPs more generally) to be

[65] Potts & Roeper (2006) offer a pragmatic/semantic explanation for the unembeddability of ARIs.

[66] A more general problem in this respect is posed by the imprecise semantic and morphosyntactic definition of the notion of finiteness (cf. Nikolaeva 2007 for an overview and different views; cf. Wenger 2009 for my own point of view).

[67] My own empirical research has produced two other, Slavic languages that possess ARIs: Bulgarian and Croatian. Thanks to my informants Iwo Iwanov and Iva Riekert-Wenger.

[68] This seems to be also true of French: *Lui*$_{[ACC]}$/?*$Il_{[NOM]}$ *aimer les livres!?* 'Him like books!?'.

Case-marked (this intuition goes back to at least Vergnaud's (1977 [2008]) Case Filter), the central question with regard to the ARI Subject is where its Case stems from. Structural Cases, i.e. nominative and accusative, are considered to be assigned in particular configurations, by particular categories: Thus, while ACC is typically assigned to direct Objects by transitive verbs, NOM (a.k.a. Subject Case) has typically been correlated with 'finite' I (1980s), later on 'finite' T (1990s) – ultimately with a [+Tense] category (cf. Chomsky 1981:19). A Subject agreement feature Agr_S (i.e. SVA), either contained within I (Chomsky 1981), or projecting independently ($Agr_SP > TP$; cf. Pollock 1989; Belletti 1990), has always been considered a licensor for [NOM] as well (as opposed to [+Tense]), at least since George & Kornfilt (1981). The correlation between Agr_S and NOM re-entered the latest revision of generative theory – minimalist syntax – as [NOM] being a post-syntactic reflex of SVA (now complete [*uφ*] on T instead of Agr_S; cf. Chomsky 2001:6, 16). Whatever the licensor of [NOM], it has rarely been conceived of as primitive, but always as contingent on another morphosyntactic property.

Provided such a theory of Case, ARIs raise the question of what licenses their [ACC] Subjects – it cannot be a (higher) predicate (as in ECM-clauses; cf. (4)), nor, obviously, a [+finite]-feature (be it [+Tense], or SVA). Besides structural Case (and inherent Case, i.e. dative/oblique), there exists yet another 'type of Case', which seems to be operative in ARIs: *default Case* (cf. Schütze 1997). In certain syntactic environments, where no structural Case-assigner is available (V[+trans], I[+fin]), some sort of default mechanism[69] kicks in, which provides an unvalued Case feature with a default value, thus 'rescuing' a derivation (cf. the Case Filter mentioned above: 'overtness requires Case'). This default Case appears to be identical with the unmarked nominative Case in most of the relevant languages (e.g. German); English, however, produces [ACC] Subject Case in a number of environments where an explanation based on default Case seems reasonable, given that there is no other possible Case-assigner (finite T, prepositional C(OMP), matrix transitive predicate):

(7) a. *Him*/*He/*His sleeping, I went out alone. – PARTICIPLE CLAUSE
b. A: Who is it? – B: It's *me*/*I/*my. – FOCUS POSITION
c. *Him*/*He/*His, he digs cheese cake. – LEFT DISLOCATION

What these nonfinite domains share is the lack of a Case-assigner, which is why the default mechanism kicks in, providing the Subjects with the English default Case [ACC] (and not, say, [GEN])[70].

To conclude this subsection, I would like to briefly compare two alternative approaches to the Subject Case of ARIs with the superior (viz. more economical) default strategy. The prosodic nature of the ARI Subject, i.e. their being obligatorily focussed, is one obvious

[69] This mechanism, which provides nominals with a default Case (and operates more generally in terms of a default grammar; e.g. infinitival morphology might be another case at hand), is construed as a post-syntactic, morphological process, as implemented in Distributed Morphology (cf. Schütze 1997 for details).
[70] Visser (1963:237ff.) identifies [NOM] as the default Case for older stages of English.

candidate for the source of the [ACC] Case, the idea being that focus yields some kind of a strong pronominal form, on the assumption that the English [NOM] pronouns are too weak, in terms of their lexical-phonological complexity, to bear focal stress. Whatever the pronominal status of English pronouns (strong, weak, clitic; cf. Cardinaletti & Starke 1999 for an overview), it is rather easy to demonstrate that focussing a pronoun does not necessarily yield [ACC] Case (indeed, excludes it), which would be unexpected given the obligatoriness of [ACC] in ARIs:

(8) a. *HE* is the double agent (, not Herbert)!
b. ?* *HIM* is the double agent (, not Herbert)!

Here, the Subject pronoun bears a contrastive focus (as indicated by the bracketed *Herbert*, one member of the contrast set), but receives [NOM] rather than [ACC] Case, which actually yields at least a deviant sentence (marked '?*'), if not ungrammatical. Although the focus of ARI Subjects seems to be of a different nature than contrastive focus (incredulity, rather than contrast), it is reasonable to dissociate focus assignment from Subject Case licensing, given the heterogeneous distribution of both categories (also cf. (7) above).

The second alternative explanation is related to one class of nonfinite structures licensing [ACC] Subject Case, where in some cases an overt, non-verbal Case-assigning element is available (prepositional COMPs; (a, b)), in some cases none at all (c, d):

(9) a. I want [for *him* to read less Chomsky]. – *FOR…TO*-INFINITVAL
b. [With *him* gone to bed], the party started. – 'SMALL CLAUSE'
c. [*Him* distracting the cat], I was able to grab its tail. – PARTICIPIAL CLAUSE
d. [*Him* kissing the goldfish] is a disturbing image. – CLAUSAL GERUND

These clauses all have in common that there is no finite predicate assigning the [ACC] Case to their Subjects, as in 'ECM'-infinitivals (e.g. *I* want *him to read less Chomsky*). However, the nonfinite clauses in (a, b) are headed by prepositional COMPs (*for* and *with*), which might act as Case-assigners[71]. Now, one methodological cornerstone of generative theory being maximal reduction of various phenomena to common sources (i.e. generalisation), one might envision an analogical extension of (a, b) to (c,d) *qua* null COMPs (something that is done e.g. in Radford (2009), possibly for textbook didactics). Thus, while as for (a, b) it is the nonfinite COMPs *for/with* in C that assign [ACC] to the Subject 'under government', this is achieved by the null COMP ('∅') in (c,d) (provided the tripartition of the clausal spine into CP > IP > *v*P (*v* = transitive V); cf. Carnie 2008: ch. 11 for a concise but illuminating overview):

(10) a. I want [$_{CP}$ [$_{C°}$ for]$_{[ACC]}$ [$_{IP}$ *him*$_{[ACC]}$ [$_{I°}$ to] [$_{vP}$ read less Chomsky]]].

[71] Indeed, it is uncontroversial that their properly prepositional counterparts (and possibly their diachronic sources) do assign [ACC].

b. [$_{CP}$ [$_{C°}$ ∅]$_{[ACC]}$ [$_{IP}$ *Him*$_{[ACC]}$ I° [$_{vP}$ kissing the goldfish]]] is a disturbing image.

One domain of inquiry central to generative theory are infinitival structures such as Control, raising, and 'ECM'-infinitivals. What is essential here is that these are all dependent on (= selected or licensed by) a higher predicate. Accordingly, the source of the [ACC] Case of Subjects in nonfinite argument clauses (= Complements) has been ascribed to the dependency between matrix predicate and embedded Subject, something that is evidently not an option with the relevant examples above, which are Adjunct (= 'non-selected/-licensed', thus omissible) clauses. Importantly, the study of nonfinite Complementation (cf. Bošković 1997 for an elaborate survey) has produced an asymmetry w.r.t. the structural complexity of Control and COMP-infinitivals on the one hand, and raising and 'ECM'-infinitvals on the other: While the former are considered CPs (cf. Davies & Dubinsky 2004 for Control infinitivals), the latter are considered truncated (= reduced) to IP, essentially for the lack of any evidence to the contrary. This structural asymmetry is reflected in the different mobility of e.g. Control vs. 'ECM'-infinitvals:

(11) a. [$_{CP}$ PRO$_k$ To read less Chomsky]$_i$ is what I$_k$ promise t_i.
b. *[$_{IP}$ Him to read less Chomsky]$_i$ is what I want t_i.

To sum up, only CPs can be moved (pseudo-clefted, topicalised), passivised, phonetically isolated, etc., but IPs cannot. While these contrasts may prove valid, it is far from clear that they are reducible to the contrast in structural complexity – the CP vs. IP opposition retains an *ad hoc* flavour. What is worse is that these differences (or at least some of them) do not seem to extend easily to the Adjunct clause given in (9c, d) above. While their similarity to 'ECM'-Complements (no overt COMP, [ACC] Subject Case) suggests a treatment as IPs, they are not subject to the same mobility constraints[72]:

(12) a. It is [$_{?P}$ him kissing the goldfish] that is a disturbing image. – CLEFT
b. What is a disturbing image is [$_{?P}$ him kissing the goldfish]. – PSEUDO-CLEFT

Thus, the categorical status (CP vs. IP) of the clausal gerund in (12) remains unclear (?P). In any case, attractive as a generalisation of superficially different nonfinite structures to a uniform structural representation might be, I think it misses a central desideratum of minimalist theory: economy. All that e.g. a null COMP theory of the nonfinite Adjuncts discussed above does is extend the explanation of one phenomenon (i.e. Case-assigning prepositional COMPs) to another one (i.e. COMP-less nonfinite clauses with [ACC] Subjects), while there is an equally adequate, but, importantly, more economical solution readily available, not appealing to an *ad hoc* stipulation like null COMPs: default Case.

[72] Granted, copular sentences, and clefts, and pseudo-clefts in particular, are a difficult case in their own right. The asymmetry in grammaticality w.r.t. mobility between the Adjunct clause in (12), and the 'ECM'-clause in (11b), however, remains a fact.

Therefore, instead of assuming null Case assigners wherever a non-canonically Case-marked Subject occurs in a nonfinite structure, I maintain the more economical approach based on default Case assignment (prepositional COMPS notwithstanding).

Against this background, I would like to discuss in the following section evidence for and against the structural complexity of ARIs. More concretely, based on the tripartition of the clause into CP > IP > *v*P (where each phrase is likely to stand for a more fine-grained clause structure along the lines of Cartographic approaches to phrase-structure; cf. Rizzi 1997, among many others), boils down to the question: Are ARIs CPs, IPs, or *v*Ps?

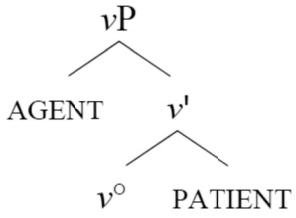
2.3 The phrase-structural complexity of ARIs

2.3.1 Minimalist syntax

In this section, I give a concise account of the essentials of the most recent framework of generative syntax.

Syntactic theory in the (mainstream) generative vein (evolving around Chomsky's works), which in its latest incarnation (going back to Chomsky 1993) might be referred to as *minimalist syntax*, assumes a phrase-structural skeleton for each clause (reduced clauses being excluded for now) consisting of three domains nested within each other like in a Matryoshka doll: CP > IP > *v*P. The lowest, verbal domain *v*P is where argument structure is licensed in a uniform fashion, as thematic roles (AGENT, PATIENT, etc.) are concerned (the so-called *Universal Theta-Assignment Hypothesis* (UTAH), first formulated in Baker 1988). Thus, AGENT nominals are always licensed in the Spec(ifier) of *v*P as an external argument, and PATIENTs (a.k.a. THEMEs in generative vocabulary) as the sister (i.e. the Complement) of *v*P as internal arguments.

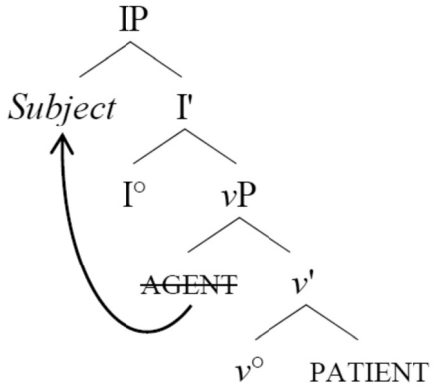
(13)



What is particularly interesting in this respect is a contrast in thematic structure deriving from the split of intransitive verbs into two classes: verbs that have a PATIENT-like Subject (unaccusatives, e.g. *fall*), and those that have an AGENT-like Subject (unergatives, e.g. *dance*). Provided the UTAH is valid, unaccusatives, lacking external arguments, would evidently fail to yield the actually observed surface word order of intransitive-unaccusative sentences if their PATIENT argument were spelt out *in situ*, i.e. as the Complement of *v*. Rather, they would produce the ungrammatical ***Fell the guillotine* instead of the correct *The guillotine fell.* This line of argumentation is the base of the *VP-internal Subject Hypothesis* (VPISH), which captures one aspect a principle like the

UTAH entails – that the notion of Subject is a derivative one. Thus, it is assumed that the Subject-to-be argument (be it AGENT, PATIENT, etc.), i.e. the highest nominal within the *v*P, moves from its *v*P-internal position to (the Spec of) a higher, *v*P-external one, becoming the grammatical Subject. The Subject position is generally assumed to be the Spec of IP (or of another I-related head – or of an even higher one, under particular circumstances, as proposed in more recent works; cf. e.g. Rizzi & Shlonsky 2006, 2007).

(14)



The inflectional head I of the clausal domain superseding *v*P not only licenses Subjects in its Spec (implemented as a feature [EPP] scanning the domain in its scope for a nominal and attracting it), but also hosts Tense, Aspect, and Modality/Mood features (all ultimately surfacing as verbal inflection), as well as an Agreement (more precisely, a SVA, or, in more recent generative vocabulary, a *φ*-feature comprising PERSON, NUMBER, and GENDER), and a feature related to Subject Case, i.e. [NOM][73]. The rough idea behind this feature accumulation around I goes as follows: If finiteness can be equated with morphological Tense (but cf. the discussion below), which is licensed by I, then SVA must be licensed around I as well since it only surfaces in finite environments. The same holds for [NOM], which is the typical Subject Case in *finite* contexts (default [ACC] Case being the nonfinite counterpart; cf. above). If I contains no Tense feature, however, i.e. if it is nonfinite, it still seems to be able to attract a Subject to its Spec position – as the preceding discussion of e.g. ECM-infinitivals has shown –, the difference with regard to finite I being the lack of Tense, SVA, and [NOM].

With this rough outline of the principles behind the derivation of a canonical indicative sentence (considered the unmarked case, underlying other, more comploex sentence types), I am now in the position to discuss the structural complexity of ARIs. The section immediately following will – as announced above – take the discussion of the syntax of ARIs one step back, and address whether ARIs qualify as 'clauses', i.e. as unified,

[73] In what follows, these aspects of the I-domain are heavily simplified for presentational purposes. Actually, the relation between Tense, SVA, [NOM], and finiteness have been undergoing constant revisions at least since Chomsky (1981).

integrated syntactic structures, at all. This will be followed by a discussion of ARIs as structures of different, increasing complexity, ranging from *v*P to CP.

2.3.2 ARIs as clauses

While, intuitively, the ARI might come across as a clause proper, on closer inspection, from a narrowly syntactic perspective, things are not as straightforward. A number of its characteristics, raise the question of whether ARIs are really mono-clausal, i.e. one syntactically unified phrase (*v*P, IP, CP), or rather bi-phrasal, i.e. two syntactically distinct phrasal chunks.

The first controversial aspect is the intonational (prosodic) structure of ARIs. Speaker judgements differ as to whether ARIs form one intonation phrase (IntP) (a), or rather two distinct ones (b):

(15) a. [$_{\text{IntP}}$ HIM like books]!? – UNIFIED INTONATION CONTOUR
b. [$_{\text{IntP}}$ HIM]!? [$_{\text{IntP}}$ Like books]!? – COMMA INTONATION

Thus, a prosodic structure like (a), representing a unified intonation contour, would support a mono-clausal analysis of ARIs, while the comma intonation in (b) might favour a bi-phrasal one (with connectivity possibly established post-syntactically). Solely on prosodic grounds, the question cannot be easily settled. Thus, the most careful observation to be made would be that prosodic variation exists with ARIs, with a unified intonation contour and an interrupted one (comma intonation) coexisting. However, this entails the question of whether we are dealing with two distinct *syntactic* phenomena, or with only one, which is prosodically variable. While this might be hard to answer, there is evidence that at least the prosodic subset represented in (a) also constitutes a unified syntactic domain.

A classic diagnostic for clausal domains is binding theory (cf. Chomsky 1981), in particular the coreferential binding of reflexives like *himself*, etc. (*anaphors* in generative terminology; coreferentiality indicated by co-indices), which is captured by the binding condition A (here, a simplified version by Büring 2005:55; for the original formulation, cf. Chomsky 1981:188): "A reflexive must be bound within the smallest category [α] containing it, its case assigner, and a Subject". Put even more simply, a reflexive and its antecedent must be *clause-mates* (clause = domain/smallest category α). Otherwise, a clause containing a reflexive would not be well-formed, as shown by the following example (16), where the reflexive *himself* does not find an appropriate antecedent within α (requiring the personal pronoun *him*):

(16) Courtney$_i$ and Kurt$_k$ have just married. But he$_k$ knew [$_\alpha$ that she$_i$ didn't love him$_k$/**himself$_k$*].

Interestingly, reflexives do not pose any problem in ARIs – of course provided their

antecedent is within the same domain:

(17) I've just heard that Kurt committed suicide… – What!? [$_{\alpha}$ Kurt$_i$ kill *himself*$_i$/*him$_i$]!? This can't be true!

If the ARI in (17) were represented as a bi-phrasal structure, the grammaticality with a reflexive (*himself*) contained in it would be unexpected: As shown in (16), a reflexive should not be able to occur in a 'clause' (α) on its own, without an antecedent. Thus, what is deviant in the following representation is the notation indicating the syntactically licensed coreferentiality between a reflexive (*himself*) and its antecedent (*Kurt*), which is at odds (marked by a starred index) with the insights gained from Binding Theory (viz. that both must share a domain). This would be a wrong binding-theoretic prediction since the ARI per se is of course well-formed containing a reflexive:

(18) [$_{\alpha}$ Kurt$_i$]!? [$_{\alpha}$ Kill himself$_{*i}$]!?

While the preceding argument from binding-theoretic considerations relies on a negative/indirect line of argumentation, another, more clearly morphosyntactic one comes from the phenomenon of inflected infinitives. As laid out above, ARIs are available in a whole range of languages (language families), among them Portuguese. Now, interestingly, varieties of the latter possess an *agreeing infinitives*, i.e. infinitives morphologically marked for SVA (the following is an example from Brazilian Portuguese (BP)[74]).

(19) Eles saír*em* cedo de casa!? Impossível!
PRN.3PL get.out-INF-3PL early of home impossible
'Them leave home early!? Impossible!'

Whatever the specific implementation, most theories assume that agreement (SVA being a specific subcase) is a *local* dependency between two elements, i.e. one holding within certain syntactic domains (of variable complexity), but never across sentences[75]. Trivially, in order for the BP infinitive to surface inflected for φ-features (i.e. *saírem* instead of *saír*), then, the Subject pronoun *eles* must share with the verb *saír* a unified, local domain – one phrase (= a clause), not two distinct ones.

A third, strong piece of evidence for the mono-clausal analysis is provided by an investigation of the left-peripheral activity in ARIs (Do they license topics, etc.?). As this point will be taken up in 2.3.4. in more detail, I here provide only one example from

[74] Thanks to Marcello Modesto for the Brazilian Portuguese data. It should be added that the agreeing infinitive in BP might be restricted to particular registers/varieties.

[75] Of course, while agreement dependencies are also formed transsententially in discourse (e.g. any personal pronoun without a referring expression in the same clause), this would not qualify as syntactic agreement in the narrow sense, which – contrary to discourse agreement – is subject to domain-specific locality constraints.

Spanish, which allows for clitic left dislocation (CLLD) in ARIs, whereby a constituent is fronted to the left, leaving behind a resumptive clitic pronoun (example from Etxepare & Grohmann 2005:130):

(20) [Las elecciones]$_i$ [ganar-[las]$_i$]$_k$ Schröder t_k!?
the elections win-them.CL Schröder
'Schröder win the elections!?' ('#The elections, Schröder win!?')

Given that the unmarked, assertive-futurate 'base form' of the sentence is *Schröder ganará las elecciones* 'Schröder will win the elections', i.e. SVO word order, the information-structurally modified (20) not only has its direct object *las elleciones* 'the elections' moved to a left-peripheral topic position, but also the infinitive *ganar* 'win' moves higher than the Subject *Schröder* (be it in Spec*v*P or SpecIP). If the Spanish ARI in (20) would really be constituted by two phrases, movement operations like CLLD – from one phrase into another one – would clearly be unexpected, even prohibited under the general ban on transsentential movement.

A final, somewhat conceptual, argument derives from the minimalist theory of thematic structure (UTAH) discussed above: In short, if any *v* is subcategorised for a specific number of arguments, these must be exhaustively satisfied in the course of the syntactic derivation of any *v*P. If the ARI were taken to consist of two phrases – one containing the predicate, one the Subject –, then the predicate phrase (*v*P) would clearly violate any conditions formulated within such a theory given that no external argument would be licensed (not to mention the unaccusative–unergative divide).

I take the evidence from connectivity and movement (binding, SVA, CLLD) to conclude that at least a (prosodic?) subset of ARIs must constitute a unified clausal structure. It is this very subset that is of interest here. What remains to be examined, then, is the structural complexity, i.e. the categorial status, of ARIs (roughly: *v*Ps, IPs, or CPs).

2.3.3 ARIs as *v*Ps

Once the syntactically unified nature of ARIs has been established, the most minimal way of analysing them would be as bare *v*Ps. The notion of 'bare *v*P' is closely related to theories of Small Clauses (SCs; cf. Williams 1975), which are verbless predicational structures like the following:

(21) I consider [$_{?P}$ Fritz a moron]. ('I think Fritz *is* a moron.')

In principle, there are three options to deal with SCs syntactically in order to determine their categorial status: (*i*) as exocentric structures labelled *SC*; (*ii*) as endocentric

structures headed by the predicate (A, P, D[76], or *v*/V); or (*iii*), as *v*Ps headed by a covert predicator similar to *be* (v_{BE}, but not A, P, or D).

(22) a. I consider [$_{SC}$ [$_{NP}$ Fritz] [$_{DP}$ a moron]].
b. I consider [$_{DP}$ [$_{NP}$ Fritz] [$_{D°}$ a] [$_{NP}$ moron]].
c. I consider [$_{vP}$ [$_{NP}$ Fritz] $v°_{BE}$ [$_{DP}$ a moron]].

Interestingly, a corpus-based, empirical perspective shows that most tokens of the ARI – as rarely as it may occur compared to other syntactic 'constructions' – instantiate a verbless, SC-like structure, most often an adjectival one (the following German one is attested):

(23) Ich schwanger!?
PRN.1SG pregnant
'Me pregnant!?'

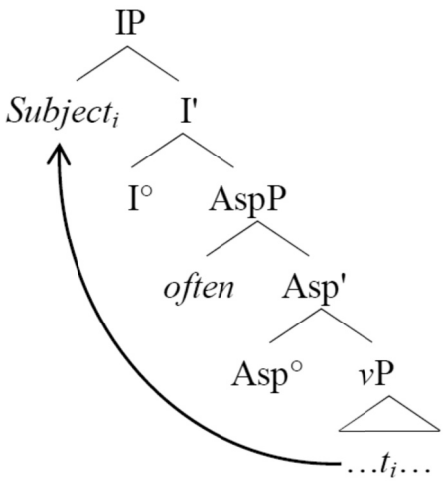
Disregarding option (*i*), one might attempt to subsume both verbless and verbal ARIs under a SC-analysis, be it along the lines of (*ii*), or (*iii*). Indeed, this is assumed by Progovac (2006) in her survey of various nonsentential structures, among them the ARI, which she refers to as *verbal Root Small Clause* (VRSC), i.e. a main clause headed by *v*/V (= *v*P). However, beyond these basic observations, there exists evidence for a more complex syntactic structure for ARIs that cannot be discarded.

2.3.4 ARIs as IPs

No matter how one would syntactically represent an adjectival SC as that in (23) (as SC, AP, or *v*P), the asymmetry between the thematic structure and the surface syntax of unaccusative verbs ([$_{vP}$ *fall he*] *vs. He fell*) strongly suggests a structure even more complex than *v*P, according to the thematic theory outlined above. While this might be an argument resting on theory-internal grounds, modification of ARIs by aspectual adverbs (like *often*) shows that there must be more structure than a thematically complete *v*P since semantically these adverbs need to take scope/quantify over a whole eventuality, which is syntactically represented by *v*P ('It is ASPECT$_{often}$ [that AGENT *v* PATIENT]'). In conjunction with the VPISH, then, adverbial modification yields a schematic structure along the lines of the following representation, where the highest *v*P-internal nominal must have moved across the adverb *often* (be it in SpecAspP, in the outer Spec*v*P, or maximally adjoined to *v*P):

[76] In generative theory, what had been known as nominal phrases (NPs) have been treated as Determiner phrases (DPs) at least since Abney (1987).

(24)



Interestingly, ARIs are not only compatible with adverb types that modify eventualities (i.e. *v*P's) as a whole, but also with adverbs that are licensed still higher in the clausal structure, within the I-domain. Those adverbs comprise among others root (≈ deontic) modality adverbs, as opposed to adverbs licensed still higher within the C-domain (incl. epistemic modality, evidential, etc.; cf. next section).

(25) Fritz *necessarily*$_{\text{ROOT}}$ digs girls since he's a man… – What!? Fritz *necessarily*$_{\text{ROOT}}$ dig girls!? Why!? As I see it, he might well be into men…

In addition, ARIs are compatible with temporal adverb(ial)s, but only with *non-deictic* ones, deictic ones being prohibited by the nonfiniteness characteristic of ARIs (to which I will return in section 3).

(26) Fritz be a theoretical syntactician *some day*$_{[\text{-deictic}]}$/**tomorrow*$_{[\text{+deictic}]}$!? You got it completely wrong! He'll be a syntactic theoretician!

On the assumption, then, that temporal adverbials are generally licensed by the I-head T, which is also where tense values are introduced, it is safe to conceive of the ARI as projecting at least to IP (as given in (24)).

2.3.5 ARIs as CPs

The common diagnostics to determine the presence/complexity of the C-domain of clauses are (*i*) modification by speaker-oriented adverbs (cf. above w.r.t. IP and *v*P); (*ii*) operations targeting the left periphery (topicalisation, etc.). To cut things short, for the majority of languages examined (incl. English), there is no indication of a left periphery (except for a group of Western Romance languages; cf. (20), hence no reason to assume a C-domain:

(27) Him (**unfortunately*) prepare a paper!? (cf. He's *unfortunately* preparing a paper.)

(28) *[*A paper*]$_i$, him prepare t_i!? (cf. *A paper*, he's preparing (but no thesis).)

One feature of the ARI, which seems to have been neglected in the syntactic literature, is that it exhibits a rather systematic behaviour when it comes to the mobility of its *v*P: the *v*P may undergo what looks like topicalisation, leaving behind the Subject (the TopP here is without any particular theoretical commitment, generic):

(29) a. Prepare a paper, him!?
b. [$_{\text{TopP}}$ [$_{v\text{P}}$ Prepare a paper]$_i$ Top° [$_{\text{IP}}$ him I° t_i]]. – *v*P-TOPICALISATION

Rather straightforwardly, this raises the question whether the derived front position of the predicate in (29) is a syntactic fronting operation at all, or really just an instance of conjunct reversibility, supporting the analysis of ARIs as biphrasal coordination structures (*Prepare a paper!? Him!?*; cf. (29). While one might be inclined to intuitively take the latter view, German ARIs, which may (optionally?) occur with an overt coordinator *und* 'and' linking Subject and predicate, suggest otherwise[77]. In coordinative ARIs, *v*P-fronting is barred, and so is &P-fronting (fronting of the phrase headed by the coordinator):

(30) a. Der ein Paper schreiben!?
that.one a paper write!?
'Him write a paper!?'
b. [$_{v\text{P}}$ Ein Paper schreiben]$_i$, der t_i!?

(31) a. Der *und* ein Paper schreiben!? – COORDINATIVE ARI
that.one and a paper write!?
'Him (and) write a paper!?'
b. *[$_{v\text{P}}$ Ein Paper schreiben]$_i$, der *und* t_i!?
c. *[$_{\&\text{P}}$ *Und* ein Paper schreiben]$_i$, der t_i!?

It is all but clear what kind of functional element the coordinator in ARIs really is: It is no Boolean coordinator (cf. Potts & Roeper 2006:198), neither of the symmetrical kind, denoting intersection (e.g. [$_{\text{N}}$ *John*] *and* [$_{\text{N}}$ *Paul*]…), nor of the asymmetrical kind, denoting logical spatio-temporal or modal relations (e.g. *He tripped, and fell*). The latter both require identical categorial and semantic types for the conjuncts (where equi-categoriality may be obstructed by ellipsis). Rather, the coordinator in ARIs appears to be a *predicator*, akin to the *as* coocurring with the verb *regard* (*I regard* [$_{\text{PredP}}$ *him* [$_{\text{Pred°}}$ *as*]

[77] The coordinative ARI is also available to English, though to a limited degree/non-productively (cf. Bücker 2008:65ff.).

[*an idiot*]]). Leaving the discussion of this aspect of the ARI to future investigation, what is relevant here is that ARIs do seem to license movement operations, as indicated negatively by intervening restrictions (coordinator).

A final question that remains to be addressed is the target of the movement operation: in general, at least some nonfinite structures are taken to be without a C-domain (i.e. truncated to IP). However, it is the C-domain where topics are assumed to be licensed, according to varying theoretical implementations (adjunction theories excluded, all approaches syntactic in character): (*i*) classically, in SpecCP; (*ii*) in the SpecTopP/FocP of an articulated C-domain: Force > Top > Foc > Fin (cf. Rizzi 1997, and others); (*iii*) in the Specs of the *non-information-structural* heads of a Rizzian C-system (i.e. in SpecForceP and/or SpecFinP; cf. López 2009). Although interesting (in particular w.r.t. to a group of Western Romance languages, which *do* allow for left-peripheral operations in ARIs, though restrictively; cf. (30) and Wenger 2008:52), for reasons of space I cannot pursue investigations into the information-structural (IS) syntax of ARIs. Nonetheless, a theory of the syntax of finiteness (as to be rudimentarily sketched in section 3) should shed light on these matters as well since it is exactly here, around the C–I interface, where the derivation of both left-peripheral IS-operations and finiteness is computed.

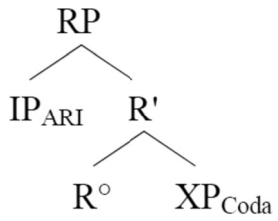
2.3.6 A short note on the transsentential character of ARIs

It should be pointed out that not only the internal structure of ARIs is of controversial interest, but also the external, i.e. transsentential, context, in which they occur within discourse. As already laid out in the introductory section, ARIs are likely to be accompanied by a follow-up expression – a *Coda* –, which spells out (= confirms) their incredulitive force lexically:

(32) What!? Him prepare a paper!? *No way, dude!/Never!/I can't believe it!/…*

This feature of the ARI raises the question of what the linguistic nature of this dependency is – discursive or syntactic? While the former solution is relatively plausible (as e.g. assumed by Lambrecht 1990), the latter one, as it is maintained by Etxepare & Grohmann (2000 *et seq.*), is much less obvious. They argue for a quantificational tripartite *syntactic* representation of ARIs (ultimately following Heim 1982, Diesing 1992), headed by the quantificational operator R (as proposed by Zanuttini & Portner 2003 for exclamative clauses), contrasting an abnormal/unexpected event expressed by the ARI with a presupposed set of normal/expected situations (= the function of *widening*). R is taken to take as its restriction its external argument (the ARI), mapping it into its nuclear scope (the Coda) (cf. Wenger 2008:55ff. for a more detailed exposition and discussion).

(33)



As empirical evidence, Etxepare and Grohmann (e.g. Etxepare & Grohmann 2005) rely on connectivity effects that seem to hold between ARI and Coda. One such effect is the licensing of Negative Polarity Items (NPIs) like *any-X* (in the non-generic reading). NPIs must be licensed by 'emphatic' elements (negative, interrogative,…) c-commanding them:

(34) a. I do*n't*$_{NEG}$ want to have *any*$_{NPI}$/*some more coffee.
b. I want to have **any*$_{NPI}$/some more coffee.

As it turns out, NPIs contained within ARIs seem to need a (negative) licensing expression in their Coda (example taken form Etxepare & Grohmann 2005:134):

(35) Me buy *anything*$_{NPI}$ in that shop!? *Never!/No way!/*Of course!/*Okay!*

However, this piece of evidence faces several problems, one set concerning the grammatical nature of the Coda itself, the other the explanatory base for the connectivity effects. First, it is not evident that the Coda is an *obligatory* follow-up to ARIs at all since ARIs may well be uttered on their own, maybe accompanied by an *extralinguistic* (facial) expression of disbelief – which, however, does not constitute a *narrow syntactic* (grammatical) property. Besides that, the Coda expression itself is positionally rather variable (it can well occur preceding an ARI: *No way! Him read books!?*), and a rather heterogeneous set with regard to its categorial status (QP, DP, CP, elliptical expressions, etc.) – characteristics that in my view favour a discourse-based explanation of the connectivity, which is more loose than syntactic connectivity. In addition, as for the licensing of NPIs, a more straightforward account is available: The interrogative dimension of ARIs (ARIs clearly involve a force type consisting of at least an exclamative and an *interrogative* value, hence the '!?'). Interrogativity, however represented syntactically, licenses NPIs, as shown in the following example:

(36) a. Would Steven like *any* more coffee? – QUESTION
b. Steven like *any* more coffee!? – ARI

In what follows, I will treat the ARI as a mono-clausal structure, leaving the discussion of its higher order structure (syntactic vs. discursive) to future research.

3 FINITENESS

In this section, I will sketch a syntax of finiteness, which essentially reduces to an examination of the syntax-internal C–Infl interface. I believe the key to understanding the syntactic dimension of finiteness lies in the syntax of tense (more abstractly, referential anchoring). Before laying out a syntactic account of finiteness, specifically w.r.t. the *non*finiteness in ARIs, I would first like to sketch the ontology of finiteness within the generative paradigm.

Traditionally, finiteness itself has been a theory-peripheral, often merely descriptive, notion associated with (at least) four phenomena: (*i*) Tense (TNS); (*ii*) NOM Case; (*iii*) Agr_S/SVA; and (*iv*), syntactic dependence. While initially (i.e. at least since the grammarians of the antiquity) the focus was on the morphological dimension of the verb (w.r.t. tense and *φ*-agreement, particularly PERSON), it has shifted to a broader, clausal context in modern theories of grammar: finite *clauses* license NOM Subjects; finite *clauses* can be syntactically independent (i.e. root clauses), nonfinite *clauses* are dependents, and do not generally license Subjects, etc.. Within generative theory the features (*i*)-(*iii*) have been described in terms of implicational licensing correlations of the following kind, at least since Chomsky (1981), which is how the notion of finiteness found its way into generative syntax, though initially as a rather *descriptive* label [±Fin][78]:

(37) a. I[+Fin]: [+Tns] → [+Agr] → [NOM]
b. I[–Fin]: [–Tns] → [–Agr] → ([∅/NULL][79])

An assumption within the formulation of this correlation has always been that structural Case – the last link in the chain – is contingent on other phenomena, alternately on TNS or Agr. In current phase-based minimalism à la Chomsky (2000 et seq.), the licensing correlation is derivationally instantiated in T (= I), which contains [TNS] and [*φ*] (*φ* is the former Agr, and consists of the feature bundle [PERSON, NUMBER, GENDER]), NOM being considered a post-syntactic PF-reflex licensed by a complete *φ*-feature on T. Accordingly, nonfinite contexts are considered to be headed by a *φ*-defective T_{def}, which does not license Case. While the licensing chain as formulated in (37) does not reflect minimalist syntax, where there is no interdependency between [TNS] and [*φ*], it is nonetheless assumed to be *φ*-completeness/defectiveness that differentiates nonfinite from finite domains. Hence, the capacity of agreement is equated with finiteness (according to option (*iii*) above).

At first sight, neither SVA, nor any of the other four options listed above prove sufficient

[78] Although occasional occurrences in several GBT-era works suggest otherwise, e.g. FP within Pollock's (1989:372, 394) split-IP hypothesis, the vagueness and subsequent re-disappearance confirms the notion's (formerly) descriptive character.

[79] Default Case aside (which is ACC in English), English has two other nonfinite Subject Cases not licensed by I: ACC in so-called ECM-infinitivals (classically, i.e. AcI, e.g. *I want* him *to leave*), where ACC is licensed by the matrix verb, and GEN, which in nominal gerunds (His *visualising of my ideas is very creative*), is licensed DP-internally.

as candidates for finiteness: cross-linguistically there are nonfinite structures that (i) *do* show SVA (contra the conception just sketched; cf. (19)); that (ii) can occur as independent root structures (e.g. the ARI); that (iii) can license NOM Subjects (e.g. Hungarian; cf. Szabolcsi 2005:619); and that (iii) can manifest overt (= morphological) Tense, as the following example from Classic Latin shows (from Cecchetto & Oniga 2001:15):

(38) Vellem hoc scrip*isse*
would-like-1SG that write-*PST*-INF
'I would like to have written that.'

On the plausible assumptions that NOM Case is a secondary property, and that the dependence of nonfinite structures can be overridden rather easily (with syntax-external help, 'pragmatic-illocutionary enrichment'), I would like to sketch a schematic derivation of ARIs with regard to nonfiniteness that relies on properties of tense rather than agreement[80, 81].

On closer scrutiny, examples of so-called tensed infinitives like the Latin one in (38) turn out not to involve fully referential, i.e. *deictic*, tense, but rather dependent *anaphoric* tense, which cannot referentially anchor to the speech event (the NOW of the *origo*), but derives its temporal interpretation contextually, either by entering into a dependency (binding, valuation, checking, etc.) with a higher matrix predicate, or – in case of root infinitives – by appealing to non-syntactic means. For the above example from Latin this means that the Tense morpheme *-is(s)-* of the infinitive *scripisse* is, strictly speaking, not a real PAST morpheme (viz. PST). Past tense orders a structure corresponding to an eventuality (or to an extended situation/interval), including an indication of event time (ET) and Reference time (RT), anterior to the *Speech Time* (ST) (cf. Reichenbach 1947 for these notions) (i.e. RT < ST). Crucially, *-is(s)-* orders the eventuality anterior to the ET/RT of the *matrix predicate velle* (i.e. anaphorically: $RT_{scribere} < ET_{velle}$), which itself is ordered contemporaneously with ST (PRESENT: ST,RT,ET_{velle}).

Arguably, the anaphoric nature of the temporal reference of the inflected Latin infinitive is just what would be expected for non-inflected counterparts in e.g. English. While this has been a major point of controversy ever since Stowell (1982), according to whom some linguists have maintained that (some) infinitivals have a future-irrealis tense semantics (viz. Control infinitivals), many others view infinitivals as transparent domains whose temporal interpretation is context-dependent, i.e. anaphorically determined by the

[80] I am not discussing agreeing infinitives as those found in Brazilian Portuguese here (cf. (19)).

[81] To my knowledge, yet other candidates for the identification of finiteness have been verbal Mood (e.g. Aygen 2002), assertability (e.g. Klein 2006), or none at all (or, in other words, a composite notion), as in Landau's (2004) scale of finiteness. Particularly interesting is the (not new) idea of categorising (non)finiteness as a type of verbal Mood, nonfinite verb forms being in *complementary* distribution with other verbal Moods such as the Indicative, or the Subjunctive. For reasons of space, though, I will not discuss this option here.

main clause tense (cf. e.g. Hornstein 1990:146ff.). Based on Neo-Reichenbachian approaches to the syntax of tense, the three time points/intervals are represented in the tripartite backbone of the clause, where finiteness is a function of the referential anchoring of the extended situation (i.e. IP ⊃ RT–ET) to C (⊃ ST) (cf. Enç 1987; Bianchi 2003):

(39) $[_{CP}\, C°_{[ST]}\, [_{IP}\, I_{[RT]}\, [_{vP}\, v°_{[ET]}\,]\,]\,]$

Just like some of the works just mentioned, I would like to capitalise on the notion of *defectiveness* (a privative approach) – but rather as phrase-structural underspecification (i.e. scalar truncation[82]) than as featural underspecification (e.g. a missing *φ*-probe on T, or a lacking Tense-feature). The dichotomy of phrase-structural and featural underspecification of structures mirrors the tension between mainstream (cf. e.g. Chomsky 2000) and Cartographic generative theories of phrase-structure (cf. e.g. Rizzi 1997), the former assuming the clausal skeleton to consist of macro-categories (C > T > *v* > V), the latter of fine-grained sequences of varying complexity (e.g. C = Force > Top > Foc > Fin > IP; cf. Rizzi 1997). On the truncation view, then, nonfiniteness results from the absence of structure, specifically, C (⊃ ST): the IP remains unanchored within its own domain, either linking up to a higher clause, or to a discourse context, as in the case of ARIs.

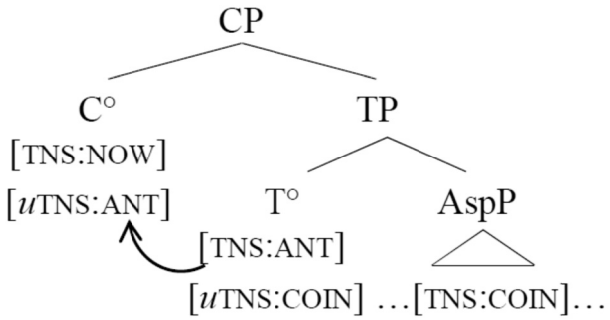
Going back to the licensing of agreement, Tense, and Case, then, the Neo-Reichenbachian syntax of tense just outlined in a simplistic fashion might be integrated with current reasoning as follows: On the assumption that it is C (or Fin/C^{min} = the lowest head of a split C-domain) that licenses [NOM] and [*uφ*:], and not T (I) (cf. the similar idea of C–T feature inheritance Chomsky 2007, 2008), the absence of SVA and NOM follows if an infinitival projects only to TP (or I^{max}), to the very exclusion of C[*uφ*: , NOM]. Subject raising can still be assured if one conceives of the [EPP] as a leftness condition (i.e. Spec condition) on domains (which may be overridden subsequently), having a nominal raise to the left edge of the I-domain under Attract Closest (cf. Chomsky 1995:297).

Finally, what remains to be sketched in more detail are the tense properties of infinitival structures. A more recent trend is the assumption that (mono-clausal) syntactic structures involve more than just one tense category, namely one that is lower in the clausal structure, topping off the *v*P, and a higher one, the classic T(P) (cf. e.g. Pesetsky & Torrego 2004). In the present approach, the higher Tense (proper, i.e. referential tense) is reanalysed as C/Fin (or as contained therein), while the lower tense is identified as the classic T, but redefined as (containing) a time variable [TNS:val] (on possible values cf. below) that denotes the temporal orientation of an extended event, which may be interacting with the event argument on *v* (ET) as well as aspectual categories to produce

[82] Given a functional sequence *a* > *b* > *c* (an fseq, i.e. a fixed hierarchy of functional projections; cf. Starke 2001), the lack of *b* entails the lack of *a*, i.e. only *scalar* truncation of the fseq is permitted. Allowing for *selective* truncation, e.g. $^{?}a > c$, is not restrictive enough (indeed, not restrictive at all) in capturing phrase-structurally a configurational property of a syntactic structure.

distinctions of viewpoint and inner aspect. The temporal dependency between C and T may be construed in terms of Agree-based feature valuation: Besides [*uφ*:] and [NOM], C contains a (default?) time value denoting the NOW (referential index), say [TNS:NOW], while T carries a feature denoting the relative temporal orientation of the extended event it heads (i.e. relative tense), which can take one of three values [ANT(ERIORITY)], [POST(ERIORITY)], or [COIN(CIDENCE)][83]. Furthermore, if the anaphoric relation is to be conceived of in terms of valuation (instead of, say, binding), T also carries an unvalued, uninterpretable 'linking' feature. Overall, this treatment of Tense yields a decompositional-derivational syntactic approach to Tense (e.g. simple past = C[TNS:NOW] > T[TNS:ANT] > Asp[TNS:COIN]).

(40)



C must carry an active probe [*u*TNS:], which searches for a matching value [TNS:val], in order for Agree(C,T) to be established. Thus, in the present example, C[*u*TNS:] probes for and finds T[TNS:ANT], which heads an extended situation typed 'anterior' (temporal orientation) (and, irrelevant here, 'perfective', or simple, aspect). At the syntax–morphology interface, an according Tense morpheme – here, in English, {-ED} – is inserted into [*u*TNS:ANT], with affix hopping (cf. Chomsky 1957 [2002]) producing the surface order (low, i.e. *v*, in English)[84].

What about nonfinite structures? Evidently, with C, and thus the 'proper' Tense feature [*u*TNS] as well as the referential anchor [TNS:NOW], being absent, an ARI is correctly predicted not to display deictic Tense, but to still be capable of producing distinctions of relative tense (temporal orientation). Indeed, if languages possess free or bound morphology that is able to lexicalise a nonfinite (i.e. C-less) T, this is possible under the proper contextual circumstances (contrary to what is claimed, e.g. in Etxepare & Grohmann 2007). As for anteriority, this is typical of past perfect contexts:

[83] This tripartition can be derived from a feature hierarchy of temporal coincidence (cf. Ritter & Wiltschko 2005) composed of [±coincidence] and [±anteriority/posteriority] (or similarly, e.g. privatively).
[84] Recall that the highest [*u*TNS] feature would be (contained in) the finiteness category Fin in a more fine-grained perspective on phrase structure, and would thus still be dominated by (at least) another functional projection, viz. Force.

(41) A: When I came home yesterday, Axel had already left… – B: What!? *Him have left (already)*!? Not true! I spotted him behind the sofa when *I* came home!

In nonfinite contexts, the perfect auxiliary, which is commonly associated with tempo-aspectual concepts like 'present relevance' or 'current orientation' (an eventuality anterior to ST extends into the NOW), is reduced to an expression of anteriority, as predicted by the lack of anchoring[85]. The fact that ARIs – like most nonfinites – are interpreted as irrealis is likely to be due to extra-syntactic default interpretation, assigning an unactualised (= irrealis) semantics to unanchored situations.

4 CONCLUSION AND OUTLOOK

A careful survey of the linguistic properties of ARIs has shown two things: (*i*) that it can be subjected to syntactic analysis, contrary to arguments that see it as a 'defective' construction consisting of two loosely linked phrases; and (*ii*) that ARIs have an abstract syntactic structure that is more complex than meets the eye (*v*P/SC), but just as complex to match the requirements imposed by nonfiniteness (TP, but not CP).

The analysis of ARIs as TPs (syntactically) and extended situations (semantically) still lacks one component of meaning – pragmatics, especially, illocutionary meaning. Uncontroversially, ARIs possess a kind of force (incredulitive), which is rather specialised and cannot be easily overridden (as is the case e.g. with declaratives as questions). However, provided that illocutionary force is somehow represented in syntax (as sentence mood, sentential force, or, put more simply, as a 'clause-typing' operator), ARIs (and reduced nonfinite structures more generally) prove problematic given that the locus of force is generally assumed to be very high in the clausal spine, in C (or Force), as suggested by COMPs indicating clause-type (*that* → declarative, *if* → interrogative). W.r.t. ARIs then, I can only speculate that their illocutionary force is derived compositionally extra-syntactically, rather than being represented structurally, e.g. by operators. In any case, the role of illocutionary meaning in nonfinite root structures, as well as the effect of prosody on illocutionary meaning need to be taken into account to be able to tackle these questions – a topic for another paper.

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[85] Also cf. the discussion around the Latin example (38) and p. 19. Latin realises the anteriority realised by *have* synthetically, by an inflectional affix.

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978-0-9576682-3-2