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**ADVERBIALS AND FUNCTIONAL HEADS: A
COMPARATIVE STUDY OF BULGARIAN AND
ENGLISH CLAUSE STRUCTURE**

DOCTORAL DISSERTATION SUMMARY

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The thesis consists of 224 pages in total, 212 pages are occupied by the chapters of the dissertation, and 12 pages contain the works cited that include 183 titles.

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STRUCTURE

This thesis features a list of abbreviations, seven chapters, including an introduction and a conclusion, and a works cited section. The first chapter, *Introduction*, outlines the topic, briefly presents the two main theoretical approaches to adverbs, and discusses the organisation of the dissertation.

The second chapter is *Investigating Adverbs: Research Goals, Methods, Key Theoretical Notions*, and it provides the conceptual and methodological framework for the dissertation. The chapter discusses adverbs within traditional part-of-speech classifications and presents the main objectives and research questions of the study.

The next chapter, *On the Evolution of Adverb Conceptualisations*, examines how linguistic theory has conceptualised adverbs, from the earliest philological approaches and traditions to the most recent syntactic frameworks.

Chapter four, *'Specifying' The Framework*, focuses on the two main approaches to adverbs, the Cartographic Approach and the Scope-based Approach. It compares how each theory interprets sentence structure and meaning. While it tries to show the strengths and limitations of each approach, the chapter also argues that the Cartographic Approach provides a more comprehensive and accurate framework.

Chapter five, *Cinque's Adverb Hierarchy: A Comparative Analysis of Adverb Positions and Clause Structure in English and Bulgarian*, is dedicated to the empirical application of the Cartographic approach, particularly G. Cinque's hierarchy, to Bulgarian and English.

This is followed by *Adverb Polysemy and Functional Structure in the Clause*, a chapter dedicated to scope ambiguities and interpretive contrasts that oftentimes arise from structural rather than semantic indeterminacy. The chapter seeks to demonstrate that the cartographic approach provides a principled way of linking meaning variation to the universal functional architecture of the clause.

The thesis ends with chapter seven, *Advancing Adverb Syntax: Conclusions and Future Directions*, whose purpose is to formulate the main conclusions as regards the applicability of Cinque's adverb hierarchy to both Bulgarian and English.

The *Works Cited* section includes 183 titles, covering key contributions in the field and relevant interdisciplinary perspectives. The section encompasses both foundational works and recent studies relevant to the topic.

RESEARCH OVERVIEW

This dissertation is devoted to the syntax of adverbs and their role in the internal structure of the clause. Particular focus is placed on Bulgarian and English sentence structure. The central questions that guide the study are: *To what extent can adverb distribution be accounted for by hierarchical syntactic structure? How do competing theoretical models explain adverb ordering and interpretation? What is the role of verb movement in shaping surface variation across languages? Can adverb polysemy be systematically related to structural positions within the clause?* Among others, these questions aim to clarify the interaction between syntax and semantics as reflected in adverbial behaviour.

The topic is motivated by the increasing recognition in contemporary linguistics that adverbs, far from being a marginal or residual category, provide crucial empirical evidence for the articulation of functional structure. While earlier grammatical traditions often treated adverbs as a loosely defined class encoding manner, time, or speaker attitude, more recent generative approaches have demonstrated that their distribution is constrained and structurally informative. In this respect, adverbs have played a central role in the development of major theoretical frameworks, most notably the cartographic approach associated with Guglielmo Cinque (1999) and the scope-based model advanced by scholars such as Thomas Ernst (2004).

Many studies in generative grammar have examined adverb syntax, including questions such as adverb order, scope interpretation, and the nature of adjunction. What distinguishes the present dissertation from previous work is the systematic comparison between Bulgarian and English, combined with a critical reassessment of the two dominant theoretical approaches. Given the Bulgarian academic context in which this dissertation is situated, it is important to note that research on adverb syntax in Bulgarian remains relatively limited and often fragmented. Existing studies usually focus on descriptive aspects or theoretical issues, but often lack a comparative perspective. The topic was selected precisely because of

the lack of similar research. The dissertation will help fill this gap by providing a detailed cross-linguistic analysis that places Bulgarian data within broader theoretical discussions.

The methodology which is used in this study combines theoretical and empirical observations. Corpora examples from both languages are examined using established diagnostics with a focus on adverb order and verb movement. Attention is paid to the interaction between lexical verbs, auxiliaries, and participial forms, as well as to the distribution of high and low adverbs within clause structure. The analysis also draws on X'-theory, the Principles and Parameters framework, and more recent developments in cartographic syntax.

The dissertation discusses a lot of theoretical studies, including the work of Hengeveld (1997), Alexiadou (1997), Huddleston and Pullum (2002), Starke (2004), Ledgeway and Lombardi (2005), and others. In addition, conceptual issues such as the nature of functional categories, the limits of syntactic variation, and the interface between syntax and semantics are addressed. A key idea behind the study is that structural position plays a decisive role in determining interpretation (Krapova 2021), and this idea is tested against data from both Bulgarian and English.

The analysis first establishes the theoretical foundations of the study and clarifies the key concepts employed throughout the dissertation. The historical overview of adverb research in the third chapter *On The Evolution of Adverb Conceptualisations* connects modern approaches to earlier linguistic traditions. This way, the work traces the evolution of ideas from classical philosophy to modern generative syntax. The discussion then proceeds with a differentiation between predicate-level, sentence-level and subject-level adverbs as well as a classification of adverbs in generative syntax.

The fourth chapter, '*Specifying*' *The Framework*, offers a detailed comparison of the cartographic and scope-based frameworks, highlighting their strengths and limitations. The scope-based approach, with its emphasis on semantic licensing, scope relations, and the Fact–Event Object calculus, provides a descriptively nuanced account of meaning-driven adverb placement, and its appeal lies in its relative economy in terms of syntactic assumptions. However, the very flexibility that constitutes its main advantage also weakens its predictive capacity. By analysing adverbs as freely adjoined modifiers constrained primarily by semantic well-formedness, the model often fails to account for the systematic ordering asymmetries and cross-linguistic differences in syntactic distribution, even

in languages with comparatively flexible word order such as Bulgarian. As Cinque puts it, the Scope Theory ‘falls short [...] of accounting for certain crucial properties of adverbial syntax’ (2004: 684)

Subsequent chapters focus on specific empirical domains. A central part of the dissertation is devoted to the investigation of adverb positions and clause structure, with particular emphasis on the role of verb movement. The comparative analysis demonstrates that both Bulgarian and English exhibit evidence for fixed adverbial positions within a hierarchical structure, while also displaying surface variation resulting from language-specific movement operations. The study also focuses on adverb polysemy showing that different interpretations of one and the same adverb may be linked to different structural positions.

Overall, the dissertation argues that adverb syntax cannot be explained solely in terms of semantic scope or free adjunction. The data suggests a close link between syntactic structure and meaning and the cartographic approach provides a more detailed and empirically supported account of the phenomena examined.

The last chapter summarises the main findings of the study and outlines possible directions for future research. It also considers how the results help improve our understanding of clause structure and cross-linguistic variation in general. In this sense, the dissertation aims not only to advance the study of adverbs but also to address broader issues in syntactic theory.

CHAPTER I INTRODUCTION

This chapter of the dissertation introduces the central research problem and outlines the theoretical ideas that guide the investigation of adverb syntax as an important area for understanding clause structure. It highlights the idea that adverbs, traditionally treated as a peripheral or even a residual class, in fact provide empirical evidence for the existence of a richly articulated functional hierarchy. Therefore, the interaction between syntax and semantics is essential for understanding the functional organisation of the clause. The study develops this idea through a comparative analysis of Bulgarian and English.

A central issue discussed in this chapter is the long-standing uncertainty about the grammatical status of adverbs. While they have often been described as a heterogeneous category encoding manner, time, degree,

or speaker attitude, recent developments in generative syntax have demonstrated that their distribution is far from arbitrary. Instead, adverbs exhibit systematic ordering restrictions and interpretive effects that reflect underlying structural configurations.

The chapter introduces the two main theoretical frameworks on which the dissertation is based: the cartographic (functional) approach and the scope-based approach. The cartographic approach argues for a universal and fixed hierarchy of functional projections, in which adverbs occupy specific structural positions. On the other hand, the scope-based approach explains adverb placement through semantic scope relations and treats adverbs as freely attached modifiers mainly constrained by interpretation.

Although both approaches aim to account for the same linguistic phenomena, they differ significantly in their view of how syntax and semantics are related. The cartographic model posits a richly articulated and universally ordered hierarchy of functional projections (Krapova 2021), whereas the scope-based approach derives ordering from interpretive principles and allows for greater structural flexibility. The study aims to demonstrate the advantages of the cartographic approach. A main argument of this chapter is that the flexibility attributed to the scope-based model, although descriptively appealing, often reduces its explanatory adequacy.

The chapter outlines the background of the study and its broader theoretical implications. It addresses the ongoing debate about the status of adverbs as adjuncts or specifiers and argues that the hierarchical approach explains their behaviour more consistently. In addition, it introduces the issue of adverb polysemy, suggesting that different interpretations of an adverb may correspond to distinct structural positions within the clause.

Finally, the chapter presents the overall organisation of the dissertation. It briefly describes the structure of the subsequent chapters, which move from theoretical foundations and historical overview to detailed empirical analysis of adverb placement, verb movement, and polysemy in Bulgarian and English. The development of the study shows a gradual refinement of the main claim, namely that adverb syntax provides strong evidence for a hierarchical structure of the clause and that the cartographic approach offers the most complete framework for describing this complexity.

CHAPTER II INVESTIGATING ADVERBS: RESEARCH GOALS, METHODS, KEY THEORETICAL NOTIONS

This part of the dissertation outlines the conceptual and methodological framework of the study. It starts by placing adverbs within traditional part-of-speech classifications and explains why these approaches are limited. The chapter draws on insights from Chomsky (1957, 1986), Jackendoff (1972), and Hengeveld (1997) and further aims to refine the distinction between adverbs and adverbials, which is essential for the purposes of the work. The central research questions, the main objectives of the study and the comparative methodology are also discussed.

In descriptive grammar, adverbs are typically defined as modifiers of non-nominal elements. This means they are capable of modifying verbs, adjectives, other adverbs, or entire clauses (Schachter & Shopen, 2007: 20). They are often grouped into semantic subclasses such as manner, time, degree, and speaker-oriented adverbs. However, this classification is heterogeneous since they function as a “catch-all” category for elements that do not fit neatly into other lexical classes. As Haider puts it, ‘what is uncontroversial about adverbials is that their grammatical status is controversial’ (2000: 95).

Although traditional accounts recognise the positional flexibility and semantic diversity of adverbs, they offer limited insight into their structural properties and fail to provide a unified explanation of their behaviour across languages. For instance, Jackendoff (1972) distinguishes adverbs from adjectives based on their ability to take complements. While adjectives are described as [+Comp], adverbs are [-Comp]. However, this generalisation does not apply to most adverbs as there are exceptions, such as *separately from* and *independently of* (*отделно от* and *независимо от* in Bulgarian), which require a prepositional phrase as their complement. Parallel research on languages different from English has also played an important role in shaping current approaches to adverbial syntax. Gabriela Pană-Dindelegan's research on Romanian syntax (1974, 1976) and Artemis Alexiadou's investigations into Modern Greek syntax (1994) are just some of the works that offer a principled account of the structural behaviour of adverbs. Cross-linguistic research has shown that adverbs display significant variation in both position and interpretation, making them

resistant to purely descriptive generalisations. This was noticed even by Chomsky, who was the first scholar to propose a hierarchy of levels of adequacy for evaluating grammars that included observational adequacy, descriptive adequacy, and explanatory adequacy. In other words, any theoretical framework should provide a comprehensive and accurate classification of empirical data, formulate rules that account for all observed patterns, offer a principled choice of selecting among contrasting descriptions, capture the underlying structures responsible for observable phenomena, and exhibit predictive power (Chomsky 1965).

The chapter includes a definition of adverbs offered by Hengeveld, who says that ‘an adverb is a lexical word that may be used as a modifier of a non-nominal head’ (Hengeveld 1997: 121) and goes on to explain the usage of the terms *modifier*, *lexical word*, and a *non-nominal head*. However, as mentioned earlier, this traditional framework offers no insight into where adverbs are generated in the respective phrase or in the sentence, what syntactic positions they can occupy, or how their structure is related to their semantics. The flexibility of adverb placement across and within languages, as well as the existence of larger adverbial expressions such as PPs and CPs, further complicates their classification. Adopting Hengeveld’s preliminary definition of adverbs, the work then moves beyond the traditional view of adverbs as optional adjuncts and instead treats them as elements occupying specific positions within a hierarchically organised functional structure. In this model, adverbs are specifiers of functional heads, and apparent variation in word order is derived from verb movement rather than adverb mobility. This shift allows for a more precise account of the relationship between syntactic position and interpretation, which is central to the overall argument of the dissertation. Building on this framework, the present dissertation investigates adverb placement in English and Bulgarian, with particular attention to verb movement and the distinction between obligatory and optional adverbial positions. The study also aims to explain distributional patterns through a limited set of general principles, in line with the notion of restrictiveness in Universal Grammar. The notion of restrictiveness holds that grammar should be constrained to the minimum number of rules, principles, and parameters necessary to account for the syntactic phenomena attested across human languages. Nevertheless, it should still adequately describe the syntactic phenomena of all human languages. This means that such a grammar will need to have

fewer parameters and options, leading to a more rationalised and predictive model of syntax.

This first chapter also presents the main objective of the work, which is to contribute to the development of a unitary and predictive theory of adverbial distribution by refining the specifier–head relations proposed by Cinque. More specifically, the research seeks: (a) to propose grammatical principles that predict the rules governing the movement of verbs around adverbs and (b) to thereby render the theory of adverbial specifier/head relations both as restrictive and as general as possible. The main research questions addressed in this first chapter are:

I. To what extent can adverbs be said to occupy structurally fixed positions in clause structure, as proposed by Cinque (1999), in English and Bulgarian?

II. Are Cinque’s functional projections empirically justified in accounting for the placement and interpretation of adverbs?

III. How is verb movement across adverbial projections constrained?

IV. Can Cinque’s hierarchy be maintained in the face of non-canonical adverb placement?

V. How should adverbial polysemy be treated within a model that assigns a single functional projection to each adverb type?

In this dissertation, I aim to balance solid theoretical foundations with real language data, so that the analysis is based both on established linguistic ideas and on actual language use. The methodology employed in the dissertation is analytical and comparative, supported by corpus data from three well-established corpora: the British National Corpus (BNC), the Corpus of Contemporary American English (COCA), and the Bulgarian National Corpus (BgNC). The aim of the research is to account for the hierarchical positioning and structural behaviour of adverbs within the clause, and to examine how these patterns are instantiated in English and Bulgarian. To this end, the methodology adopted in the present study is deductive, in that it begins with a theoretical premise and tests its predictions against data drawn from natural language usage. The research relies heavily on theoretical interpretation within the framework of generative grammar. More specifically, it adopts the Cartographic Approach, which places each adverb in the position of a specifier of a functional projection, rather than an adjunct. This is the reason why the

chapter goes on to explain some differences in terminology, such as the usage of *adjunct* in traditional grammar and in generative syntax. In traditional grammar, adjuncts are one type of adverbial element, alongside subjuncts, disjuncts, and conjuncts (Quirk et al. 1985), incorporated into clause structure to varying degrees and typically providing optional information about time, place, manner, or reason. In generative syntax, however, adjuncts are defined structurally as optional modifiers that are not selected by a lexical head but are introduced through adjunction. Within X-bar Theory, they attach to intermediate projections X', creating recursive structures without affecting the projection line of the head. Throughout the dissertation, the term *adjunct* is used exclusively in this generative sense, in contrast to complements and specifiers, which are determined by their selectional and configurational relationship to the head. X-bar Theory, a key component of the present study, assumes a uniform hierarchical phrase structure of the form [Spec [X' [X Complement]]], illustrated in Fig. 1 below.

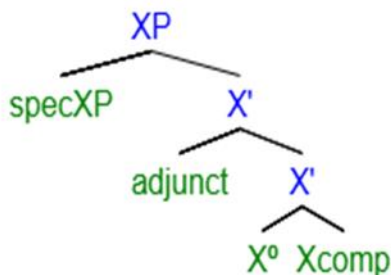


Figure 1. *The canonical X-bar phrase structure configuration*

Overall, this chapter establishes the conceptual and methodological framework for the dissertation. It shows that adverbs are complex and that their classification, distribution, and interpretation raise a number of challenges.

CHAPTER III ON THE EVOLUTION OF ADVERB CONCEPTUALISATIONS

The chapter *On The Evolution of Adverb Conceptualisations* examines how the understanding of adverbs has evolved in linguistic theory. It traces a path from their marginal status in traditional grammar to their central role in current syntactic models. Traditionally, adverbs were seen as peripheral elements without a clear structural function. However, recent work in generative syntax has challenged this view by proposing that adverbs occupy structured and hierarchical positions within the clause. The chapter reviews previous suggestions as to how adverbs contribute to sentence meaning, syntactic structure, and discourse coherence. It also evaluates the strengths and limitations of these approaches in order to select the most appropriate framework for analysing the data in this study. The chapter also addresses the long-standing debate on the integration of adverbs into clause structure. As the evolution of the conceptualisation of adverbs includes historical, contemporary, and comparative dimensions, this chapter examines a range of theoretical perspectives developed over the years.

The chapter begins with a brief introduction to Generative syntax, its emergence, and its main priority, namely to propose a grammar system that could be applicable to all human languages. This is of great importance, since the current dissertation is a cross-linguistic comparison of Bulgarian and English whose main goal is to identify similarities and differences between the two languages. Section 3.2 *Historical Background: From Aristotle to Generative Syntax in a Few Lines* briefly focuses on the study of human linguistic ability, which led to the emergence of linguistics as a science, addressing phonetics, syntax, morphology, and other areas. This section draws an interesting parallel between Aristotle and Plato, on the one hand, and Chomsky, on the other, leading into the next section called *Modern Syntactic Approaches to Adverbs*. Modern approaches treat adverbs as more than peripheral modifiers recognising the fact that they often reveal crucial information about the architecture of grammar, the interaction between syntax and semantics, and the typological variation across languages. An important distinction between *predicate-level, subject-level, and sentence-level adverbs* is made, followed by a discussion

of the Principles and Parameters framework. The chapter combines descriptive, neo-traditional ideas and functional-typological approaches. It discusses several authors, such as Huddleston and Pullum, who talk about front, end, and central positions (2002: 575), Himmelmann and Schultze-Berndt, who introduce the term *predicate-level adverb*, distinguishing it from *sentence-level adverbs* (2005: 5), and Givón, who is amongst the first linguists to talk about *subject-oriented adverbs*. After Givón, the distinction between subject-oriented adverbs and sentence-oriented adverbs has been further explored by various linguists and researchers, such as Ronald W. Langacker (2008), who delves into the concepts of *grounding* and *viewpoint* – two key concepts in the interface between syntax, semantics, and discourse, especially in the study of adverbials.

According to Huddleston and Pullum VP-oriented adverbs, such as *naturally* in (1a) and (1b) below, can be subdivided into subject-level adverbs (1a) and predicate-level adverbs (1b) (2002: 575):

- 1) a) She *naturally* laughed at the joke.
b) She laughed at the joke *naturally*.

The distinction between subject-level adverbs and predicate-level adverbs revolves around the specific elements of the sentence they modify and the type of information they provide. Subject-level adverbs modify the subject of the sentence, providing information about the subject's manner, attitude, or involvement in the action. Predicate-level adverbs modify the verb phrase (VP), providing information about the manner, time, place, frequency, degree, or aspect of the action or state described by the verb. They are concerned with the specifics of the action or state itself rather than the subject's manner or attitude. On the other hand, sentence-level adverbs, positioned at a higher functional projection in Cinque's hierarchy, modify entire propositions, thereby influencing discourse coherence and the speaker's stance:

- 2) *Naturally*, she laughed at the joke.

Therefore, example (2) illustrates that it is natural for the girl's laughing to occur (Himmelmann & Schultze-Berndt 2005: 5). In contrast, a fourth

type of adverbs is presented by adverbs like *however*, *therefore*, *moreover*, etc., whose function is to connect ideas across sentences and manage the flow of discourse. In other words, they do not modify the internal structure of the clause but function more as discourse markers or conjunctive adverbs. For that reason, they are not included in Cinque's hierarchy. These adverbs serve to connect sentences or clauses and express relationships such as contrast, addition, or causality at the discourse level rather than within the clause structure itself:

3) *Therefore*, she laughed at the joke.

Such discourse markers often appear at the beginning of a sentence or clause and can also be found within the clause but set off by commas.

The chapter then focuses on some insights from Linguistic Typology, considering cross-linguistic variations in adverbial placement and their relevance to the search for syntactic universals. The diversity and universality of adverbs make them an intriguing subject for typological studies. Ramat and Ricca (1994), for example, attempt to delineate the boundaries of the adverb category in relation to other grammatical categories such as nouns, adjectives, verbs, and converbs, adopting a prototypical category perspective in which members vary in their degree of centrality, with some being more prototypical than others. Their suggestion aligns with the radial model conceptualised by Lakoff (1987), which is also briefly discussed in this chapter. Other names, such as Hengeveld (1992), Biber (1999), and Croft (2000) have also contributed to this line of research and have been cited in this context.

Having explored some of the more prominent typological studies connected with adverbs, I then go on with one of the most significant debates in the field, namely whether adverbs are simply optional elements that do not impact core syntactic structures and are freely adjoined or whether they occupy specific, fixed positions within the functional structure of the sentence. Before discussing the classification of adverbs, explaining the three different terms used to designate them, a complement, a specifier, and an adjunct, the work offers a brief introduction of the main idea behind Universal Grammar and the principles and parameters which comprise it. As Richard S. Kayne puts it:

The study of differences among languages must obviously proceed in tandem with the study of what they have in common, that is, with the study of the principles of Universal Grammar (UG) that interact with language-specific parameters to yield observed variation. (2000:3)

The idea of a UG was introduced in the 1950s based on observations about how quickly and effortlessly children acquire language. These considerations quickly lead to the general hypothesis that humans are born with an ‘innate “language-forming capacity”’ (Chomsky 1965: 30; Krapova 2012: 21 - 70), governed by principles and parameters. Examples of such principles include the Projection Principle according to which lexical information is projected from the lexicon onto syntactic structure at all levels of representation, and Relativized Minimality, which states that a local relation between X and Y cannot hold if there is an intervening Z of the same structural type (Chomsky 1973, 1977; Rizzi 1990). In addition to universal principles, the theory incorporates parameters that account for cross-linguistic variation. One such an example is the Head Position Parameter (Radford 2009: 25). This parameter captures cross-linguistic variation in whether heads (e.g. verbs, prepositions) precede or follow their complements. Languages such as English, Bulgarian, and French instantiate a head-initial configuration, whereas languages such as Japanese and Korean exhibit a head-final configuration. This contrast is illustrated by the English prepositional phrase *in the house*, in which the head precedes its complement, as opposed to the Japanese construction *ie no naka* (‘house of inside’), where the head follows the nominal element. Other examples of parameters are the *Wh-Movement Parameter*, ‘which determines whether wh-expressions are fronted (i.e. moved to the front of the overall interrogative structure containing them) or not’ (Radford 2009: 24); the *V2 (Verb-Second) Parameter*, which specifies whether the finite verb must appear in the second position of a clause; and the *Object Drop Parameter*, which deals with the question of whether objects can be omitted when they are contextually understood (Rizzi 1986). The chapter then goes on to examine the structural status of adverbs. It begins with an overview of phrase structure theory and the development of X'-theory and highlights how adjunction has traditionally been used to account for the apparent

flexibility of adverb placement. This is followed by a closer look at the role of specifiers, which provides the foundation for more constrained and hierarchical approaches to adverb distribution. Building on this, the chapter reviews key proposals on adverbial licensing and movement, with particular attention to Cinque (1999) and Alexiadou (1997), who argue for a structured and universal hierarchy of adverbial positions. It also considers the distinction between strong, weak, and clitic adverbs and their implications for syntactic behaviour (Cardinaletti and Starke 1994; Anne Abeillé and Danièle Godard 2001).

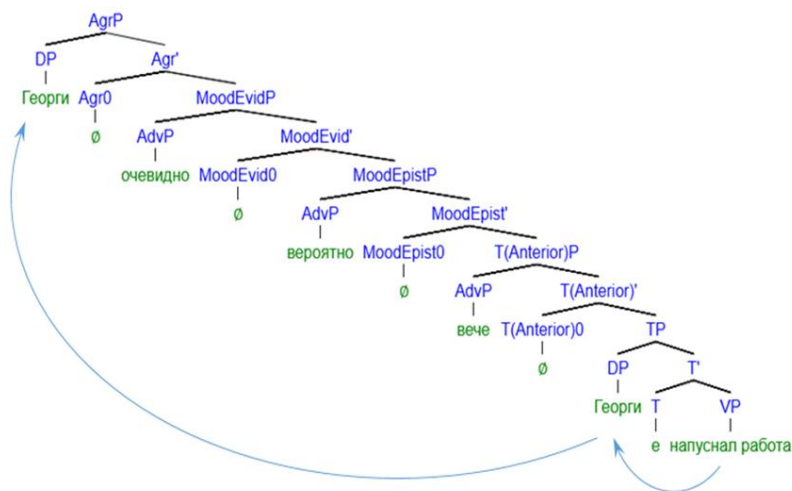
The aim of this chapter is twofold: first, to review the main theoretical approaches to the classification and placement of adverbs, and second, to assess how well these models explain differences between languages, with a focus on Bulgarian and English. By bringing together earlier and more recent studies, summarising different classifications, and placing adverbs within a clear syntactic structure, the chapter aims to offer a better understanding of adverbs in phrase and clause structure. This discussion also prepares the ground for the main goal of the dissertation, namely a comparative analysis of adverb distribution based on Cinque's (1999) cartographic framework. Overall, the chapter supports a more structured and constrained view of adverb placement, setting the stage for the analytical framework adopted in the dissertation.

CHAPTER IV '*SPECIFYING*' THE FRAMEWORK

As mentioned earlier, the analysis of adverb placement and behaviour has led to the emergence of two dominant views – the Cartographic Approach (Alexiadou 1997, Cinque 1999, Rizzi 1997) and the Scope-based Approach (Jackendoff 1972, Ernst 2004). This chapter offers a critical analysis of the two approaches. It details their core principles and discusses illustrative examples that compare how each approach interprets sentence structure and meaning. The name of the chapter itself highlights its main argument, namely that analysing adverbs as specifiers provides a more comprehensive and accurate framework for analysing adverb syntax.

The chapter begins with the key principles of the two theories. The scope-based approach emphasises the semantic interactions among adverbs and other constituents and allows any adverb to adjoin to any projection,

provided its individual semantic requirements are met. In other words, ‘adverbials can appear wherever they cause no violation of semantic well-formedness’ (Ernst 2020: 89). In contrast, the cartographic approach analyses the type, order, and hierarchy of the functional heads and claims that there is a universal inventory of adverbs whose order is rigidly fixed in all human languages, even though languages may choose the exact ways of encoding functional content into specific morphological forms. In other words, ‘one of the basic ideas behind cartography is that the semantic interpretation of a given clause is determined by features that project their own functional projections in syntax’ (Sočanac, 2019: 330). Therefore, adverbs are ‘individually licensed by dedicated functional heads, arranged in a rigid hierarchy by Universal Grammar (Ernst 2020: 89). According to this hierarchy, a Bulgarian sentence such as (4) will have the syntactic tree in **Figure 2**:



- 4) Георги очевидно вероятно вече е напуснал работа.
 *George obviously probably already has left his job.

Figure 2. Syntactic tree of example (4)

By taking a closer theoretical look at the adverb hierarchy proposed by Cinque and analysing more examples like the one provided above, the chapter shows the strengths of the ‘location-in-Spec’ hypothesis. The scope-based approach, on the other hand, is mainly discussed in light of the various challenges it encounters and the fact that ‘much of its underlying semantic analysis remains to be developed in explicit terms’ (Ernst 2020: 89). Section 4.3 *Reassessing Ernst’s Seven Empirical Arguments* confirms that the scope-based theory offers a descriptively rich account of meaning-driven placement, with its emphasis on semantic licensing, scopal flexibility, and the Fact-Event Object calculus. Nevertheless, it claims that the attraction of the approach, which lies in its conceptual economy with respect to syntactic stipulations, is also what weakens its ability to make clear predictions. If adverbs can appear almost anywhere as long as the meaning allows it, it becomes difficult to explain why we still see consistent ordering patterns and cross-linguistic differences, even in relatively free word order languages like Bulgarian. In addition, phenomena such as ellipsis, clitic–adverb interactions, adverb stacking, and position-dependent meanings are not well explained. As Cinque (2004) notes, the theory ultimately ‘falls short [...] of accounting for certain crucial properties of adverbial syntax’ (2004: 684). As a result, the cartographic approach is presented as a more constrained and theoretically predictive framework for the analysis of adverb distribution.

CHAPTER V CINQUE’S ADVERB HIERARCHY: A COMPARATIVE ANALYSIS OF ADVERB POSITIONS AND CLAUSE STRUCTURE IN ENGLISH AND BULGARIAN

While the main goal of the preceding chapter is to establish the Cartographic Approach as the most suitable framework for the present investigation, this chapter now shifts focus to the empirical application of the approach in two typologically distinct languages, namely Bulgarian and English. Although the chapter is divided into more than ten subsections, its main ideas can be grouped into two parts. First, the chapter begins by explaining in detail the distinction between high and low adverbs and the structural positions they occupy within clause structure in each language. It discusses how Cinque’s hierarchy builds on earlier classifications such as

those proposed by Jackendoff (1972) and Bellert (1977), but also seeks to refine them by giving attention not only to configurations where the universal order appears to be maintained, but also to cases that appear to be counterexamples. One goal of this chapter is to determine whether such deviations represent genuine counterexamples or can instead be accounted for through other, perhaps independently motivated, syntactic operations within the cartographic model. I then continue by examining the distribution of adverbs in English and Bulgarian with respect to high and low structural positions in the clause. I compare a large number of corpus-based examples from both languages in order to identify systematic patterns of placement and interpretation. The analysis focuses on different adverb types, which are compared in pairs to determine whether their positions and readings in English and Bulgarian correspond to the predictions of Cinque's hierarchy.

The chapter further discusses scope ambiguities involving aspectual adverbs (such as *Asp_{generic/progressive}* and *Asp_{PLCompletive}*), as well as focusing and parenthetical adverbs, highlighting both structural and pragmatic variation. Section 5.1.3. *Scope Ambiguities and Adverb Interpretation: Asp_{generic/progressive} and Asp_{PLCompletive}* argues for the postulation of the functional heads *Asp_{Generic/Progressive}* and *Asp_{PLCompletive}* within Cinque's cartographic approach to functional projections, based on cross-linguistic evidence from English and Bulgarian. The motivation for the projection *Asp_{PLCompletive}* comes from the fact that in Polish, in the case of a plural object, the verbal morphology includes a suffix that expresses a pluralised or distributive completive meaning. In other words, there is a distinct suffix that signals the completion of a set as a whole ("one after the other"), as opposed to the completion of each individual item within the set ("right through") (1999: 101). In English, an instructive case for the necessity of postulating both *Asp_{SgCompletive}* and *Asp_{PLCompletive}* comes from sentences where more than one instance of *completely* occurs, each with a distinct interpretive contribution. Consider (5), extracted from the COCA:

- 5) Antony has turned the tables *completely* and has now *completely* destroyed *all* hopes of the conspirators ever establishing themselves in Rome.

In the first conjunct, *completely* clearly targets the result state of a single event. This reading is compatible with $\text{Asp}_{\text{SgCompletive}}$ (II), the lower completive head associated with inner aspect and process/result structure. Therefore, the first *completely* targets the resultant state of a single telic event (“has turned the tables”). By contrast, in the second conjunct, the interpretation of *completely* is different: the adverb does not merely mark the thoroughness of one event but extends distributively over a plurality of objects or subevents, expressing ‘exhaustive destruction of all hopes’. The plural/exhaustive reading is triggered by the quantifier *all*, which forces the completive reading to apply to each individual member. This distributive reading is precisely what Cinque (1999) identifies as the domain of $\text{Asp}_{\text{PlCompletive}}$ (1999: 100–101). While English does not display a dedicated adverb that can be assigned exclusively to the specifier of $\text{Asp}_{\text{PlCompletive}}$, the distributional facts and the interpretive contrasts provide indirect support for Cinque’s claim that such a functional head is part of the universal hierarchy. Therefore, $\text{Asp}_{\text{PlCompletive}}$, though morphologically visible in some languages and only semantically retrievable in English, plays a crucial role in capturing the fine-grained distinctions in how natural languages express aspectual completion.

Similar to English, Bulgarian does not have a dedicated morphological suffix that unambiguously encodes distributive or pluralised completion. Therefore, completive meanings are expressed through a combination of Aktionsart prefixes and verbal aspect (perfective aspect which is encoded by prefixes such as *из-*, *на-*, *про-*, etc.) (Chakarova 2025: 54), Tense (Aorist and Imperfect Tense), adverbs (*напълно*, *изцяло*, *съвсем*), and quantificational elements (*всички*, bare plurals, etc.). Bulgarian aspectual morphology is highly developed and speakers of Bulgarian exhibit a high degree of sensitivity to different aspectual meanings, as the language has ‘kept the historically older distinction between Aorist and Imperfect Tense while also developing the common Slavic distinction between Perfective and Imperfective Aspect (Slabakova 2001: 82). The Aorist tense presents the event as having reached an actual endpoint, whereas the Imperfect depicts the eventuality as ongoing, without reference to either its beginning or its completion (Chakarova 2025: 127–128). Moreover, in Bulgarian, we have a lexical/derivational category that exists independently of tense but is, nevertheless, closely related to

grammatical aspect. Consequently, ‘Bulgarian aspect is generally considered a lexicogrammatical category’ because the language ‘has a developed system of word-formation affixes for creating verbs in perfective and imperfective forms’ (Koeva 2025: 208). In addition, both perfective and imperfective verbs can form an aorist, but the meaning changes. Completive readings often arise from the interaction of perfective verbs with modifiers such as *напълно* (‘completely’) and *изцяло* (‘entirely’). And yet, despite all that rich verbal morphology, Bulgarian lacks a special morphological suffix that encodes distributive or pluralised completion. There is no single suffix or inflection that signals that completion applies collectively or across multiple participants or objects. Such meanings are instead expressed through lexical choices, quantifiers, or periphrastic constructions. When the object is pluralised, Bulgarian makes available interpretations that align with Cinque’s notion of $Asp_{PlCompletive}$: the action is construed not only as reaching its endpoint but as exhaustively distributed across all members of the plural set. For instance, in (6), the adverb *изцяло* does not merely indicate the thoroughness of one event but extends distributively over each object in the plural domain:

- 6) В този случай Дания ще прилага *изцяло* **всички** действащи мерки, които са приети в рамките на Европейския съюз.

In this sentence, the completive adverb *изцяло* interacts with the plural quantifier **всички**. This produces a reading in which every individual measure is applied in full. The distributive force is not determined by the perfective verb alone. It arises from the interaction between aspect, adverbial modification, and the plural quantifier. This mirrors the English pattern and shows that even in the absence of overt morphological marking, Bulgarian allows the interpretive space that licenses an $Asp_{PlCompletive}$ reading.

The second main part of the chapter focuses on the role that verb raising plays regarding the integration of adverbs into clause structure, since a fundamental claim of the cartographic approach is that the order of adverbs in a given sentence reflects the movement of the verbal head.

Emphasis is put on finite lexical verbs, finite auxiliaries, active past participles and past passive participles. Unlike English, languages such as Bulgarian have distinct participles for active and passive uses since they encode voice morphologically. For the Bulgarian examples of active past participles included in this work, only Past Active Aorist Participles and Past Active Imperfect Participles ending in -л /l/, -ла /la/, -ло /lo/, -ли /li/ are used. The existence of three intermediate projections, labelled YP_{low} , YP_{middle} , and YP_{high} , is proposed in order to account for cross-linguistic asymmetries in the positioning of auxiliary verbs and participles. The key original contribution of the chapter and of the dissertation itself lies in the extension of Ledgeway and Lombardi's proposal of a single intermediate syntactic space (YP), located between a domain delimited on the left by presuppositional adverbial negators (cf. Italian *mica*) and on the right by the arguments of the VP (2005: 81–82). In the present dissertation, this space is further refined as internally differentiated, with the introduction of two additional projections, YP_{low} and YP_{high} , which, together with YP_{middle} , form a more fine-grained hierarchical structure. A key original contribution of the chapter lies in the analysis of finite lexical verbs, auxiliaries and participles (both active and passive), which reveals structural asymmetries. English finite lexical verbs are strictly confined, remaining to the left of the lowest part of the hierarchy, specifically the projection associated with *well*. Bulgarian finite lexical verbs, on the other hand, demonstrate greater freedom, optionally raising through the lower adverbial space to reach the YP_{middle} boundary immediately above *already/вече*. English auxiliaries used both in active and passive voice surface in higher functional layers (YP_{middle} or YP_{high}). On the other hand, Bulgarian present auxiliaries used in active voice, as clitics, due to their reduced morphological weight and frequent clitic status are subject to stronger prosodic restrictions and are restricted to YP_{low} . However, Bulgarian past auxiliaries used in active voice can reach YP_{middle} . Since English auxiliaries are able to occupy higher functional heads, we observe distinct surface word-order patterns between the two languages. The maximal position available to the passive auxiliary in English is YP_{high} . By contrast, Bulgarian allows passive auxiliaries to be merged in YP_{low} but they may subsequently raise further to YP_{middle} or even to YP_{high} , as illustrated by the following examples:

- 7) а) *Вече е записано* в книгата и всички се съгласихме.
- б) *Често беше установявано*, че е необходимо да бъдат направени подобрения в системата за съхраняване на записи.
- в) Северният полюс, както знаете, *е вече открит*.
- д) Дафни *беше хваната отново*.

In example (7a) the auxiliary is located in the head of YP_{low} , with a low adverb to its left. In example (7b) the auxiliary is once again located in the head of YP_{low} but this time, there is a high adverb to its left. In both examples, the participle remains in VP. However, in (7c) the passive auxiliary is to the left of the lower adverbs *вече*. A possible interpretation of the sentence is one where the auxiliary is in YP_{middle} , followed by an adverb in the specifier position of a low functional projection, followed by the participle in VP. The participle itself can continue to raise higher, to the head of a low functional projection, forming structures such as the one below:

- 8) Акварелът, този труден материал, до голяма степен *е овладян вече* и не се боя от него.

In example (7d), we observe another interesting property of the Bulgarian passive auxiliary. Since both the auxiliary and the participle are found to the left of the high adverb *отново*, I suggest that the auxiliary occupies the head of YP_{high} , followed by a passive participle in the position of the head of the respective high functional projection. This observation is further supported by the fact that, as in English, two high adverbs can co-occur, with one intervening between the auxiliary and the participle:

- 9) Дафни *беше (вероятно) хваната отново*.

The comparative analysis of English and Bulgarian finite lexical verbs, auxiliaries, and participles presented in this section reinforces the claim that both languages adhere to the universal cartographic hierarchy, yet differ in how their auxiliaries and participles exploit the available syntactic space.

The chapter combines theoretical predictions with language-specific data and shows how Cinque's hierarchy can account for variation

driven both by pragmatic and information-structural factors. The evidence presented from both Bulgarian and English supports a view of universal syntax in which parametric variation lies in the degree of activation of the available functional projections. The chapter concludes with a comprehensive hierarchical representation of adverbial positions, refined and further developed to integrate both higher and lower domains.

CHAPTER VI ADVERB POLYSEMY AND FUNCTIONAL STRUCTURE IN THE CLAUSE

This chapter looks at how adverb polysemy is connected to the structure of the clause. I argue that when an adverb seems to have more than one meaning, this is usually not because the word itself is ambiguous, but because of where it appears in the syntactic structure. In other words, differences in interpretation often come from structure and the functional layer in which the adverb is merged rather than from the adverb's lexical meaning. The discussion focuses on two empirically significant domains, namely $T_{(Anterior)}$ and $Asp_{Continuative}$ and aims to show that the cartographic approach offers a more constrained and explanatory account of adverbial polysemy, while also providing a clear way to connect differences in meaning to the universal functional structure of the clause.

The chapter begins by introducing the adverb class represented by *already*, whose core meaning is 'one of temporal priority' (Cinque 1999:94). The adverb is located in the specifier position of $T_{anterior}P$, which is the lowest TP. Cinque explains its meaning as 'one of precedence with respect to a reference time' (1999: 94). Bulgarian sentence examples confirm that small shifts in position (preverbal vs postverbal) yield predictable contrasts between event-completion and result-state readings:

- 10) a) Влакът *вече* пристигна.
b) Влакът пристигна *вече*

The two options in (10) are particularly interesting in that they differ both in their syntactic position and in their interpretation. In (10a), the event is interpreted as a past occurrence whose tense is computed with respect to

speech time and which may be followed by subsequent events. It further implies that the train arrived earlier than expected. Preverbal adverb placement appears to be linked to a scopal position over the event, which in turn indicates its completion. In contrast, (10b) expresses the notion that the event is relevant at the time of speech; it can alternatively be paraphrased with the present perfect – Влакът **е пристигнал** вече. What *already* refers to is not the completion of the event but more like of the state of being ‘arrived’. Therefore, in (10b), but not in (10a), we get the idea that the train may still be at the station. This can be seen even better if we further expand the sentence:

- 11) a) Влакът вече пристигна и замина за Бургас.
 b)?? Влакът пристигна вече и замина за Бургас.

In (11a), the adverb has scope over the event, while in (11b), it has scope over the state (or process) expressed by the verb. It is therefore fully acceptable to paraphrase (11a) as follows: ‘the train first arrived and then when this event was over it left for Burgas’. However, a similar paraphrasis is not possible for (11b) because the adverb (not the aorist) has a resultative meaning. In other words, if the train is still at the station (the process of ‘arriving’ has ended, but the event of ‘arriving’ still has current relevance), the train cannot have left for Burgas, hence the marginal acceptability of (11b).

Another interesting property of the Bulgarian *вече* is that it is ambiguous between Asp_{Anterior} and Asp_{Terminative}. Since Bulgarian does not have an adverb that is the precise equivalent of *no longer*, the adverb *вече* is used with verb or adverb negation to render that meaning. These observations are interesting in light of the fact that in English we can combine the adverbs *already* and *no longer*, but Bulgarian resorts to the use of another adverb, namely *повече*, in order to avoid repetition such as *вече вече не*. This is not an unexpected phenomenon since Cinque’s theory of adverbial hierarchies posits that while the positions of adverbs relative to each other are universally fixed, the specific adverbs and their semantic nuances can vary across languages.

The analysis of Asp_{Continuative} *still* revealed an even more complex picture. As noted by Michaelis, ‘the adverb *still* in English has at least three different senses that have been analysed throughout the years: aspectual, adversative, and marginality sense.’ The chapter analyses these three meanings by examining whether a single adverb is used to express them in Bulgarian as well, and by determining the position of the adverb in the clause with respect to each of these interpretations. The results suggest that while the aspectual continuation sense and the marginality reading fit within Asp_{Continuative}, the adversative/concessive sense maps onto a distinct focused position outside Cinque’s unfocused hierarchy (FocP). Aspectual *still* and marginality *still* offer a slightly different interpretation in meaning depending on the verb they are used with. This theory is confirmed by Bulgarian examples taken from the Bulgarian National Corpus. In Bulgarian, the adverb *still* can be translated as (*bce*) *ouye* only in aspectual and marginality sense. When interpreted as adversative, *still* corresponds to the Bulgarian (*bce*) *nak*. What’s more, just like in English, in Bulgarian, marginality *still* cannot function as a sentence adverb.

This chapter is of great importance as it shows that the functional architecture of the clause both limits and explains how adverbs are interpreted. The results strengthen the main claim of the dissertation that a detailed functional hierarchy is necessary for an adequate theory of adverb syntax and interpretation.

CHAPTER VII ADVANCING ADVERB SYNTAX: CONCLUSIONS AND FUTURE DIRECTIONS

The present dissertation has examined the syntactic distribution of adverbs in English and Bulgarian within the framework of the Cartographic Approach and, more particularly, Cinque’s (1999) universal hierarchy of functional projections. Through a comparative corpus-based analysis, the study has demonstrated that despite differences in surface word order, both languages conform to a structured and hierarchically organised system of adverbial positions.

The findings provide empirical support for the existence of a universal functional sequence governing adverb placement. The results show that adverbs are not freely adjoined elements but occupy dedicated

structural positions within the clause. The analysis further confirms that apparent cross-linguistic variation is largely attributable to differences in verb movement and auxiliary placement rather than to differences in the hierarchical organisation of the adverbs.

Particular attention has been devoted to the interaction between syntax and interpretation, revealing that the polysemy of adverbs such as *already/бече* and *still/оуе* can be systematically explained through their association with distinct functional projections. This supports the cartographic assumption that semantic interpretation is closely linked to syntactic structure.

The dissertation also contributes to the field by providing the first systematic application of Cinque's hierarchy to Bulgarian adverbs and the first comprehensive comparison between Bulgarian and English within a cartographic framework. In addition, it proposes the functional positions YP_{low} , YP_{middle} , and YP_{high} as refinements that facilitate a more precise account of verbal movement and auxiliary distribution.

Overall, the study confirms that the Cartographic Approach indeed has explanatory and predictive advantages over scope-based alternatives. It also reinforces the view that adverbial syntax reflects a universal and highly articulated functional architecture. The results contribute to a better understanding of the relationship between syntactic structure, semantic interpretation, and cross-linguistic variation. Furthermore, the findings provide a foundation for future research on adverbs and clause structure, especially in relation to non-declarative sentences.

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SCIENTIFIC CONTRIBUTIONS OF THE DISSERTATION

1) The dissertation is the first research on the applicability of Guglielmo Cinque's adverb hierarchy to the structure of the Bulgarian clause.

2) The present study is the first that offers a systematic comparison of English and Bulgarian within the framework of Cinque's adverb hierarchy.

3) A methodological contribution of the dissertation lies in its use of three major corpora, COCA, the British National Corpus, and the Bulgarian National Corpus, which together provide a robust empirical foundation for the cross-linguistic analysis. This multi-corpus approach ensures that the observed patterns are not idiosyncratic, but reflect systematic tendencies in both languages.

4) Lesser-studied adverbial classes and interpretive patterns in English and Bulgarian are examined, particularly in relation to their distribution within the functional hierarchy. The insights of previous scholars are carefully taken into account throughout the analysis, and new generalisations are proposed with the help of the cartographic framework.

5) The study proposes new structural labels, YP_{low} , YP_{middle} , and YP_{high} , which are integrated into Guglielmo Cinque's hierarchy, thereby refining and further developing the cartographic representation of the clause.

6) The study also puts forward original findings and proposals concerning the use of adverbs such as *still* and *already*, in relation to their polysemous behaviour across different functional positions. It shows how their varying interpretations can be systematically derived from their placement within the syntactic hierarchy.