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DEVERBAL NOMINALS IN BULGARIAN: A SYNTACTIC ANALYSIS

MASTER’S THESIS

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The present work deals with the topic of nominalizations in Bulgarian within the Principles and Parameters framework.

My starting point is the assumption that word formation is syntactic and functional and that a categoriless root is spelled out as a noun, adjective, or verb, depending on the functional layers that dominate it (Alexiadou 2001). However, contrary to Alexiadou (2001) and in accordance with Ferrari (2005), I will show that sometimes a stem and not a root must be inserted in syntax.

A crucial factor for the derivation of deverbal nominals in Bulgarian is the status of nominalizers inside the nominalizing process. Following Ferrari (2005) I will defend the obligatory presence of such nominalizing heads and claim that they can appear in the form of gender suffixes or various derivational suffixes marked for gender in Bulgarian. Thus, I will suggest, in line with Ferrari (2005), that noun formation results from the merger of a nominalizing head [n] with an XP where XP can be a nominal, adjectival, or verbal stem, or a VP, AspP, or VoiceP.

I will propose that there are three nominalization types in Bulgarian, based on morphological criteria. The first type includes nouns derived from roots or stems via the merger with a gender morpheme (the gender-derived nominals) or a derivational suffix marked for gender. These nouns I label ‘other-suffix’ nominals.

The second nominalization type is what I label Voice –IE nominals. These nominalizations have been previously analysed as –NIE nominals in the literature (Dimitrova-Vulchanova and Mitkovska (2006), Popova (2006), Pashov (1999), Steinke (1999), and Bojadjiev et al (1999)), among many
others). However, contrary to previous analyses, I will show that there are syntactic and semantic reasons to consider such nouns past passive participial nominalizations.

Finally, the third nominalization type is what has been traditionally known as process –NE nominals. However, contrary to previous assumptions that such nouns are process-denoting only (Popova (2006), Dimitrova-Vulchanova and Mitkovska (2006), and Pashov (1999), among others), I will show that there is much variation inside this group.

The present study also deals with the topic of movement and the types of movement operations involved in the nominalizing process. Bearing in mind that a deverbal nominal is derived via suffixation in Bulgarian, i.e. by attaching a nominalizing suffix to the root or stem, I will show that the correct sequence of suffixes inside Bulgarian nominalizations is obtained by phrasal movement exclusively. Following Cinque (2000, 2005), Mahajan (2000) and Ferrari (2005), I will show that the derivation obtains by the successive cyclic movements of larger and larger XPs from Spec to Spec position during the nominalizing process.

Concerning this issue, given that prefixation is also active inside the nominalizing process in Bulgarian, I will show that, although both prefixes (excluding lexical ones which are not syntactically derived) and suffixes occupy head positions in my analysis, we have no need to postulate head movement to account for the correct sequence of prefixes. Rather, I will propose that prefixes do not move in syntax but simply stack together with the constituent found below the projection hosting the prefix.

As for the types of prefixation involved inside nominalizations, I will distinguish between three types. The first consists of lexical prefixes. Contrary to previous analyses (Svenonius (2004a, b, c), Ramchand and Svenonius (2002), Ramchand (2004), and Romanova (2004b), among many others), I will
show that lexical prefixes are not derived syntactically. Rather, they attach to the verbal stem pre-syntactically, i.e. as part of the stem, before they enter the derivation.

The second prefixation type includes the perfectivizing prefixes. These prefixes have an aspectual function and render imperfective verbs perfective. However, in doing so, they make the presence of the internal argument obligatory. I will argue for a syntactic derivation of such prefixes where I analyse them as heads of Borer’s (2002) AspP.

Finally, the third prefixation type is what is known as super-lexical prefixes. Such prefixes are also syntactically derived in my analysis. Due to their adverbial semantics, I analyse them as heads of an aspectual projection in accordance with Cinque’s (1999) hierarchy of aspectual features.

Another topic examined in this work is argument structure. Following Grimshaw (1990) I will show that without event structure, there is no argument structure. Thus, I will divide nominalizations into three types: true argument structure nominals, participant structure nominals and result nominals. There is, though, no strict correspondence between morphological type and argument structure due to the fact that inside any morphological nominalization type (i.e. ‘other-suffix’, Voice –IE and –NE nominals) we may find result and participant structure nouns. However, only some transitive and prefixed process –NE nominals can be true argument structure nouns.

The event denotation inside nominals can also influence their syntactic behaviour. Thus, all of the eventive nouns allow for time and manner modification as well as the adjective ‘frequent’, whereas the pure object-denoting nouns never do. As for result-denoting nominals, they can combine with manner adverbials and the adjective ‘frequent’. A possible explanation for this fact is that such modifiers relate directly not to the noun, i.e. the output of the event, but rather to the implicit event which has caused this output. As for
agent-oriented adverbials, only argument-structure –NE nouns accept them. This suggests that such modification, apart from eventive semantics, involves argument structure as well.

However, whether eventive or not, all of the nominalization types accept nominal modification (such as Pluralization, Indefinites, Numerals and Demonstratives). This suggests that eventivity does not play a role here. Rather, it is the syntactic category—a noun—that licenses such modification.

Another issue commented on in this work is the possibility of aspectual inheritance inside the nominalizing process. Bearing in mind that only –NE nominalizations can denote processes, and due to the fact that such nouns are derived from imperfective verbal bases exclusively, I will propose that aspectual inheritance takes place in such nominalizations. Thus, it is the presence of the imperfective suffix inside these nominals which allows them to denote processes. This claim is further confirmed by the telicity difference among Bulgarian deverbal nouns where only the process –NE nominals systematically allow for atelic modification. However, I will show that (a)telicity also depends on certain properties of the lexical item (the presence or absence of perfectivizing prefixes, the presence of telic PPs, etc.).

The organization of this work is as follows. In the following chapter I will present the main morpho-syntactic characteristics of the Bulgarian noun phrase in order to introduce the reader to the general picture of the Bulgarian nominal domain. Chapter 3 will then offer the theoretical framework adopted in this study together with some problems with previous analyses concerning the topic of nominalizations. Chapter 4 will then present my syntactic analysis of Bulgarian nominalizations, after which the role and syntax of prefixation will be discussed (chapter 5). Finally, I will close the discussion with some concluding remarks (chapter 6).
In this chapter, I will present the main morpho-syntactic characteristics of the Bulgarian noun phrase in order to introduce the reader to the general picture of the Bulgarian nominal domain. As the main concern in this study is to discuss the syntax of deverbal nominals, anything that is not directly relevant to this topic would be presented very briefly or altogether omitted.¹

Many linguists consider Bulgarian a classical language due to the fact that it derives from Old Bulgarian, the first written Slavic language.² Contemporary Bulgarian has also been claimed to be in a certain sense “exotic” because it has undergone quite a particular path of evolution, as far as its morphology is concerned, when compared to the other Slavic languages. It has been claimed that contemporary Bulgarian (henceforth Bulgarian) is an analytic language whereas all the rest of the Slavic languages together with Old Bulgarian are synthetic. This tendency towards analytism is the most significant characteristic of Bulgarian morphology.³ Bulgarian has also lost overt nominal Case morphology,⁴ contrary to the rest of the Slavic languages (including Old Bulgarian). Additionally, and again as opposed to other Slavic languages, Bulgarian has developed a Determiner form expressing definiteness⁵ (see 2.1.5).

¹ Thus, I will not describe the Bulgarian verbal system in any more detail than what is strictly necessary for the purposes of the discussion that follows.
² Also known as ‘Old Church Slavonic’. In fact, though I take the terms ‘Slavic’ and ‘Slavonic’ to be synonyms, I prefer to use the former.
³ Bulgarian is considered an analytic language in general. Bojadjiev et al. (1999) claim that Bulgarian nowadays is considered to contain as many analytic forms as synthetic ones.
⁴ Closely related to the Case system is the status of the Bulgarian Vocative forms. The majority of the Slavic languages, though preserving Case distinctions, have lost overt Vocative. Bulgarian underwent just the opposite process: it lost overt Case but preserved Vocative overtly.
⁵ All of the characteristics that distinguish Bulgarian from other Slavic languages are also shared by Macedonian. Thus, Macedonian, like Bulgarian, has lost CASE; has preserved the Vocative, and has developed the Determiner form. This is due to the influence of other Balkan languages (Romanian; Greek; Albanian; Bulgarian; Macedonian, and the Torlakian dialect of Serbo-Croatian; Arli Romany/Gypsy), as both Bulgarian and Macedonian form part of the Balkan linguistic union (the so called Balkan sprachbund) and thus share many grammatical and structural similarities with these languages.
In this chapter, I will first briefly describe the main characteristics of the Bulgarian nominal morphology, focusing first on grammatical Gender and Number, and then offer a brief summary of the expression and position of the Determiner forms. In section 2.2 I introduce the reader to the details of Bulgarian deverbal nominals, after which I present some data showing that though closely related to verbs, these nouns should not be included within the verbal paradigm as has been traditionally done. Thus, I briefly set up the framework of discussion for the forthcoming chapters and comments.

### 2.1. The morpho-syntactic characteristics of Bulgarian NP

#### 2.1.1. Formal gender

Bulgarian has inherited the most basic characteristics of formal gender inflection from Old Bulgarian with almost no changes. The language presents a three-way distinction in the forms of Feminine, Masculine and Neuter gender markers. Neuter was formerly used to designate nouns with neither feminine nor masculine natural gender, or in cases where it (i.e. sexual distinctions) did not matter (Pashov, 1999: 63). This is still the case with the ‘young offspring’ of animals or human beings where sexual differences still do not appear to play a significant social role or are not behaviourally obvious, as shown in the examples (1):

(1) a. edn-o  
bebe  
one-NEUT.SG baby (‘a baby’)

b. edn-o  
kote  
one-NEUT.SG kitten (‘a kitten’)

Nowadays, however, the relation between natural gender and grammatical gender is relevant only in a few cases: names to designate professions (like, for example, ‘uchitel/ uchitel-ka ‘he/she-teacher’; doktor/doktor-ka ‘he/she-doctor),
and in the case of nouns designating people. In all other instances, grammatical gender depends mainly on the phonological ending (‘*okonchanie’) of the noun.\(^6\)

Nouns ending with a consonant (including *j* “ii”) belong to the unmarked Masculine grammatical gender, which is phonologically null in Bulgarian. The following examples correspond to nouns denoting human beings (2a), animals (2b), plants (2c), objects (2d), or abstract concepts (2e):

\[(2)\]
\[
a. \textbf{People}: \text{chovek} ‘man’, \text{rabotnik} ‘worker’, \text{pisatel} ‘writer’
\]
\[
b. \textbf{Animals}: \text{kon} ‘horse’, \text{vulk} ‘wolf’, \text{slavej} ‘nightingale’
\]
\[
c. \textbf{Plants}: \text{buk} ‘beech’, \text{shiboj} ‘gillyflower’
\]
\[
d. \textbf{Objects}: \text{stol} ‘chair’, \text{kravaj} ‘ring-shaped bun’.
\]
\[
e. \textbf{Abstract concepts}: \text{napred} ‘progress’, \text{boj} ‘fight’
\]

There are some exceptions in the case of male human beings. These correspond to cases where natural gender and grammatical gender (or the ‘gender’ ending) appear to be contradictory in a certain sense.\(^7\) In this case, it is the sex that determines the grammatical gender of the corresponding noun. A small number of nouns appear to show the ‘feminine gender ending’ –*a/-ja* but are assigned grammatical masculine due to their lexical meaning:\(^8\)

\[(3)\]
\[
edin \quad \text{bashta}
\]
\[
one-MASC.SG \quad \text{father (a father)}
\]

The Feminine formal gender is overtly realized by the morphemes –*a/-ja*. Consider the examples in (4):\(^9\)

---

\(^6\) Also called a gender ending (‘*rodovo okonchanie’).

\(^7\) The “contradiction” I mean to refer to lie in the labels we use to name noun classes. It is unfortunate, and a source of confusion when describing grammatical facts, that noun inflections which are purely formal marks should be labelled “masculine” or “feminine”.

\(^8\) Just as the Catalan or Spanish noun *poeta* ‘poet’ is grammatically masculine (i.e. *un poeta* ‘a/one poet’) independently of its –*a* ending.

\(^9\) Exceptions to this general rule also exist. There is a small group of 150 nouns (which become 2500 if we include all those ending in –*ost/-est*) which, though ending in a consonant, take Feminine grammatical gender. They do not designate people or animals but rather correspond to examples like *nosht* ‘night’, *esen* ‘autumn’ and *radost* ‘joy’, among others.
(4) a. **People**: rabotnichk-a ‘female worker’
   b. **Animals**: majmun-a ‘monkey’, krav-a ‘cow’
   c. **Plants**: roz-a ‘rose’, smokin-ja ‘fig’
   d. **Objects**: himikalk-a ‘pen’, mas-a ‘table’
   e. **Abstract concepts**: kražb-a ‘theft’

Nouns that end in –о or –е are neuter in Bulgarian (5), as in the following examples:

(5) a. **People**: momch-e ‘boy’, momich-e ‘girl’
   b. **Animals**: kuch-e ‘dog’, pras-e ‘pig’
   c. **Plants**: žit-o ‘wheat’, zel-e ‘cabbage’.
   d. **Objects**: grebl-o ‘oar’, sūrts-e ‘heart’
   e. **Abstract concepts**: del-o ‘act’, peen-e ‘singing’

Even in those cases where an apparent contradiction arises between natural gender and the Neuter grammatical gender endings in certain nouns denoting people (see note 7), nouns that appear with the Neuter gender marker –е/-о remain invariably Neuter. They do not switch to the natural gender of the noun (as opposed to type (3) nouns). The examples in (6), which can denote either male or female (6a), or only female (6b) and only male (6c), belong to this class:

(6) (a) moe-to libe
       my-the.NEUT.SG sweetheart (‘my sweetheart’)

(b) edn-o momiche
    one-NEUT.SG girl (‘a girl’)

---

10 The examples in (3), (4) and (5) are taken from Pashov (1999: 63).
Another type of noun included in the Neuter class are certain nouns of foreign origin that end in –u, -ju, -i where the final vowels form part of the root of the word. Consider the examples in (7):

(7) a. edn-o kenguru
    one-NEUT.SG kangaroo (‘a kangaroo’)

    b. edn-o taksi
    one-NEUT.SG taxi (‘a taxi’)

It is important to note that the majority of the Bulgarian nominalizations examined in this paper belong to the Neuter gender as they end in –e. These are the deverbal nominals ending in –NE and –NIE (see section 2.2). Yet, as will become clear, there are other nominalizations which have different suffixes and which are assigned their gender according to the type of ending they have (see section 2.2.3).

I will now proceed to discuss the characteristics of grammatical number in Bulgarian.

2.1.2. Grammatical Number

Bulgarian morphologically marks the distinction between Singular and Plural. The morpheme for grammatical singular is morphologically null. The Plural is expressed with a phonologically overt suffix. The form of the Plural depends on the Gender of the noun. There is a great variety of plural markers but the most productive ones are –i, -a and –ove (in the case of masculine monosyllabic nouns). Consider the following examples:
Like Catalan, Spanish and many other languages, Bulgarian also has singularia tantum and pluralia tantum nouns. The former include nouns that denote groups such as students ‘students’, nouns denoting noncountable substances such as vězdě ‘air’ or gris ‘semolina’ and nouns denoting abstract entities like ljubov ‘love’ or mladost ‘childhood’. As we will see, some deverbal nominals fall into this group too. Pluralia tantum nouns include forms naming objects composed of two or more parts that form a whole like klesht ‘pliers’ or objects that come normally in pairs like obusht ‘shoes’. It also includes the names for traditions like zagovezn ‘Shrovetide’\footnote{Orthodox Bulgarians celebrate “Sirni Zagovezn” (Shrove Sunday) on the Sunday seven weeks before Easter, marking the beginning of the Great Lent, the longest period of fasting throughout the year. In its way, the festival also serves to mark the beginning of spring. In olden days, most typical of Sirni Zagovezn was the building of large bonfires in the hills surrounding towns and villages. Young and old would gather round the bonfire, where they apologized to each other, to forgive and forget small wrongs and old quarrels in the name of friendship and understanding.}. Some geographical names like those denoting mountain ranges (Alp ‘the Alps’) also belong to this group.

Some special cases of grammatical number that should be mentioned are the dual and the so-called “count(able) plural” (Brojna forma). The dual has disappeared as a grammatical entity in Bulgarian, although nowadays we can
observe very few vestiges of it deriving from Old Bulgarian. This is the case of some nouns denoting paired parts of the human or animal body such as (9):

(9) a. krak - krak-a
    leg.SG – leg-PL    (‘leg-legs’)

    b. rûka - rûts-e
    arm.SG – arm-PL    (‘arm-arms’)

    c. rog - rog-a
    horn.SG – horn-PL  (‘horn-horns’)

The endings in (9) derive from the Old Bulgarian Dual. Thus, we have the minimal pairs in (10) with (10a, b) being the Dual forms and (10a’, b’) being the regular plural forms:

(10) a. rûka - rûts-e
    arm.SG – arm-PL    (‘arm-arms’)

    a’. reka – rek-i
    river.SG – river-PL (‘river-rivers’)

    b. krak - krak-a
    leg.SG – leg-PL    (‘leg-legs’)

    b’. brak – brak-ove
    marriage.SG – marriage-PL (‘marriage-marriages’)

Masculine nouns which end in a consonant in the singular form also have a special form for the plural which is used only after numerals and numeral

---

12 Pashov (1999) claims that from a contemporary point of view, the examples in (9a, b, c) present the plural form, not the dual one, though they may originate from the latter. This is due to the fact that when we want to say more than two legs or arms we still use the forms in (9a, b) and not a different form. That is, the remains of the Dual as in (9) function in practice as a plural.
adverbs such as in (11). This form is what is traditionally called the ‘Countable’ Plural:

(11) a. Sg: \textit{bilet}
    \begin{itemize}
    \item ticket.SG \quad (‘ticket’)
    \end{itemize}

    b. Pl: \textit{mnogo bilet-i}
    \begin{itemize}
    \item many \quad \text{ticket-PL} \quad (‘many tickets’)
    \end{itemize}

    c. Countable Plural: \textit{tri bilet-a}
    \begin{itemize}
    \item three \quad \text{ticket-PL.COUNT.} \quad (‘three tickets’)
    \end{itemize}

Yet, in the cases of nouns denoting people, the tendency is towards the use of the Plural and not the Countable Plural when such nouns are preceded by a numeral or a numeral adverb (12):

(12) a. Plural:
    \textit{trima student-i}
    \begin{itemize}
    \item three \quad \text{student-PL} \quad (‘three students’)
    \end{itemize}

    b. Countable Plural:
    * \textit{trima student-a}
    \begin{itemize}
    \item three \quad \text{student-PL.COUNT.} \quad (‘three students’)
    \end{itemize}

As this is not of prime concern here, however, I will not pursue this question in further detail.\footnote{For more information and discussion, see Pashov (1999: 69-71).}
2.1.3. Case

A final short note on CASE will serve to close our description of the formal features of Bulgarian nominals. As has been noted above, though Old Bulgarian was a fully inflected language with a very rich overt CASE system, overt CASE inflection has disappeared from modern Bulgarian nominals. Interestingly, however, although CASE features can now be considered covert grammatical entities in Bulgarian, residues of its CASE system can still be observed in the morphology of personal and family names.

The only fully inflected words for CASE are the pronouns in Bulgarian, but I will not enter into this question since it has no bearing on prime concern here, i.e. the deverbal nominals. Thus, in the absence of case inflections, modern Bulgarian uses prepositions and particles to express formal relations in the sentential structure (13):

(13) Kuch-e-to na Ivan
dog-NEUT.SG.-the.NEUT.SG. of Ivan

‘The dog of Ivan’

Bulgarian still preserves the Vocative forms of some masculine and feminine nouns. However, neuter nouns and all plural nouns lack a Vocative form.

---

14 In order to refer to grammatical Case, I will henceforth use CASE in small capital letters.
15 In Old Bulgarian each noun had six case forms in singular and plural, and in the then existing dual (for those who do not count the Vocative as a case form; for those that do, it had seven different forms).
16 In fact, nowadays we can still find some examples of the Dative used for stylistic purposes (for archaistic or humoristic objectives). In (i) the noun narodu ‘people’ is in Dative as shown by the final vowel ‘-u’:

   (i) toj otdade mladija si život narod-u  
he dedicated young his life  people-Dat

‘He dedicated his young life to the people’

I will not give further details on the types of case residues because it does not bear on the topic of the paper.
17 For more information on the Vocative in Bulgarian, see Pashov (1999: 79-80; 389-395) and Bojadjiev et al. (1999: 480-482).
Having described the basic formal characteristics of Bulgarian nominals in terms of Gender, Number, and CASE, I will now proceed to present some details on agreement between the noun and the modifying adjective.

2.1.4. Some notes on adjectives and agreement in Bulgarian

The Bulgarian adjective reflects the inflectional morphology characteristics of nouns—i.e. Gender, Number and Definiteness (see the following section 2.1.5 for details on the article) and it agrees in Gender and Number with the noun it modifies. Additionally, as in many other languages, the adjective in Bulgarian can show Degree (comparative and superlative) which is expressed analytically (14):

\[
\begin{align*}
(a) & \quad \text{hubav}               & \quad \text{po-hubav}             & \quad \text{naj-hubav} \\
& \quad \text{beautiful} & \quad \text{more-beautiful} & \quad \text{most-beautiful} \\
& \quad \text{‘beautiful’} & \quad \text{‘more beautiful’} & \quad \text{‘the most beautiful’}
\end{align*}
\]

As for its position in the DP, the adjective in Bulgarian is found pre-nominally.\(^{18}\) When in the Singular, adjectives have distinct endings for each Gender (15):

\[
\begin{align*}
(a) & \quad \text{zelen} & \quad \text{plat} \\
& \quad \text{green-MASC.SG} & \quad \text{cloth-MASC.SG} & \quad \text{‘a green cloth’}
\end{align*}
\]

\[
\begin{align*}
(b) & \quad \text{zelen-a} & \quad \text{pol-a} \\
& \quad \text{green-FEM.SG} & \quad \text{skirt-FEM.SG} & \quad \text{‘a green skirt’}
\end{align*}
\]

\[
\begin{align*}
(c) & \quad \text{zelen-o} & \quad \text{dûrv-o} \\
& \quad \text{green-NEUT.SG} & \quad \text{tree-NEUT.SG} & \quad \text{‘a green tree’}
\end{align*}
\]

\(^{18}\) Cinque (2005) claims that there is a universally basic sequence as in (i) where nominal modifiers appear before the noun they modify:

\[
\text{(i) Dem > Num > A > N}
\]

Bulgarian is a language that abides to this universal unmarked pattern. Thus, all nominal modifiers appear pre-nominally in this language.
However, there is no gender distinction revealed by the plural adjectival ending, which adopts the form of –i (16):

(16) a. Masculine Plural: zelen-i   plat-ove
    green-PL  cloth-PL  (‘green cloths’)

    b. Feminine Plural: zelen-i   pol-i
       green-PL  skirt-PL  (‘green skirts’)

    c. Neuter Plural: zelen-i   dūrv-eta
       green-PL  tree-PL  (‘green trees’)

Thus, it is clear that when in the plural, gender is neutralized in the adjective (16). The same holds for the Pluralia Tantum nouns which always appear in the plural (17):

(17) hubav-i   vūglishta
    beautiful-PL  coal  (‘beautiful coal’)

Having established the basic formal characteristics of the nominal domain in Bulgarian together with some notes on agreement, I will now proceed to describe some of the main characteristics of the functional category of the Determiner Phrase (henceforth DP) in this language.

2.1.5. A note on the determiner: definiteness or “položenie” (‘status’)

As has already been mentioned in the introduction to this chapter, Bulgarian is the only Slavic language (together with Macedonian) that appears to have developed a morpho-syntactic category corresponding to the determiner. It is phonologically overt for the definite forms.
The definite article in Bulgarian derives from the ancient Bulgarian demonstrative pronouns ΤЪ (Masc), ΤΑ (Fem) and ΤΟ (Neut). It is an element without prosodic independence, since it must attach to a host and can not appear in initial position. In fact, the status of the article in Bulgarian has received many labels in the literature. Some consider it a suffix, others a particle or a clitic, and others an ending or morpheme. Though historically the article was enclitic in Bulgarian (and Macedonian), its status is still not obvious. On one hand, there are reasons to believe that it is a suffix and this is also supported by the fact that it serves a grammatical function. Yet, on the other hand, it also exhibits some characteristics of a clitic because, unlike a suffix, it is an inflected form which constitutes a single accentual unit with an already existing word. Additionally, it also appears to obey Wackernagel’s Law in the nominal domain because it surfaces as an enclitic element to the leftmost constituent of the noun phrase, be it a noun or an adjective. Consider the examples in (18):

(18) a. Feminine:

(i) kūsht-a (ii) kūsht-a-ta
(i) house-FEM.SG (ii) house-FEM.SG-the.FEM.SG
(i) ‘a house’ (ii) ‘the house’

19 B. Koneski (1967); H.G. Lunt (1952); F. Slawski (1954).
20 L. Andreichin (1944).
21 For data supporting the enclitic nature of the Bulgarian definite article see Börjars (1998) and Giusti (2002).
22 J. S. Maslov (1956); H.I. Aronson (1968); L. Beaulieux (1950).
23 S. Stojanov (1965) rejects the terms suffix, particle and ending and claims that the only standard term applicable to the article is morpheme.
24 Eslon (1976) argues against the enclitic status of the article but also concludes that there are three reasons not to consider it a suffix either. The reasons he gives are (i) it is an inflected form, (ii) it is added to an already existing word, and (iii) its relative position is defined in terms of a syntactic constituent (pp. 276-277).
25 For details supporting the suffixal character of the Bulgarian article, see Dost and Gribanova (2006), Wunderlich (2002) and Franks (2001). Dost and Gribanova (2006) claim that there are phonological reasons to consider the article a suffix as it takes part in word-level phonological processes and can sometimes affect word-level stress placement (see p. 3).
26 See Wackernagel (1892).
27 A similar proposal is made by Börjars (1998) who claims that the position of the Balkan definite article (in Bulgarian and Macedonian) is the Wackernagel position within the NP (see p.67).
(iii) krasiv-a-ta kūsht-a
(iii) beautiful-FEM.SG-the.FEM.SG house-FEM.SG
(iii) ‘the beautiful house’

b. Masculine:

(i) kupon (ii) kupon-ūt
(i) party-MASC.SG (ii) party-the.MASC.SG
(i) ‘a party’ (ii) ‘the party’

(iii) vesel-i jat student-ski kupon
(iii) joyful-the.MASC.SG student-Adj.MASC.SG party-MASC.SG
(iii) ‘the joyful students’ party’

c. Neuter:

(i) mor-e (ii) mor-e-to (iii) sin-jo-to mor-e
(i) sea-NEUT.SG (ii) sea-NEUT.SG-the.NEUT.SG (iii) blue-NEUT.SG-the.NEUT.SG
(i) ‘a sea’ (ii) ‘the sea’ (iii) ‘the blue sea’

I do not propose to take any particular stand as far as the morphological status of the article is concerned as it needs further analysis. I will simply consider it a bound morpheme which stacks on the first constituent of the DP (see (18)).

The article has forms for the three grammatical genders: Feminine (-ta), Masculine (~ūt (~a) ~jat (~ja)) and Neuter (-to) (see (18) above). Pashov (1999) and others claim that the form used for the article depends not so much on the gender of the noun but rather on its ending. Thus, we should in no way consider the article in Bulgarian an indicator of gender as is the case with Catalan, French
and German, for example. Thus, in (19) we see that bashta ‘father’, which is Masculine, and majka ‘mother’, which is Feminine, both take the ‘feminine’ article –ta:

(19) a. (i) bashta       (ii) bashta-ta
    (i) father-MASC.SG       (ii) father- MASC.SG-the(FEM)SG
    (i) ‘a father’           (ii) ‘the father’

    b. (i) majka            (ii) majka-ta
    (i) mother-FEM.SG       (ii) mother- FEM.SG-the.FEM.SG
    (i) ‘a mother’          (ii) ‘the mother’

All nouns that end in –a or –ja take the article –ta no matter their formal gender or their grammatical number. Thus, in (20) we see that although selo ‘village’ is Neuter, when in the Plural it ends in –a, so the article that attaches to its plural form is –ta:

(20) a. edn-o      sel-o
    one-NEUT.SG village-NEUT.SG
    ‘a village’

    b. krasiv-i   sel-a
    beautiful-PL village-PL
    ‘beautiful villages’

    c. sel-a-ta
    village-PL-the.PL
    ‘the villages’

Similarly, all singular nouns that end in –e or –o take the article –to regardless of their grammatical gender (21).²⁸

²⁸ These facts may suggest that this is a case of vowel harmony.
(21) a. Neut: (i) neb-e                  (ii) neb-e-to
    (i) sky-NEUT.SG       (ii) sky-NEUT.SG-the.NEUT.SG
    (i) ‘a sky’                 (ii) ‘the sky’

b. Masc: (i) star djado
    (i) old-MASC.SG grandfather-MASC.SG
    (i) ‘an old grandfather’
    (ii) djado-to
    (ii) grandfather-MASC.SG-the.NEUT.SG
    (ii) ‘the grandfather’

Normally, nouns that end in a consonant have masculine grammatical
gender. As a rule, the article that attaches to them (in Singular) is –ǔt /-jat (full
form) or –a/-ja (the short form), e.g. stol ‘chair’ > stol–ǔt/-a ‘the chair’. 29

The singular masculine article has two variants: the full forms which
contain the consonant ‘T’ (–ǔt /-jat), and the short (or reduced) forms (-a/-ja)
which do not contain ‘T’. This distinction is obligatory only in writing. Thus, the
full form of the article must be written when the noun is a subject or an attribute
of the subject. In all other cases it is the short form that prevails. 30

The plural form of the article (-ta or –te) depends on the ending of the
noun, that is, on the last vowel of the plural form of the noun. When the plural
form of the noun ends in –a (or –ta, -eta, -ishta, -esa, -ena), the article to be
attached is –ta (22a). If the nouns end in –i or –e, the article to be attached is –te:

29 There is a small number of Feminine nouns that terminate in a consonant such as esen ‘autumn’, krăv
‘blood’, and nosht ‘night’. In this case, the article that attaches is –ta for the feminine but in order to be
differentiated from the article that attaches to the nouns ending in –a/-ja, the –ta that attaches to these
nouns is always stressed: nosht ‘night’ > nosht-ȚĂ ‘the night’; esen ‘autumn’ > esen-ȚĂ ‘the autumn’,
etc.
30 Pashov (1999: 75) claims that this should not be considered as supporting the presence of a case
system in Bulgarian, i.e. Nominative equalling the full form and Accusative the short one.
A final characteristic of the definite article that must be mentioned in this context is its use to denote generics, as is the case in Catalan or Spanish. With appropriate predicates, a singular definite article in a nominal construction can denote all of the objects of the class the noun belongs to and not just only one specific member of the class. Consider the following examples, given a generic reading:

(23) a. Kuch-e-to e naj-vernijat prijatel na chovek-a
Dog-NEUT.SG-the.NEUT.SG is the most faithful friend of man-the.MASC.SG
‘The dog is the most faithful friend of the man’

b. Zlat-o-to e blagoroden metal
Gold-NEUT.SG-the.NEUT.SG is a noble metal
‘Gold is a noble metal’

c. Sol-ta e neobhodima podpravka
Salt-FEM.SG-the.FEM.SG is a necessary spice
‘Salt is a necessary spice’
The absence of the article in the above examples leads to ungrammaticality because bare nouns cannot be found in preverbal position in Bulgarian when the generic meaning is intended (24a). Yet, bare nouns can be found preverbally if they refer to an indefinite noun (24b):

(24) a.  *Kuch-e e naj-vernijat prijatel na chovek-a

   Dog-NEUT.SG is the most faithful friend of man-the.MASC.SG

   *‘Dog is the most faithful friend of man’

b.  Dete vlezna v staja-ta

   child-NEUT.SG  entered in room-FEM.SG-the.FEM.SG

   ‘A child entered the room’

Bulgarian lacks an overt realization of the indefinite article, i.e. the indefinite form of the article is phonologically null (25a). There are some grammarians who claim that apart from the phonologically null indefinite form (or the zero article), the numeral edin ‘one’ in Bulgarian, which is inflected for the three genders in the Singular, should be considered another variant of the indefinite article31 (25b):


    father    house    sea

    ‘a father’    ‘a house’    ‘a sea’

b. Masc: edin    bashta

    one-MASC.SG    father-MASC.SG

    ‘a/one father’

Fem: edn-a    kǔshta

    one-FEM.SG    house-FEM.SG

    ‘a/one house’

31 See Friedman (1976) and Mayer (1988:121). Avgustinova (1998) claims that the status of ‘edin’ (one) as an indefinite article is still an unresolved issue.
Thus, there is a dispute among linguists as to whether the numerals in (25b) should be considered alternative forms of the indefinite article or not. In my opinion, it makes no sense to add a further distinction within the category Determiner such that its two members are (i) the unmarked bare form of the word with a phonologically null article (25a), and (ii) the numeral (25b) representing the Indefinite article on one hand, and the post-positive Definite article, on the other. Additionally, it would also be strange to claim that the definite article takes the form of a bound morpheme whereas the numeral, if complementary to the indefinite article, should be a free morpheme. What’s more, there are further reasons to support the claim that the numeral cannot universally replace the indefinite article, which is phonologically null in Bulgarian. For example, though the phonologically null article denotes indefiniteness together with non-specificity, the numeral form can denote specificity (26):

(26) edn-a žena mi kaza tova
    one-FEM.SG woman-FEM.SG me-DAT.CL said this
    ‘a/one woman told me this’

(One specific woman that I have in mind/that I saw)

Additionally, the numeral (27a), like the definite article (23), can have a generic reading, which is not possible with the indefinite article (the phonologically null form) as shown in (27b):

a. Edin starets reche…
    one-MASC.SG old-man said… (An old man said…)
a’. *Starets reche…
    old-man said…

---

32 Bojadžiev et al. (1999), and Georgiev (1999), for example, claim that the numeral should not be considered an alternative form of the indefinite article.

33 Further reasons to claim that the indefinite article cannot substitute for the numeral in Bulgarian also come from the fact that whereas the latter is acceptable with a noun in subject position (a) or as an adverbal modifier (b), the former is not (a’, b’):

a. Edin starets reche…
    one-MASC.SG old-man said… (An old man said…)
a’. *Starets reche…
    old-man said…

22
(27) a. Edn-o dete nikoga ne lûže  
One-NEUT.SG child-NEUT.SG never not lies  
‘A child never lies’  

b. *Dete nikoga ne lûže  
child-NEUT.SG never not lies  
*Child never lies  

Thus, I prefer to reject the view that the numeral is an alternative form of the indefinite article.  
Hence, I will use the term ‘the article’ to refer to the definite article because the indefinite article, in my opinion, lacks a phonetic realisation (25a) though it is syntactically present.  

Having described the general characteristics of Bulgarian DP, I will now proceed to present deverbal nominals, as they are the main concern of this study.  

2.2. General Characteristics of Deverbal Nominals in Bulgarian  

Nomina Deverbativa or ‘deverbal nominals’ in Bulgarian is a topic that still gives rise to debate and contradictory opinions among specialists. Let us begin this introduction by saying very generally that there are two main kinds of deverbal nominals: the so-called –NE/-NIE types and the “other-suffix” types.  

There is some controversy among Bulgarian grammarians on the issue of whether or not –NE/-NIE nominals form a natural class and can together be labelled deverbal nominals. Forms showing the suffix –NE (henceforth –NE nominals) are unanimously claimed to be deverbal nouns because they can

b. V edn-a staja sedjat tri detsa  
in one-FEM.SG room sit-3PL three child-PL  
‘There are three children sitting in a room’  
b’. *V staja sedjat tri detsa  
in room sit-3.PS.PL three children  

34 For more details supporting such a view, see Georgiev (1999: 274-275).
presumably be obtained from the non-finite form\(^{35}\) of any verb, without exception.\(^{36}\) Pashov (1999: 209) claims that in modern Bulgarian the label ‘**deverbal nominals**’ should exclusively be applied to such nouns formed by the suffix –\(\text{NE}\). According to him, these are the only forms that can truly be related to the verbal paradigm due to the fact that they preserve the lexical characteristics of their verbal base. Thus, –\(\text{NE}\) nouns may name actions, events or states and maintain the thematic grid of the verb they derive from. Examples of the uncontroversially deverbal –\(\text{NE}\) nominals are given in (28 a, b, c):

(28) a. resh-ava-\(\text{NE}\)

solve-NON-FINITE-\(\text{NE}\)

‘solving’

b. oprosht-ava-\(\text{NE}\)

forgive-NON-FINITE-\(\text{NE}\)

‘forgiving’

\(^{35}\) In Bulgarian, each state of affairs can be represented by a pair of two verbs, one finite and the other non-finite one. Both verbs refer to the same ‘action’ and have the same lexical meaning, the only difference being their different grammatical form: finite or non-finite. An example is given in (i):

(i) kaža – kaz-va(m)  
pobedja – pobežda-va(m)

say-FINITE – say-NON-FINITE(1PS.SG)  
win-FINITE – win-NON-FINITE(1PS.SG)

The finite forms reflect the state of affairs that the verb denotes as a whole, from its beginning to its end. The non-finite verbs, on the other hand, represent the ‘action’ in its process of completion. According to Pashov (1999) ninety per cent of the verbs in Bulgarian can be organised in such pairs where the non-finite verb is always obtained by the finite one with the help of ‘aspectual endings’. Some of the suffixes which turn a finite verb into a non-finite one without changing its lexical meaning are -\(a-(m)\), -\(ja-(m)\), -\(va-(m)\), -\(ava-(m)\), -\(java-(m)\), -\(uva-(m)\), where the type of ending depends on the conjugation of the corresponding verb. In fact, there are cases where from one finite verb we can obtain more than one non-finite verb (see Pashov, 1999: 135). The remaining, verbs which do not form finite non-finite pairs, are verbs without any ‘form endings’ and are usually non-finite:

(ii) peja  
cheta  
jam

sing  
read  
eat

According to Pashov (1999), there are about fifty primary verbs without any endings which belong to the finite category (kupja ‘buy’, vidja ‘see’, chuja ‘hear’, skocha ‘jump’, etc.). Additionally, there are some verbs of foreign origin which can be used as both finite and non-finite (the so called ‘bi-aspectual’ verbs). These are those ending in the suffix –\(\text{ira-(m)}\), and –\(\text{izira-(m)}\) such as reag-\(\text{iram}\) ‘ react’, harakter-\(\text{iziram}\) ‘ characterise’, etc. For more details on these verbs, see Pashov (1999: 137-138), and Bojadjieva et al. (1999:489-490).

\(^{36}\) Dimitrova-Vulchanova and Mitkovska (2006) claim that certain psychological predicates from the “fear” class do not always yield a –\(\text{NE}\) nominal. However, given the right context, they may do so.
c. gone-NE  
   persecute-NON-FINITE- NE  
   ‘persecuting’

With respect to the –NIE forms, authors such as Kaldieva-Zaharieva (1999) maintain that they should be regarded as deverbal like the –NE forms. Some examples of -NIE nominals are the following (which correspond to the –NE nouns in (28)):

(29) a. reshe-NIE  
   solve-FINITE- NIE  
   ‘solution’

b. oproshte- NIE  
   forgive-FINITE- NIE  
   ‘forgiveness’

c. gone- NIE  
   persecute-NON-FINITE- NIE  
   ‘persecution’

For many Bulgarian linguists, the difference between the –NIE and the –NE nominals lies in the fact that the –NIE suffix seems, to many, more ‘nominal’ than the –NE one. Thus, many of the –NIE nouns refer to results (29) whereas –NE nouns denote processes (28). As for the –NE nominals, their process denotation may be due to the fact that they derive from the non-finite form of the verb and thus reflect the non-terminative status of the ‘action’. The –NIE nouns, on the other hand, cannot receive a similar explanation due to the fact that they can derive from either finite or non-finite verbal bases. As we shall see in chapter 4, their result denotation is due to their syntactic derivation, i.e. to the fact that they are formed on the past passive participle of the corresponding verb (in my analysis).
As for the nominals we have loosely labelled as “the other-suffix” forms, these are also nouns which derive from a verb but appear with a great variety of suffixes such as –A, -BA, -EŽ, -KA, -IE, -ITBA and -NITSA, among many others. They are not unanimously labelled ‘deverbal nominals’ due to the fact that they have a lexicalised meaning which makes grammarians reject them as forms of a closed verbal paradigm. Some examples of “the other-suffix” deverbal nominals are the following:

(30) a. grad-EŽ
    construct-EŽ
    ‘construction, building’

b. kos-ITBA
    mow-ITBA
    ‘mowing’

c. pad-EŽ
    fall-EŽ
    ‘CASE’ (Dative, Accusative, etc.).

Before I go on, I would like to make a distinction between the labels ‘deverbal nominals’ and ‘belonging to the verbal paradigm’ so that confusion can be avoided. What I mean by the term ‘deverbal nominal’ is any noun that derives from a verb. However, this does not imply, contrary to what I feel is the misguided view of many Bulgarian grammarians, a constituent that belongs to the verbal paradigm. Additionally, as we shall see in the next section, there are sufficient reasons to suggest that all of the nominalizations we have examined thus far (e.g. –NE, -NIE and ‘other-suffix’ nouns) belong to the nominal domain and not to the verbal paradigm. When I use the term ‘deverbal’ I in no way equate it with ‘belonging to the verbal paradigm’. Thus, I regard all of these nominals as nominalizations, with the only difference among them being the degree of substantivization of the verbal action. Additionally, I would argue that
the degree of substantivization may depend on the type of the verbal base (finite, non-finite or simply the root), on the syntactic properties of their derivation, and on the semantic characteristics of the verb itself.\textsuperscript{37}

2.2.1. Nouns ending in \textit{–NE}\textsuperscript{38}

As has already been observed, nominalizations are derived by the process of suffixation. The base for forming these nouns is the non-finite form of verbs (see footnote 35) where the nominals are obtained by adding the suffix \textit{–NE} directly to the present verbal base in the case of verbs of the third (31a) and first (31b) conjugation or previously adding the vowel \textit{–E} to the present verbal base when the verb is from the second conjugation as in (31c) below.\textsuperscript{39}

(31) \textbf{a. 3}^{\text{rd}} \textit{conjugation}

\begin{itemize}
\item[(i)] kritik-uva-\textit{NE} \hspace{1cm} (ii) prod-ava-\textit{NE}
\begin{align*}
\text{criticise-NON-FINITE-\textit{NE}} & \quad \text{sell-NON-FINITE-\textit{NE}} \\
\text{‘criticising’} & \quad \text{‘selling’}
\end{align*}
\end{itemize}

\textit{a’}. \textit{Present verbal base} (3PS.SG present tense)

\begin{itemize}
\item[(i)] kritikuv-\textit{A} (criticise-3.PS.SG) \hspace{1cm} (ii) prodav-\textit{A} (sell-3.PS.SG)
\begin{align*}
\text{‘criticises’} & \quad \text{‘sells’}
\end{align*}
\end{itemize}

\textsuperscript{37} Georgiev (1999) suggests that the degree of substantivization of the nominalization depends on the semantics of the verb and on the type of the nominalizing suffix (see pp. 146-151).

\textsuperscript{38} According to Kaldieva-Zaharieva (1999) the \textit{–NE} nominals number roughly 15,000.

\textsuperscript{39} There are three verbal conjugations in Bulgarian according to the ending of the present verbal base (which coincides with the form of the third person singular present tense). The verbs which have \textit{–E} as their present ending (\textit{chet-E} ‘read-3PsSg-E ‘reads’) belong to the first conjugation. The verbs from the second conjugation end in \textit{–I} (\textit{govor-I} speak-3PsSg-I ‘speaks’), and those from the third conjugation in \textit{–A/-JA} (\textit{raskazv-A} tell-3PsSg-A ‘tells’).
As for the nature of the vowel –E that is inserted in the case of second conjugation verbs (31c), we shall see that there is evidence to claim that it is the thematic vowel (see § 4.1). As for the rest of the conjugations, the suffix –NE attaches directly to the present verbal base (31a, b).

As far as the Gender of these nouns is concerned, in section 2.1.1 we saw that all of them are Neuter because they end in the vowel –E. Thus, all of them must be modified by the Neuter form of adjectives, demonstratives, numerals. As far as Number is concerned, some –NE nominalizations lack Plural (see example (32a, b) below). This happens with certain intransitive verbs which, when nominalized, result in an abstract noun. Those deverbals that admit the plural appear with the plural inflectional suffixes –ija /–eta, as in example (33a, b). The definite determiners are –to for the singular forms and –ta for the plural. Consider the following examples:

(32) Abstract Singulars

(a) tova negov-o postojann-o misl-e-NE za
  semejstvo-to
  this-NEUT.SG his-NEUT.SG constant-NEUT.SG think-e-NE.NEUT.SG for
  family.NEUT.SG-the.NEUT.SG.
‘This his constant thinking of the family’

(b) mechta-NE-TO na Maria da stane izvestn-a
    dream-NE-the.NEUT.SG of Mary to become famous-FEM.SG
    ‘The dreaming of Mary to become famous’

(33) –NE Plurals: -ija /–eta

(a) kla-N(E)-ETA-TA na novoroden-i zajts-i
    slaught-NE-PL-the.PL of newborn-PL rabbit-PL
    ‘the slaughtering(s) of newborn rabbits’

SG : kla-NE (slaughter/ing) PL : kla-N-eta (slaughters/slaughterings)

(b) izprashta-N(E)-IJA-TA na pism-a do Amerika
    send-NE-PL-the.PL of letter-PL to America
    ‘the sending(s) of letters to America’

2.2.2. Nouns ending in –NIE:

Though considered an ancestor of the nominalizing suffix –NE, -NIE is claimed to attach to both finite and non-finite forms of the verb. What is typically claimed for -NIE nominalizations is the fact that they have lost their verbal character because they denote not the verbal action but rather some object or abstract concept (Pashov, 1999: 213). Thus, whereas sŭbira-NE (collecting) denotes an action, sŭbra-NIE (meeting, assembly) denotes an abstract concept.

As far as gender is concerned, we have previously commented that as the final vowel of –NIE is ‘E’, then these nouns should have a Neuter grammatical

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40 In contrast to –NE, the -NIE suffix is no longer productive in Bulgarian. Additionally, as this suffix has a Russian origin, there is also the tendency to replace nouns ending in –NIE by other synonymous words formed by a variety of suffixes such as stremle-NE >strem-EŻ (striving, aspiration), otmene-NIE > otmnjan-A (help, assistance), etc.
gender. Contrary to the –NE class, –NIE nouns always have a plural form. In the Plural, the marker is –ja/(-nija), which can sometimes lead to confusion between –NE and -NIE type nominals when in Plural. Thus, in (34a) we have the Plural of the –NE nominal and in (34b) we have the Plural of the –NIE one, identical in all respects but stress:

(34) a. sèche-NE (Sg) > sèche-N(ɛ)-IJA (Pl)
   fell-NE          fell-NE-PL
   ‘felling’       ‘fellings’

   b. sechè-NIE (Sg) > sechè-N-IJA (Pl)
   fell-NIE         fell-NIE-PL
   ‘section’        ‘sections’

2.2.3. Nouns formed with other suffixes

As noted above, there are many nominalizations formed with a variety of suffixes like –A, -BA, -ĖŽ, -NIK, -NITSA, -KA, -ISHTA, -NJA, -ALNJA, -TEL, -ANT, etc. These nominalizations are what I have labelled ‘other-suffix’ nominals. I would also include here nominalizations formed with a zero suffix [−Ø], i.e. that lack an overt suffix.

As far as the semantics of these nouns is concerned, they may be divided in the following groups:

(35) ‘Other-suffix’ nominals:


\(^{41}\) For more detailed information on the semantics of the agentivity suffixes in Bulgarian, see Georgiev (1999:136-142).
Suffixes: -ACH, -TEL, -AR, -NIK, -ETS, -DŽIJA (-CHIJA), -CHIK, -JAK, -AK, -KO, etc.

(b) Patients (plenn-IK, etc.) ‘captive’

(c) Instruments (brűsn-ACH ‘razor’, met-LA ‘broom’, greb-LO ‘oar’, vūrt-EL-EŽ-KA \(^{42}\) ‘roundabaaout’, otvarja-CHKA ‘tin opener’, etc.)

Suffixes: -ILO, -ALO, -LA, -LKA, -KA, -ITSA, -ARKA, -ACHKA, -ETS, etc.


Suffixes: -KA, -A, -IVO, -EŽ, etc.

(e) Substances: (gor-IVO ‘fuel’, lep-ILO ‘glue’, gorch-ITSA ‘mustard’, etc.)

Suffixes: -IVO, -ILO, ITSA, -OVKA, -INA, -ILKA, -KA, etc.

(f) Abstract concepts (ljub-OV ‘love’, bol-KA ‘pain’, glavobol-IE ‘headache’, etc.)

Suffixes: -OST, -ETS, -IJA, -KA, -IE, etc.

(g) Actions (predatel-STVO ‘betrayal’, proda-ŽBA ‘sale’, grab-EŽ ‘theft’, rast-EŽ growth’, etc.)

Suffixes: -EŽ, -(Ž)BA, -ITBA, -AVA, -ITSA, -KA, etc.

\(^{42}\) For more detailed information on complex suffixes, see Barbolova (1999).

Suffixes: -ISHTE, -NJA, -ALNJA, -ILNJA, -NITSA, etc.

Among this group of nominalizations there are some whose suffix absorbs a semantic participant of the verb or an adjunct of the verbal base, a phenomenon which also occurs with the Catalan suffixes -(D)OR/-ER/-AIRE. Thus, in (36a, b, c) we have the Bulgarian examples of such suffixes whereas (36a’, b’, c’) present the analogous Catalan forms:

(36) Agentive value:
   a. pisa-tel  a’. escript-or
      write-TEL  write-OR
      ‘writer’   ‘writer’
      ‘person who writes’

   Locative value:
   b. zakusva-lnja  b’. abeura-dor
      breakfast-LNJA  drink-DOR
      ‘place where one breakfasts’  ‘place where one drinks’

   Instrumental value:
   c. otvarja-chka  c’. obri-dor
      open-CHKA  open-DOR
      ‘(tin) opener’  ‘opener’
      ‘a tool for opening (tins)’

As for Number, all of these nouns accept pluralization in the same way as–NIE nouns. The type of the plural ending depends on the gender of the noun (see § 2.1.2).
Having shown the general characteristics of the three types of nominalizations examined in this paper, I will now present some evidence supporting the fact that all of them belong to the nominal domain but not to the verbal paradigm.

2.3. Against the hypothesis that nominalizations in –NE and -NIE belong to the verbal paradigm

We have seen that many linguists defend the view that the –NE nominals should be regarded as belonging to the verbal paradigm, in the manner of substantivized infinitives in other languages (Pashov (1999), Steinke (1999) and Kaldieva-Zaharieva (1999), among many others).

There are also linguists who claim that not only–NE but also–NIE type nominals should be included in the verbal paradigm (Kaldieva-Zaharieva (1999)). However, almost all Bulgarian grammarians share the opinion that this cannot be the case with the ‘other-suffix’ nominalizations such as those presented in section 2.2.3.

What I would like to propose here is that neither–NE nominlas nor –NIE ones should be regarded as belonging to the verbal paradigm. The reason for this conclusion can be found in the fact that in many cases the nominalizations ending in –NE (or –NIE) change the meaning of the originating verb by either reducing it or amplifying it. If these nominalizations really belonged to the verbal paradigm, they should be able to conserve all of the original verbal meanings. Yet, as we shall see below, this is not usually the case.

2.3.1. Semantic modification

Often, the deverbal nominals do not take all of the verb’s meanings but just one or few of them, i.e. the nominalizations present a semantic reduction of the originating verb. To offer some examples, in (37a) I show the meanings of the
verb *disham* ‘breathe’ and in (37a’) I show that the –NE nominal *disha*-NE ‘breathing’ takes just the first meaning of this verb. Similarly, in (37b) I present the semantics of the verb *unishtožavam* ‘destroy’ and show in (37b’) that the –NIE nominal *unishtože*-NIE ‘destruction’ conserves just some of its meanings. Finally, in (37c) the semantic connotations of the verb *prikazvam* ‘talk’ are offered, after which in (37c’) we observe that the ‘other-suffix’ –KA nominal *prikaz*-KA ‘tale, story’ conserves just two of the verb’s meanings.

(37) a. [DISHAM] ‘breathe’: (i) draw a breath; (ii) live, exist; (iii) express
   a’. –NE nominal: disha-NE: (i) breath, respiration.
   
   b. [UNISHTOŽAVAM] ‘destroy’: (i) destroy, do away with; (ii) annihilate; (iii) (for fire) devour; (iv) crush, run down; (v) (for contracts) vitiate, invalidate; (vi) obliterate; (vii) (for power) overthrow; (viii) (food, liquids) finish off; (ix) (obstacles) break down; etc.

   b’. –NIE nominal: unishtože-NIE ‘destruction’: (i) destruction; (ii) annihilation; (v) vitiation, invalidation.

   c. [PRIKAZVAM] ‘talk’: (i) talk, speak; (ii) say; (iii) tell; (iv) talk, converse.

   c’. ‘other-suffix’ nominal: prikaz-KA ‘tale, story’: (iii) tale, story; (i) talk.

   Sometimes, however, it is the case that the nominalizations amplify the meaning of the verb they derive from. An example is given in (38), with (38a, a’) making reference to a –NE nominal, (38b, b’) referring to a –NIE noun, and (38c, c’) to an ‘other-suffix’ nominalization:
The example is taken from Kaldieva-Zaharieva (1999: 217).
belong to it, like any gerund, and the deverbal –НЕ nominals which, as we saw in section 2.3.1 above, do not.

As for the –NIE nominals, the fact that some grammarians include them in the verbal paradigm as well might be due to the fact that such nouns derive from the past passive participle of the corresponding verb, as I will argue. Thus, the close relation between past passive participles and these nouns may have misled linguists to include them as part of the verbal paradigm. However, being nominalizations, they cannot truly count as such (see § 2.3.1).

Having briefly described the basic morpho-syntactic data on the Bulgarian nominal system together with some lines of thinking on the nominalizing process, I will now proceed to outline the theoretical framework adopted in this work (chapter 3) before presenting my syntactic analysis of Bulgarian nominalizations (chapter 4).
Interest in nominalization processes has increased over the years since the first study by Robert Lees in 1960. Since then, numerous proposals have been made to explain the nature of apparently category-changing derivational affixes and the fact that sentences and nominalizations appear to share many common properties at the interpretive level (see Randall (1984), Sproat (1985), and Zucchi (1989), to mention only a few). Yet, nominalizations were attributed either an exceptional treatment (which increasingly seemed conceptually unjustifiable)\(^1\), or an abstraction was introduced, which made nominalizations seem just like sentences.

It is a well-known fact since Lees (1960) and Chomsky (1970) that verbs and nouns share fundamental argument-taking properties. In fact, apart from the failure of nouns to take prepositionless DPs, everything seems completely parallel (examples from Grimshaw (1990: 46-47)):

(1) i. **CP complement:**
   a. with verbs: The physicists claimed that the earth is round.
   b. with nouns: The physicist’s claim that the earth is round.

   ii. **Infinitival complement:**
       a. with verbs: They attempted to leave.
       b. with nouns: Their attempt to leave.

   iii. **PP complement:**
       a. with verbs: The train arrived at the station.
       b. with nouns: The train’s arrival at the station.

\(^1\) See Roeper (2004).
The various theoretical frameworks that have been developed over the evolutionary course of generative grammar, have resulted in proposals that differ both in conception and in spirit, since Lees (1960) first study on English nominalizations. Within the framework set up by *Syntactic Structures*, Lees’ work has generally been considered to be the first attempt in the history of generative grammar to give extensive rule motivations and derivations for a specific type of construction. In his work, Lees claimed that nominalizations of the types exemplified in the (b) constructions above are derived from the sentential constructions in (a) and thus inherit the verb’s arguments by postulating a proper sentence inside the NP. The spirit of this approach may arguably be said to continue in some current theories of nominalization, which do not posit a whole sentence as part of the nominalization, but claim that there is a hidden VP in nominal structures that can be very abstractly represented as in (2), where irrelevant details are omitted:  

\[(2) \left[ DP \ldots \left[ NP \ldots \ldots \right. \right. \ldots \left. \ldots \ldots VP \right] \right]\]

A decade after Lees’ pioneering study, Chomsky (1970) proposed that a common abstract syntactic notation, X-bar-theory, could represent both the structure of the lexical categories that constitute the core elements of sentences and nominalizations. If a lexical element XP surfaces as VP, accusative case is assigned to the internal argument of the verb: \([the\ enemy\ [destroyed\ the\ city]\_\text{acc}]\_\text{VP}\). If the XP surfaces as a NP, this case assignment is blocked and a preposition must be inserted: \([the\ enemy’s\ destruction\ of\ the\ city]\_\text{NP}\ vs. *\_[the\ enemy’s\ destruction\ the\ city]\_\text{NP}\). Although the bulk of Chomsky’s work was devoted to arguing that nouns should directly enter the lexicon as such, and thus are not derived transformationally, this approach can be said to persist in some recent Distributed Morphology accounts, where lexical categories like verbs and nouns are seen as a combination of category-neutral roots plus functional layers F, as in (3):  

\[\text{See Giannakidou and Rathert (2005).}\]

\[\text{See Giannakidou and Rathert (2005) and references cited therein.}\]

38
Much research has been done on the nature of F (Harley and Noyer (1997, 1998, 1999, 2000); Alexiadou (2001); Marantz (1997); etc.). There is agreement that in the verbal domain F corresponds to $v$. Thus, $[\text{the enemy}_i [\_p \text{destroyed the city}_{\text{acc}}]]$ conforms to the following abstract architecture:

In the nominal domain, F is considered to be D. Thus, $[\text{the enemy’s destruction of the city}]_{\text{dp}}$ has the following representation:

In (5), adjustment morphological rules will spell out destroy, directly or indirectly dominated by D, as destruction.

Thus, it is clear that in analyzing nominalizations, there are two conceptual routes to follow. If we follow Lees (1960), we will claim that there is a verbal projection inside the nominalization that delivers its verbal traits. Yet, following some of Chomsky’s (1970) suggestions one may conclude that nouns and verbs are category-neutral and that the difference between verbs and deverbal nouns is due to a higher functional structure in abstract syntax.
In this paper, I adopt the latter position. Following this line, my starting point will be the assumption that thematically-related lexical items share a set of category-neutral stems with a specific theta-grid (Picallo (1991: 279)). I further follow Alexiadou (2001) who claims, similarly to van Hout and Roeper (1998), that the behavior of nominals is linked to the properties of the features in the functional layers of the construction (T, D, Asp, v, etc.). Furthermore, it will be suggested that nominals differ depending on the functional layers they contain and on the feature specification of these layers, as suggested in Alexiadou (2001) (see § 3.2.1). Yet, contrary to Alexiadou (2001) and Marantz (1999), I will try to show that not only roots but also stems can be modified in syntax. A similar proposal is made in Ferrari (2005), although she considers only stems to be modifiable in syntax, and not roots.

The structure of this chapter is as follows. In the next section I will discuss some general proposals on the functional structure of the DP (§ 3.1.1) together with some details on Grimshaw’s (1990) analysis of nominalizations (§ 3.1.2). The following section will provide some general and more recent assumptions on the nominalizing process such as those made by Alexiadou (2001) (§ 3.2.1) and Ferrari (2005) (§ 3.2.2). Some problems with Grimshaw’s (1990), Alexiadou’s (2001) and Ferrari’s (2005) analyses will be mentioned in section 3.2.3. Finally, section 3.3 is devoted to discussing previous analyses of Bulgarian nominalizations.

3.1. Some general proposals on nominalizations and the functional structure of the DP

3.1.1. The structure of the DP

Since Chomsky’s (1986) study, it has generally been assumed that functional elements like complementizers and auxiliaries project to the phrasal level like lexical categories do, constituting the extended projection of a lexical head and conforming to X-bar schema.
Within the nominal domain, Abney (1987), based on previous work by Szabolcsi (1983) for Hungarian, presents theoretical and empirical arguments to assume that a functional category, the Determiner Phrase (DP), is the dominant category in nominal structures.\footnote{See also Szabolcsi (1983) and Hellan (1986) for earlier proposals on the Determiner as a syntactic projection.} The DP is considered to be the extended and maximal projection of the head N, thus unifying the treatment of nominal constructions and clauses. The syntactic representation is given in (6):

\begin{itemize}
\item (6) Abney (1987)
\end{itemize}

\begin{center}
\begin{tikzpicture}
  \node (dp) {DP};
  \node (spec) [below left of=dp] {Spec};
  \node (dprime) [below right of=dp] {D'};
  \node (d) [below of=dprime] {D}
  \node (np) [below of=dprime] {NP};
  \node (specnp) [below of=np] {Spec N'};
  \node (n) [below of=specnp] {N};
  \draw (spec) -- (dprime);
  \draw (d) -- (np);
  \draw (specnp) -- (n);
\end{tikzpicture}
\end{center}

Moreover, it has further been suggested that only fully developed DP structures can be arguments of predication, whereas bare NPs are nominal predicates (i.e. non-arguments). That is, it is the selection of the article that causes a shift of a predicational NP element into an argument DP, a proposal that provides further semantic reasons for postulating a DP.\footnote{See Szabolcsi (1987), Abney (1987), and Longobardi (1994), among others.}

Abney (1987) also provides morphological evidence for postulating a DP projection by examining some crosslinguistic data. In Turkish, as well as in Bulgarian, there is a DP-internal agreement where the Possessor in Genitive agrees in Number and Gender with the N. Similar proposals have been made previously by Szabolcsi (1983) for Hungarian where the head N agrees with the possessor in...
person and number. The following examples from Bulgarian exemplify this type of agreement:

(7) a. Ivan-ov-a -ta sestra
Ivan-GEN-FEM.SG-the.FEM.SG sister-FEM.SG
‘Ivan’s sister’

b. Ivan-ov-i-te sestr-i
Ivan-GEN-PL-the.PL sister-PL
‘Ivan’s sisters’

Bernstein (2003), among others, presents further syntactic motivation in support of the DP hypothesis. She claims that arguments in the nominal domain are hierarchically arranged as they are in the clause. Over the years there have been extensive discussions on the structural position of the arguments of N. Ritter (1988), for example, suggests that the subject argument of a DP (a possessive) is generated in Spec, NP and the object arguments are complements of N, following the VP-Internal Subject Hypothesis previously suggested by Koopman and Spotiche (1991) in their analysis of sentential structures. Longobardi (2003) has claimed that Possessors are higher than notional subjects such as Agents or Experiencers, and those in turn are higher than internal arguments. In order to prove this generalization, he presents evidence involving the interpretation of possessives and binding.

Another issue that has triggered extensive discussion is the position of the article and the types of movement operations that take place to account either for its being phonologically covert or for its appearing at the left or right of N when overt.

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6 Remember that Gender distinctions are lost when the noun is plural in Bulgarian.
   (i) Rome destroyed Carthage
   (ii) Rome’s destruction of Carthage
8 Koopman and Spotiche (1991) propose that the internal and external arguments in the clause are generated VP-internally. Thus, the subject is in Spec,VP and not in Spec,IP as had previously been assumed.
Arguments for N raising to D (N-to-D head raising) have been proposed for Romance languages in Longobardi (1994, 1995), Bernstein (1991b), for Hebrew in Ritter (1988, 1991) and Siloni (1991), and for Scandinavian languages in Taraldsen (1990), Desling (1988), Santelmann (1993) and Kester (1993). Longobardi (2003) claims that there are three types of N-to-D raising identified in the literature (Rumanian Ns with the enclitic article; the Semitic construct state, and Romance proper names). In these cases, it has been argued that the features of D attract N, following Chomsky’s (1995) proposal that features in functional projections can be strong or weak, the former triggering overt movement. Against this view, others have proposed a phrasal movement inside DP, following Szabolcsi (1983) who first proposes DP-internal phrasal movement claiming that Spec, DP, in parallel to Spec, IP, is an ‘escape hatch’ for extraction from DP. This idea was subsequently adopted by Valois (1991) for French. Cinque (2000) argues for an XP movement only inside the DP as well. For him, everything can be derived by successive leftward movement of larger and larger XPs. The same remnant movement (but without pied-piping the containing phrase) may be involved in the traditionally considered N-to-D raising. I will also defend the view that movement is of the phrasal type only (see chapter 4).

The position of adjectives inside the DP has also been extensively discussed. It is assumed that adjectives in the nominal domain correspond to adverbs in the clausal one. Jackendoff (1972) suggests that there is a fixed left-to-right sequence of adjectives paralleling that of adverbs. Cinque (1994) also proposes that adjectives in the DP are organized according to a universal hierarchy that relates to their semantic properties. The basic order of the adjectives is prenominal. Following this assumption, and on observing a wide range of Romance varieties, Bernstein (2003) further suggests that there is a parametric variation as to how high an N raises in order to derive the post-nominal position of adjectives in Romance. Thus, adjectives have a greater tendency to precede the N in French in comparison to Spanish and Italian, i.e. Ns in French do not raise as high as Ns in Spanish and Italian. Bernstein (2003) concludes that the higher the landing site of N, the greater the tendency for

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9 Sproat and Shih (1988) also suggest that adjectives of absolute properties such as colour and shape are closer to the head than adjectives for relative properties such as quantity and size.
adjectives to occur post-nominally. As for the landing sites between N and D, she claims that they correspond to functional projections. Possible candidates for these intermediate functional landing sites have been claimed to be Number (singular vs. plural), Gender and CASE.

As for Number, it was Ritter (1991) who first proposed a NumP and claimed that it is NumP and not NP which is the complement of D in Modern Hebrew. In a similar way to Ritter, Valois (1991) and Picallo (1991) adopt a number projection for French and Catalan respectively. Bernstein (1991a, 1993a) provides additional support for adopting a NumP for Romance presenting data from Walloon.

As for the status of Gender Phrase inside nominals, Picallo (1991) claims that gender projects to a functional phrase within DP which she labels Gen(der)P. This functional projection is situated between NP and NumP reflecting the fact that gender is expressed directly on the noun stem and that number is expressed outside gender.\(^{10}\)

\[(8)\] Spanish:
\[
\text{mes-a-s} \\
\text{table-FEM-PL} \\
\text{‘table’}
\]

Bernstein (1993a, 1993b) subsequently suggests that gender is expressed in the form of word markers (in the sense of Harris (1991)) in Spanish and Italian-type languages. However, Ritter (1993) challenges the idea that gender, or word markers, should correspond to functional categories, claiming instead that gender is a feature and that there is a parametric variation in the location of this feature cross-linguistically. Thus, gender is found on the noun stem at all levels of syntactic representation in Hebrew while in Romance it is located together with the noun’s number specification on the functional head Num.

\(^{10}\) See Picallo (2006) for recent proposals on the relation between gender and number.
Longobardi (2003) further examines Case positions within the DP. He claims that many languages tend to use a special case, the genitive, for the arguments of nouns whose verbal thematic correspondents bear nominative and accusative. There are at least five different ways of formal realization of the genitive apart from expressing it by a preposition:

(9)\(^{11}\)

a. a phrase-final affix (English ’s)

b. a word-final affix (German s, Arabic i)

c. an inflectional (fusing) ending (Latin or Slavic Genitive)

d. phi-feature agreement with the noun (Romance/German Possessives)

e. zero-realization (Hebrew Construct State Genitive)

Longobardi (2003) suggests that prepositional genitives surface lower than the genitival forms listed in (9a, b, d, e). Thus, he hints at a possible hierarchy made available by UG:

(10) (\(1\) GenS \(2\) AP \(3\) GenO \[a P [S [O…N…]] \(a\)] )

The positions from 1 to 3 set out some crosslinguistically possible surface positions for the N. GenS and GenO are the high and low positions for possessivized genitives respectively, and AP are iterated positions for attributive adjectives. That is, there are two positions for non-prepositional genitives (higher or lower than adjectives). Longobardi (2003) proposes that Semitic languages, Romance and Hungarian activate only the higher one, Celtic languages only the lower, while some varieties of Germanic activate both positions.

In conclusion, there has been a great amount of literature about and interest in the structure of the DP since the work by Szabolcsi (1983) and Abney (1987) within the Principles and Parameters framework. Yet, what is also certain is the fact that there is still a lot of work to be done on the syntax of the DP. Nowadays, there are many linguists who are shedding light on this field as they research languages that

\(^{11}\) Examples by Longobardi (2003: 567).
have thus far received little attention. New theoretical proposals are also being suggested that new insights into old themes.

Having now set a very general scenario on the basic structure of the DP, I will proceed to discuss some issues on the classification of deverbal nominals.

3.1.2. Classifying nominalizations (Grimshaw, 1990)

The notion that the argument-taking properties of nouns are directly dependent on their event properties was first extensively argued in Grimshaw (1990). According to her, any predicate lacking event properties lacks argument structure as well.

Grimshaw (1990) presents evidence for the need to classify nominalizations according to their argument structure, distinguishing between the so-called event and result nominals exemplified in (11 a, b) respectively:

(11) Nominalization types (Grimshaw 1990)

a. Event Nominlas:
   (i) The examination of the patient took a long time.
   (ii) *The barbarians’ destroying
   (iii) The barbarians’ destroying of the city
   (iv) The examination of the dog in/for an hour
   (v) Bill’s intentional examination of the weak candidate

b. Result Nominals:
   (i) *The exam of the patient took a long time
   (ii) The exam is on the table
   (iii) *The exam of the student in/for an hour
   (iv) *Bill’s intentional exam of the weak candidate.
Grimshaw extensively argues that there are substantial differences between these two types of deverbal nouns. Event nominals, exemplified in (11a), are subject to several restrictions, which are exemplified in the ungrammatical sequences in (11a). They are called ‘event’ nominals because they denote events whose duration can be measured. Result nominals (11b), on the other hand, refer to the output of the event, so there is no possibility for measuring an event they can not possibly denote.

Event nominals are Theta-assigners, i.e. they have obligatory arguments (11a: ii, iii). In fact, having argument structure makes event nominals very similar to verbs (see *the barbarians destroyed). To account for this, Grimshaw (1990) proposes that event nominals have an external event argument that we can label EV whereas result nominals have an external referential argument R. For her, it is the EV argument that is responsible for the argument-taking properties of nouns (11a).

Another verbal feature of event nominals is their capacity to combine with aspectual modifiers (11a: iv), an observation first made by Vendler (1967). These modifiers cannot combine with the result nominals (11b: iii). Additionally, whereas event nominals allow for agent-oriented adverbials (11a: v), result nominals do not (11b: iv).

However, there are nominalizations that denote events but behave like result nominals as they are incompatible with aspectual modifiers and agent-oriented adverbials (12):

(12) Simple event nominals, Grimshaw (1990)
   a. *The event in an hour
   b. *Mary’s intentional trip to Asia

The distinction is based on argument-structure. Grimshaw proposes that complex event nominals like (11a) have a true argument structure, similar to that of verbal predicates. Simple event nominals like those in (12), on the other hand, do
not. Rather, they have what she labels participants which are not real arguments but which serve to restrict the denotation of the nominal in several ways.\textsuperscript{12}

Grimshaw (1990) further suggests that there are several tests that can distinguish between true argument-structure nominals, i.e. complex event nominals (11a), from those that do not have argument-structure, i.e. the simple event nominals (12) and result nominals (11b). For example, only argument-structure nouns accept adverbial modifiers such as ‘frequent\textsuperscript{13}, or ‘constant’ and agent-oriented modifiers such as ‘deliberate’, ‘intentional’ (see 11a: v). They can neither pluralize nor take indefinite determiners.

Following Grimshaw’s (1990) classification, I will show that there are also three types of nominalizations in Bulgarian, as in (13):

(13) Nominalization types in Bulgarian

(a) \textit{Argument-structure nominals} (some process –NE nouns)

(b) \textit{Participant-structure nominals} (eventive -(N)IE and eventive ‘other-suffix’ nouns and some process –NE nouns)

(c) \textit{Result nominals} (result –NE, result -(N)IE and result ‘other-suffix’ nouns)

The reason for such a classification is syntactic, that is, it is based on the syntactic behaviour of these nouns (see § 4.2). It will also become clear that their different behaviour results from a difference in the syntactic derivation and structure of these nominals (see § 4.1). Generally speaking, type (13a) nominalizations correspond to Grimshaw’s complex event nominals, type (13b) to her simple event nominals and type (13c) to her result nominals. Prior to substantiating my claims, I

\textsuperscript{12} Grimshaw (1990) distinguishes between syntactic arguments, which stand in grammatically significant relation to predicates, and what she calls ‘participants’. She claims that, among other things, the lexical conceptual structure (lcs) defines a set of participants involved in the meaning of the lexical item (p. 54). Whereas verbs and complex event nominals project participants in their argument-structure and thus make their participants grammatical arguments, other nominals (i.e. result and simple event ones) have only participants but no grammatical arguments.

\textsuperscript{13} Grimshaw claims that if modifiers like ‘frequent’ and ‘repeated’ appear with result nouns, they must be in the plural (e.g. the frequent exam*(s)).
would like to present some general and more recent proposals on nominalizations suggested by Alexiadou (2001) and Ferrari (2005) from which I have adopted some assumptions.

3.2. Some notes on Alexiadou’s (2001) and Ferrari’s (2005) proposals on nominalizations

In this section I will discuss only the relevant assumptions on nominalizations made by Alexiadou (2001) and Ferrari (2005) which I have adopted in this work. Other details, which are not related to my proposal, will be omitted.

3.2.1. Alexiadou’s (2001) view: some recent assumptions

Alexiadou (2001) adopts the Distributed Morphology (hence, DM) view (Marantz (1997, 1999), Schoorlemmer (1995), van Hout and Roeper (1998), Borer (1999)) and claims that all word formation is syntactic and functional. Basically, she concentrates on the framework proposed in Marantz (1999) according to which lexical elements, unspecified for syntactic category, are introduced into variable syntactic environments. Depending on the functional layers that dominate these unspecified items, they are correspondingly spelled out as adjectives, verbs, or nouns (Alexiadou 2001: 7). That is, Alexiadou considers categories like a verb destroy or a noun destruction to be abstract roots which lack categorial features. These abstract roots are introduced into the syntactic structure unspecified for a syntactic category and relate to higher functional heads such as Number/D or v, to turn into a noun or a verb respectively. Thus, when √DESTROY is placed in a verbal environment, it yields a verb (14a), and if placed in a nominal environment, the result is a noun (14b):
In an approach like this one, functional layers fully determine the category of a lexical head.\(^{14}\)

As for deverbal nouns, Alexiadou distinguishes between argument-supporting nouns, which correspond to Grimshaw’s (1990) complex event nominals, and non-argument-supporting result nouns.\(^{15}\) For her, the difference between argument-taking and result nominals is explained by the presence of additional functional layers inside the former but not the latter. Thus, she claims that only argument-taking nouns include Voice/\(\sqrt{v}\) and Aspect projections whereas result nominals do not.\(^{17}\) A syntactic representation is provided in (15), where (15a) refers to Alexiadou’s argument-supporting event nominals and (15b) to her result nominals, and F relates to additional nominal functional projections such as Number or Agreement:\(^{18}\)

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\(^{14}\) This, in fact, differs from Grimshaw’s (1990) analysis, which claims just the opposite, i.e. that the category of lexical heads determines the functional layers.

\(^{15}\) For Alexiadou (2001) both *process* and *event* nouns are argument supporting, the only difference between them being that the first are durative while the latter are terminative (p. 10).

\(^{16}\) According to Kratzer (1994a, b), Chomsky (1995), Harley (1995), Marantz (1997), and Arad (1999), \(\sqrt{v}\) is (i) the locus for agentivity, i.e. external arguments; (ii) contains features related to agentivity; (iii) bears case features for the object; and (iv) comes in two types: a. introduces an external argument; b. does not introduce such arguments (see Alexiadou 2001: 17). As for property (iv)b, Alexiadou claims that exactly this type of \(\sqrt{v}\), the ‘deficient’ one, is found in nominalizations, due to the fact that no accusative case is assigned to their DP argument and that no agent is syntactically projected to Spec,\(\sqrt{v}\)P.

\(^{17}\) In Alexiadou’s analysis, the functional category Aspect contains features related to the semantic properties of the denoted event (for example, perfective for a completed event and imperfective for an ongoing one), while Voice is the locus of agentivity, decisive for features relevant to the licensing and interpretation of external arguments.

\(^{18}\) Examples from Alexiadou (2001: 19).
(15) a. Process/event (argument-supporting) nominals:

```
DP
  D  FP (NumP, AgrP)
  AP  FP
   F  AspP
      Asp'
         Asp  vP
             v  LP
                 L  DP/Complement
                     √DESTROY  the city
```

b. Result nouns:

```
DP
  D  FP
  Fº  LP
```

As we can see from the representation in (15), Alexiadou, contrary to Marantz (1999), does not include a category-changing functional nominalizing head [nº] to derive a noun. For her, whenever a root is introduced under D/Number, we have a noun, and when introduced under Tense, the outcome is a verb. I will argue,
however, that a nominalizer projection [nP] is necessary for a root (or stem) to be analysed as a noun.

An interesting observation by Alexiadou (2001), which will be relevant for my analysis, is that there are languages that have overt morphological reflexes for Voice and Aspect. Though Greek does not systematically show Voice morphology on nominalizations (revealed by the infix -\textit{m}-), there are languages that do (e.g. Turkish, Korean, West Greenlandic, Bantu languages, and Maori). In Turkish, the passive morpheme –\textit{IL} shows the presence of Voice both for verbs and derived nouns (16):\textsuperscript{19}

\begin{equation}
(16) \begin{align*}
\text{a. Mektub yaz } & \rightarrow \text{IL } \rightarrow \text{di} \\
\text{letter } & \text{ write pass past} \\
\text{‘the letter was written’}
\end{align*}
\end{equation}

\begin{equation}
\begin{align*}
\text{b. mektub-un-yaz } & \rightarrow \text{IL } \rightarrow \text{ma-si} \\
\text{letter-GEN write pass VN-its} \\
\text{‘the writing of the letter’}
\end{align*}
\end{equation}

Following this assumption, I will show that Bulgarian also has an overt Voice morphology in some nominalizations (in the case of –(N)IE nominals) which is manifested by the suffix –\textit{N/T} (see § 4.1.2).

As for Aspect, Slavic languages present an opposition between perfective and non-perfective, which can be observed in both verbs and nominalizations.\textsuperscript{20} Bulgarian is thus a language that has both overt morphological reflexes: for Voice like Turkish, and for Aspect like the other Slavic languages. Following Alexiadou (2001), the presence of both should result into a process/event argument-taking nominal. However, we will see that this is not so (for further details, see § 4.1).

\textsuperscript{19} Examples from Alexiadou (2001: 50).
\textsuperscript{20} Similar patterns are found in Archi, Inuit, Buryat, Mongolian, Turkish, Tuva, and Tagalog (Alexiadou 2001: 51).
In the next section, I present some possible modifications of the basic assumptions put forth in Alexiadou (2001) based on some recent proposals by Ferrari (2005), which will constitute the starting point for my work.

3.2.2. Ferrari’s (2005) analysis: some notes

Following some of Alexiadou’s (2001) ideas, Ferrari (2005) proposes a syntactic account for Italian and Luganda nominalizations. However, contrary to Alexiadou (2001) and Marantz (1999), she claims that only stems can enter syntax to be further modified. For her, roots first need to acquire a categorial specification, i.e. they need to become stems, in order to be analyzable. Once this process has taken place, they can enter the syntactic component for further modification. Stem formation takes place in the Lexicon in Ferrari’s analysis. An example is provided below:

(17) **The Lexicon**: √ + (c) = stem (c)

From (17) we see that the root √ combines with a categorial feature (c) to yield a stem which is categorially marked (i.e. (c)). Stems thus always have a categorial feature (verbal, nominal, or adjectival).

Following Ferrari’s line, I will suggest that there are cases where a stem, and not a root, must enter at the syntactic component as an indivisible unit. In other words, there are instances where only stems can enter the numeration as syntactic objects. This is the case of lexically prefixed nominalizations (see § 4.1 and fns. 9, 10). Otherwise, it is the root that directly enters syntax to be further modified there.

Ferrari (2005) further suggests that an important factor for the derivation of nouns in both Italian and Luganda is the Gender/Class morpheme. In her analysis, these morphemes are used to derive nouns from non-nominal (i.e. verbal and adjectival) stems. They are types of derivational heads marked for the lexical

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21 Luganda is a Northeastern Bantu language. It is the official language of the Baganda people, the largest Interlacustrine Bantu tribe in Uganda.
feature [n] that project in syntax by virtue of their inflectional nature. Thus, contrary to Alexiadou (2001), who rejects the role of any nominalizer such as [n] for the derivation of deverbal nouns, Ferrari (2005) proposes that it is [n] which is responsible for the nominalizing process. For her, noun formation results from the Merger of [n] with an XP where XP can be a nominal, adjectival, or verbal stem, or a VP, AspP, or VoiceP, as represented in (18):

\[(18) \text{[nP[n[XP]]]}\]

\[
\text{nP} \\
\text{n} \quad \text{XP}
\]

Following this line of analysis, I will propose that some Bulgarian nominalizations are also derived by the merger with a gender morpheme which, in my analysis, is a nominalizer as well (in the case of ‘gender-derived’ nominals). As for all other Bulgarian nominalizations, the nominalizer head is a derivational suffix marked for gender. In a similar way to Ferrari, I will also propose that the base for deriving nominalizations can be either a VoiceP (in the case of –(N)IE nominals), AspectP (in the case of –NE nominals), or a VP (in the case of lexically prefixed nouns, i.e. when verbal stems enter the syntactic component). Otherwise, we have categoriless roots that enter syntax.

Having established the basic ideas which I adopt from Grimshaw (1990), Alexiadou (2001) and Ferrari (2005), I will now proceed to show that we still need some further modification of these analyses in order to account for certain Bulgarian data.

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22 Root stems, affix stems (i.e. derivational morphemes) and inflectional morphemes are considered to be XPs in Ferrari’s (2005) framework.
3.2.3. Problems with previous analysis on nominalizations.

Crucial to my analysis of Bulgarian nominalizations is Grimshaw’s (1990) assumption that without event structure there is no argument structure. I will show, using data on Bulgarian deverbal nouns, that such a claim is confirmed. As for the classification of Bulgarian nominalizations, I have already suggested that they can be divided into three types which roughly correspond to Grimshaw’s (1990) classification (see (13) above).

With respect to the tests proposed in Grimshaw (1990) for distinguishing between argument structure (complex event nominals) and non-argument structure (simple event and result) nominals, we shall see that they do not always apply to Bulgarian. In section 4.2 it will become clear that all of the nominalization types in Bulgarian can (i) pluralize, and (ii) accept indefinites, demonstratives and numerals. As for time and manner adverbial modification, all eventive nouns, whether argument-structure (13a) or participant-structure (13b), accept it as well. Regarding agent-oriented modifiers and the adjective ‘frequent’, Grimshaw’s claims are supported, i.e. such modifiers are compatible only with argument-structure nominals.

I adopt from Alexiadou’s (2001) analysis the assumption that word formation is syntactic and that a categoriless root is spelled out as a noun, adjective, or verb, depending on the functional layers that dominate it. However, contrary to Alexiadou (2001) and in accordance with Ferrari (2005), I will show that sometimes a stem and not a root must be inserted in syntax. This, as already mentioned, happens in the case of lexically prefixed nominalizations (see § 5.3.1).

An important proposal of both Alexiadou (2001) and Ferrari (2005) is the presence of Aspect and Voice projections in nominalizations. In line with Alexiadou (2001) I will show that Bulgarian is a language with overt morphological reflexes

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23 Such facts are also attested by Sleeman and Brito (2007) and the references therein.
24 As for the adjective ‘frequent’, Grimshaw (1990) claims that it can occur with result nominals but then they must appear in the plural (see fn. 13). The same holds for Bulgarian.
for both Voice and Aspect which are preserved in certain nominalization types. Following Ferrari (2005), this would suggest that the base for deriving such nominals is either AspP or VoiceP. Thus, I will propose that –(N)IE nominals are generated under VoiceP due to the fact that they preserve the past passive participial suffix –N/T (see § 4.1.2). As for process –NE nominalizations, they contain an Aspect Imperfective Phrase (Asp¹P) because they are always formed on imperfective verbal bases. Following Alexiadou’s analysis, this would mean that all of these nominals should be process/event argument-taking ones. However, it will be shown that this is not always the case and that some –NE and almost all –(N)IE nouns denote results or objects. Additionally, there are cases where such projections are not present but the nominal can still denote an event, as is the case with the participant-structure ‘other-suffix’ nouns (see § 4.1.1).

Before I present my syntactic analysis, I will first mention some previous proposals regarding nominalizations in Bulgarian, the language under investigation.

3.3. Previous proposals on nominalizations in Bulgarian

The literature on nominalizations in Bulgarian is scarce. Dimitrova-Vulchanova and Mitkovska (2006), Popova (2006), Fowler and Dyer (1988) and Steinke (1999) are among the few who have analyzed deverbal nominals in Bulgarian. As for the semantics of nominalizations, Gradinarova (1999) is one of the very few to offer a detailed account of both Russian and Bulgarian deverbal nouns.

The semantic types of Slavic nominalizations in comparison with other languages such as English have been studied in Revzin (1973) and Fowler and Dyer

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25 The literature on the functional structure of the DP in Bulgarian is much richer. Thus, Wunderlich (2002), Schürcks and Wunderlich (2003), Tasseva-Kurktchieva (2005a, b), Dimitrova-Vulchanova and Guisti (1999) and Dimitrova-Vulchanova (2000) pay attention to the role and syntax of possessors in Bulgarian DPs. Tasseva-Kurktchieva (2006) further examines the categorical status of quantifiers in Bulgarian, claiming that they are not determiners and that demonstratives generate in their own DemP (something previously suggested by others such as Roca (1996)). Dimitrova-Vulchanova (2002) then analyzes the realization of Number in the Balkan languages whereas Dimitrova-Vulchanova (2003) and Arnaudova (1996) pay attention to possible N-A orders and A-to-N movement in the DP.

26 Dineva (1997, 1998), on the other hand, focuses more specifically on Bulgarian words of emotion.
who state that Slavic languages exhibit a smaller degree of variation among process nominals. Whereas (19a) is unknown in Slavic, the equivalent of (19b), a gerundive nominal (or a possessive –ING construction) in English, is found in Bulgarian and Macedonian:

(19) I was surprised by
   a. [John immediately *refusing* the offer]
   b. [John’s immediately *refusing* the offer]

Syntactic analysis of Slavic nominalizations is provided in the works of Procházková (2006) for Czech, Schoorlemmer (1995) for Russian, and Rozwadowska (2000a, b) for Polish, among many others.

Before I offer my syntactic analysis of nominalizations in Bulgarian, I will discuss some of the assumptions made in the literature on this topic. I first start the discussion with some proposals made in Dimitrova-Vulchanova and Mitkovska (2006) after which I will show the way in which Popova (2006) analyzes Bulgarian nominalizations.

3.3.1. A note on Dimitrova-Vulchanova and Mitkovska (2006)

Dimitrova-Vulchanova and Mitkovska (2006) (henceforth, DV&M (2006)) explore nominalization types in Bulgarian and Macedonian. The authors claim that whereas Macedonian collapses event and result nominals in one and the same nominalization pattern (the –NJÉ nouns), Bulgarian distinguishes between productive event –NE and semi-productive result –NIE nominalization types. To illustrate this, they provide the following example (20), where from one and the same verb we obtain both nominalizations with the corresponding meanings. The examples refer to Bulgarian:

27 Example from DV&M (2006: 2).
(20) a. pis-a-NE
write-a-NE
‘the act of writing’

b. pis-a-NIE
write-a-NIE
‘writings, the product of writing’

–NE nominalization yields an event reading (20a), whereas the corresponding
–NIE noun in (20b) has a result interpretation. Normally, a verbal root will give rise
to both –NE and –NIE nominalizations. Sometimes, however, the –NIE noun may not
be available. In this case the –NE pattern, which is always available, is opposed to a
‘non-derived’ nominal. An example is given in (21):

(21) a. laj
b. la-e-ne
‘bark’                          bark-e-NE
‘barking’

The result noun in (21a) is, according to these authors, a ‘non-derived’
nominal. Yet, in my analysis (see the following chapter) I include this pattern in the
group of ‘other-suffix’ nominals and claim that this is an instance of gender
derivation.

DV&M (2006) also claim that both Bulgarian and Macedonian have a
number of other semi-productive patterns which give rise to result interpretation,
although they do not analyse these nouns. An example from Bulgarian is provided
below:

(22) a. grad-EŽ                          b. trjas-UK
‘building’                         ‘bang, loud noise’

28 In fact, as also claimed by DV&M (2006), some verbs of the ‘fear’ class do not yield a –NE
nominalization (e.g. *strahuva-NE ‘fearing’ vs. strah ‘fear’).
As we will see in the following chapter, these nouns fall, morphologically, under the label of ‘other-suffix’ nominals in my analysis. Contrary to DV&M (2006), I will show that some of them may denote events. In this case, they are participant-structure nominals (13b), whereas if they denote objects or results, they fall under the result nominal type (13c).

DV&M (2006) present additional evidence for the distinction between –NE and –NIE nouns. While –NE nouns derived from transitive two-place predicate verbs are ungrammatical with overt realization of only the external argument (the agent) as in (23a), the –NIE class permits such constructions (23b):

\[(23)\]
\[
\begin{align*}
\text{a. negovoto izpitva-NE} & \quad \text{b. negovoto izpita-NIE} \\
\text{his examination} & \quad \text{his trial}
\end{align*}
\]

Thus, in (23a) ‘his’ is interpreted as the patient, not the agent. In fact, we will see that this is due both to the transitivity of the predicate and to the argument-taking properties of the –NE nominals exemplified in (23a). (For more details, see section 4.2.1.)

Another difference detected by DV&M (2006) between the –NE and –NIE nominals concerns their syntactic behaviour. Following Grimshaw (1990), the authors claim that event nominalizations (-NE nominals) rarely take modifiers and almost never take demonstratives (24a), whereas result nominals (the -NIE nouns) can freely occur with demonstratives (24b):

\[(24)\]
\[
\begin{align*}
\text{a. *tova lae-NE} & \quad \text{b. tozi laj} \\
\text{‘this barking’} & \quad \text{‘this bark’}
\end{align*}
\]

I will show, however, that all nominalization types can freely accept any nominal modifier (see § 4.2.2).

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29 Examples from Dimitrova-Vulchanova and Mitkovska (2006: 12).
30 For more details on structural differences see Dimitrova-Vulchanova and Mitkovska (2006: 13).
31 For me, this example is acceptable. DV&M (2006) claim that this example is typical of colloquial register, primarily in ironic contexts (see their fn. 8).
Finally, I would like to briefly comment on the aspectual differences between event and result nouns in Bulgarian as discussed in DV&M (2006), as this is relevant for my syntactic analysis and further proposals on this topic.

DV&M (2006) claim that the event –NE nouns inherit the event structure of the verb they derive from while the result–NIE nouns have a ‘non-processual’ structure. To prove these claims, the authors apply the ‘lasted X time’ test as in (25) below:³²

(25) a. tŭrse-NE-to na izcheznalite prodŭlji dŭlgo
   The searching for the lost (ones) lasted long

   b. *tŭrse-NIJA-ta na poeta prodŭljija dŭlgo
   *The search of the poet lasted long

However, the examples they provide in (25) are problematic in various ways. First of all, the noun in (25a) is a –NE nominal in the singular whereas (25b) corresponds to its plural form. That is, (25b) does not correspond to a –NIE nominal so we cannot claim that durative modifiers (‘lasted X time’) are not available to such nouns. As we will see in section 4.2.4, though the examples in (25) do not serve to prove that aspectual inheritance takes place only in the –NE nominalization pattern, such an intuition is correct. I will claim that it is related to telicity and there are various factors intervening in this issue.

DV&M (2006) suggest that further contrasts between the aspectual characteristics of –NE and –NIE nouns can be supported by the fact that only the former can be used adverbially (as complements of prepositions) but not the latter (26):³³

(26) a. na vliza-NE          b. predi/sled trugva-NE
    ‘on entering’            ‘before/after going’

The authors claim that (26) is felicitous with any type of preposition which can pick up an interval and refer to a point (or interval) in time, which further supports the eventive character of –NE nominalizations in contrast to –NIE ones. I will suggest that this may be due to the fact that –NE nominals are related to gerunds and can take over some gerundive functions (see section 4.1, fn. 29).

Finally, the authors claim that nominalizations behave differently with respect to aspectual prefixes. According to them, only –NE nominals (27a, a’) but not any other type (27b) accept them: 34

(27) a. iz-lajva-NE
    ‘barking’

a’. PRO-lajva-NE
    ‘barking-PF’

b. *iz-laj /*PRO-laj
    ‘PF-bark’

As opposed to DV&M’s (2006) claims, I will show that some of the ‘other-suffix’ nouns and some –(N)IE nouns do allow for modification by aspectual prefixes (see chapter 5).

From all of the examples presented above, DV&M (2006) conclude that –NE nominalizations are event-denoting whereas –NIE nominalizations give a result reading (like ‘non-derived’ ones). I will show in the next chapter that this conclusion does not actually describe the situation in Bulgarian very exactly. There are cases of –NIE and ‘other-suffix’ nominals with event interpretation.

Consequently, certain aspectual prefixes can also attach to both of them (see chapter 5).

Before I proceed to present my analysis in the next chapter, I would like to briefly mention some of the proposals on Bulgarian nominalizations presented in Popova (2006).

3.3.2. A note on Popova (2006)

Popova (2006) is also one of the few scholars to have devoted some thought to the topic of Bulgarian nominalizations. Adopting the Paradigm Function Morphology framework, she also claims that Bulgarian distinguishes between two types of nominalizations, –NE and –NIE nouns. For her, –NE nouns denote events and inherit the argument structure of the verb they derive from whereas the other nouns denote results. However, we have noted above that this is not entirely the case in Bulgarian. First, there are many nominalizations, apart from –NE ones, which denote events. Second, we will also see that certain –NE nominals can denote results or objects (see § 4.1).

Popova applies some of the tests already proposed in Grimshaw (1990) to show that Bulgarian supports Grimshaw’s distinction between argument and non-argument structure nominals. She shows that only –NE nouns (i) can be modified by phrasal verbs (28a), (ii) can take durative or completive adverbials (28b); (iii) allow for manner modification (28c); (iv) allow for modification by adjectives like ‘frequent’ or ‘permanent’ (28d); and (v) allow for event control (28e):  

Paradigm Function Morphology is a model of morphology which stems from the works of Matthews (1972), Anderson (1992) and Aronoff (1994), and is very thoroughly formalized in Stump (2001).

Popova (2006) also claims, rather like Grimshaw (1990), that the adjective ‘frequent’ may appear with result nouns but requires that they be in the plural.

Examples taken from Popova (2006: 77-79).
(28) —NE vs. —NIE nominals:

(i) **Modified by phrasal verbs:**

a. izrazjava-NE-to na chuvstvata mu zapocna predi dva dni
   expression of feelings his started before two days
   ‘His expressing his feelings started before two days’

a’. *izraža-NIE-to na litseto j prodalži dva chasa
   expression on face her continued two hours
   *The expression on her face lasted for two hours

(ii) **Durative and completive adverbials:**

b. sreshta-NE-to s chuždentsi v prodǔženie na dva dni go iztoshti
   meeting with foreigners in duration of two days him exhausted
   ‘Meeting with foreigners in duration of two days exhausted him’

b’. *sreshtata s chuždentsi v prodǔženie na dva dni go iztoshti
   meeting with foreigners in duration of two days him exhausted
   *Meeting with foreigners for two days exhausted him

(iii) **Manner modification:**

c. Spokojnoto i uvereno pisa-NE na pisma mu pomaga
   calm. THE and confident writing of letters him help
   ‘The calm and confident writing of letters helps him’

(iv) **Modification by ‘frequent’:**

d. chestoto chuka-NE go iznervi
   frequent. THE knocking him nervous
   ‘The frequent knocking made him nervous’
d’. **chest-i-te** udar-i po vratata go iznerviha

*frequent*.PL.THE knock-PL at door.THE him nervous

‘The frequent knocks at the door made him nervous’

(v) **Event control:**

e. Nalaga se sūbira-NE-to na sobstvenitsi-te za da se reshi problema s pokriva

Demanded REFL gathering.THE of owner.THE.PL for to REFL solve problem with roof

‘The gathering of the owners **in order to** solve the problem with the roof is mandatory’

e’. * Nalaga se sūbra-NIE-to na sobstvenitsite za da se reshi problema

Demanded REFL gathering.THE of owner.THE.PL for to REFL solve problem s pokriva with roof

‘The gathering of the owners **in order to** solve the problem with the roof is mandatory’

From the data in (28) Popova concludes that only –NE nominals have eventive semantics while the rest (28a’, b’, d’, e’) do not. However, I will demonstrate in section 4.2.3 that, as far as manner modification is concerned (i.e. (28c)), all types of eventive nominals (–NE, -NIE and ‘other-suffix’) allow for it as well. My data further contradict Popova’s assumption that only –NE nouns are eventive (see § 4.1). As for durative adverbials (i.e. (28b)), I will show that their licensing is related to telicity and an explanation will be offered in terms of the syntactic decomposition of nominalization types (see § 4.2.4).

A last comment I would like to make is the relation Popova (2006) proposes between –NE nominals and aspect. The fact that –NE nominals derive only from imperfective verbal bases suggests that they may have inherited the aspectual
properties of the verb. However, Popov a finds such a claim problematic for Bulgarian and proposes that Bulgarian –NE nominals do not have aspect. In order to prove this she shows that some –NE nominalizations can combine with both durative ‘*for X time*’ and terminative ‘*in X time*’ modifiers at the same time. Due to the fact that durative modifiers combine with imperfective eventualities whereas terminative modifiers combine with perfective, the fact that some nominalizations combine with both at the same time would suggest that there is no aspectual information inside them. Consider the example below:\(^{38}\)

(29) a. Pütuva-NE-to *v prodülženie na dva dni* ja umori
    travel *in duration of two days* her tired
    ‘Travelling for two days tired her’

    b. Pütuva-NE-to do Varna *za shest chasa* ja umori
    travel to Varna *in six hours* her tired
    ‘Travelling to Varna in six hours tired her’

Though it seems reasonable to suggest that the examples in (29) question the imperfective aspectual nature of such nominalizations, it is plausible to think that this is due to (i) the unergative nature of the verbal base ‘*pütuva*’ (travel), and (ii) to the presence of the telic prepositional phrase ‘*do Varna*’ (to Varna).\(^{39}\) In other words, it is the prepositional phrase which transforms the unergative atelic verb ‘*pütuva*’ (travel) from (29a) into the unaccusative telic verb ‘*pütuva do Varna*’ (travel to Varna) in (29b). Thus, the presence of the telic modifier ‘*in six hours*’ in the nominalization in (29b) is accounted for. If the PP were not present in (29a),

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\(^{38}\) Example taken from Popova (2006: 84).

\(^{39}\) Unfortunately, I have not been able to find any work on tests distinguishing between unergative and unaccusative verbs in Bulgarian. From the tests that have been applied in the literature for other languages, it seems that only the ‘locative inversion’ test could be applied successfully to Bulgarian. In the locative inversion construction, a locative phrase occurs sentence-initially while a surface subject DP follows an unaccusative verb, i.e. we get a [PP VP\(_{\text{UNACCUSATIVE}}\) DP\(_{\text{SUBJECT}}\)] structure. Unergative verbs are believed not to occur in this construction. Applying this test, the verb ‘*pütuva*’ (travel) is unergative (1a), in contrast to a verb such as ‘*rasta*’ (grow), which is unaccusative (1b):

(1) a. # V avtobusa *pütuva* detsata (In the bus travel the children)
    b. V gradinata *rastit* tsvetja (In the garden grow flowers)

See Harves (in progress) and references therein for further details on this diagnostic for Russian. As far as I can tell, the same holds for Bulgarian. However, further research is required on this topic.
then the verb, and hence the nominalization, would remain unergative and atelic and the telic modifier would not be accepted.\textsuperscript{40}

Having presented the basic proposals made on Bulgarian nominalizations together with some critical comments, I focus the next chapter on my own analysis of Bulgarian deverbal nominals.

\textsuperscript{40} Thanks to Jaume Mateu (p.c.) who has suggested to me that this is a possible, though provisional, explanation for the phenomenon in (29), as has been previously suggested for English. A similar proposal has been made for Spanish in Miguel (1999) as well. Miguel (1999) claims that an atelic verb which denotes an activity such as ‘nadar’ (swim) becomes delimited when a PP such as ‘hasta el puente’ (to the bridge) is inserted. Thus, the verbal complex ‘nadar hasta el puente’ (swim to the bridge) becomes an accomplishment and, similarly to Bulgarian (29b), allows for a telic modifier such as ‘en un minuto y medio’ (in a minute and a half). If the PP is not present, then ‘nadar’ (swim) remains atelic and rejects the telic modifier (‘Amaya nadó en un minuto y medio ’Amaya swam in one minute and a half’). See (Miguel 1999: 3032-3033) for further details on Spanish.
CHAPTER 4: THE SYNTAX OF NOMINALIZATIONS IN BULGARIAN

We have already noted that the literature on nominalizations in Bulgarian is scarce and not always detailed. There is no general consensus on the analysis of any given topic. Sometimes, the adopted theoretical backgrounds and the analyses suggested under them are contradictory and incompatible. One may say, in addition, that many Bulgarian linguists focus their attention on a restricted issue: either a particular projection in the DP (e.g. *NumberP*; Dimitrova-Vulchanova (2002); *DemP*: Tasseva-Kurktchieva (2006), Arnaudova (1998); *AP*: Arnaudova (1996), Dimitrova-Vulchanova (2003); *GenP*: Rappaport (2000), Tasseva-Kurtkchieva (2005a, b)), or specific details in the nominalizing process (e.g. the role of the suffix: Steinke (1999), Georgiev (1999); argument structure: DV&M (2006); aspect: DV&M (2006) and Popova (2006); semantics: Gradinarova (1999); the role of passivization: Rappaport (2000) and Engelhardt and Trugman (1998, 2000)). Often, these authors do not consider particular details that are in many cases of great importance for the proposals they defend. Even the apparently uncontroversial status of the Determiner has been challenged among authors.\(^1\)

Incompatibilities of various types also arise with respect to the nominalizing process itself. Whereas Rappaport (2000) claims that there is no passivization inside nominalizations due to the absence of T, v and Prt (participle) projections inside the DP, Engelhardt and Trugman (1998, 2000) and Townsend (1975) defend the role of passivization.

As for the classification of deverbal nominals, Rappaport (2000) divides them into three types (-N/-T Ns, action (result) Ns and process Ns) while DV&M (2006) consider there to be only two types of them: event (-NE) and result (-NIE)

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\(^1\) For example, Zlatic (1998) claims that articleless languages do not project to DP whereas in Bulgarian and Macedonian, (the only Slavic languages that have an overt article) the NP must be, in fact, a DP. Nevertheless, the majority of linguists adopt Abney’s (1987) DP hypothesis which claims that all NPs are DPs.
nominals, claiming that what I have been calling ‘other-suffix nouns’ are non-derived.

Disagreements also arise on the reading of these nouns. DV&M (2006) claim that –NE nominals give rise to event interpretations while –NIE nouns are result nouns. Against such considerations, Popova (2006) and Rappaport (2000) claim that the status of –NIE nouns may be sometimes ambiguous between the two readings. Further disagreement exists on the aspectual nature, and its analysis, of Bulgarian nominalizations. Rappaport (2000), for example, suggests that aspect and Voice do project inside DP when the event interpretation obtains. DV&M (2006) also defend the aspectual nature of the –NE nominals but reject the possibility for –NIE nominals to project an AspP. There are also linguists, like Popova (2006), who totally reject the syntactic presence of Aspect inside Bulgarian nominalizations of whatever kind.

Finally, and more relevant to the discussion that follows, there is also disagreement as far as the derivation of Bulgarian deverbal nominals is concerned. Steinke (1999) and Popova (2006) claim that the verbal base for deriving them is the aorist. Georgiev (1999) suggests that they derive from the present verbal base.² Pashov (1999) proposes that deverbal nouns in Bulgarian could be obtained either from the aorist stem (from which they historically derive), or from the present verbal base, and sometimes even from the past imperfective one (p. 210). It must also be pointed out that the exact nature of the verbal base is almost never mentioned in the syntactic analyses of scholars working in this field. It is only briefly commented on in traditional descriptive grammars but not in recent syntactic analyses. I mention this particular state of affairs because the aspectual nature of the verbal base plays a crucial role in the analysis proposed here, as I have already suggested.

This scenario of contradictory or mutually inconsistent analyses has led me to propose a more detailed and concrete view of the nominalizing process in

² In fact, Georgiev (1999) claims that –NE nominals derive from the present verbal base but does not specify whether –NIE ones do so too. Nevertheless, we understand that they do.
My discussion is organized as follows: in section 4.1, I present the possible nominalization types in Bulgarian, offering a corresponding syntactic analysis for each one. Then, in section 4.2, I proceed by showing that the suggested division is attested because these nominalization types behave differently with respect to various tests, namely argument structure, possessive interpretation of the external argument, the acceptability of nominal modifiers, adverbial modification and telicity.

4.1. The syntactic representation of Bulgarian deverbal nominals

I suggest that three different types of nominalizations in Bulgarian can be morphologically distinguished.\(^3\) I will label the first type ‘other-suffix’ nominals (see § 4.1.1.). The second nominalization type is discussed in section 4.1.2. It is what I call “Voice –IE nominals”. Finally, the third group is the –NE nouns (see § 4.1.3).

4.1.1. ‘Other-suffix’ nouns

Under this label I include gender-derived nominalizations as well as deverbal nouns derived from various suffixes (-(ž)BA, -ITBA, -KA, -EŻ, -ITSBA, -IE, among many others). Though these nouns have different morphological representations, I include them in one group due to the fact that they behave syntactically in a similar way (see §4.2). The gender\(^5\) nominals are exemplified in (1) and nominals derived via the suffixes listed above are exemplified in (2):

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\(^3\) Following Svenonius (2004a), I endorse the view that there is a close correspondence between syntactic structure and morphological structure (see Baker 1985, 1988, Hale and Marantz 1993, Cinque 1999, and Julien 2002). According to these authors, a morphological complex of the form C-B-A often indicates the existence of an underlying syntactic structure of the form \([C \rightarrow B \rightarrow A]\).

\(^4\) Note that here the –IE suffix is different from the –IE found in the participial Voice –IE nominalizations (or what is known as –NIE nominals). The –IE ‘other-suffix’ nominals derive from a root/stem to which the –IE suffix attaches whereas the Voice nominalizations (labelled here Voice –IE nominals) are formed on the past participial base of the corresponding verb to which the –IE suffix attaches. In fact, -IE is a very productive suffix in Bulgarian. Apart from its role in nominalizations (in ‘other-suffix’ –IE and Voice –IE nominalizations), it may also be a place suffix (e.g. imen-IE ‘estate; domain’); see Georgiev (1999)). It can also attach to adjectives to form nouns (vesel’ ‘gay’ – vesel-IE ‘gaiety, fun’).

\(^5\) I call these nominalizations gender nominals due to the fact that there is no nominalizing suffix available. As we shall see, the nominalizer in such nouns is the gender morpheme.
(1) Gender nominalizations

a. **Masculine**
   
   [RAZ-kaz]-Ø
   
   [RAZ-say]-Ø
   
   narrate- Ø.MASC.SG
   
   ‘narration, story’

b. **Feminine**
   
   [ZA-shtit]-a
   
   defend-a.FEM.SG
   
   ‘defense’

c. **Neuter**
   
   tegl-o
   
   weigh-O.NEUT.SG
   
   ‘weight’

(2) ‘Other-Suffix’ nominalizations

a. **Feminine:** kraž -BA
   
   steal-BA.FEM.SG
   
   ‘theft’

b. **Masculine:** plam-ÚK
   
   flame-ÚK. MASC.SG
   
   ‘flame’

c. **Neuter:** deistv-IE
   
   act-IE.NEUT.SG
   
   ‘action’
Like all nouns, nominalizations are marked for gender. In fact, from the examples in (1) we see that gender nominalizations result from the merger of a gender marker (overt ‘a’ for feminine, overt ‘–o/-e’ for neuter and covert, or ‘Ø’, for masculine) as well as a root (1c) or a verbal stem (1a, b). As for the ‘other-suffix’ nominals, the gender is carried by the suffix. The suffixes that end in –a (-BA, -KA, -ITBA, -(N)ITSA) are feminine, those that end in a consonant such as –EŽ, -UK (2b) are masculine, and those that end in –E such as –IE (2c) are neuter. We may further reanalyse those suffixes as a suffixal element plus a gender marker. But for the sake of simplicity, I will assume that gender is marked on the nominalizing suffix.

Throughout this chapter it will become clear that a nominalization can be formed either on a root (√) or a verbal stem. In cases where there is a prefix, we have a stem (1a, b). Otherwise, we have a root (1c). I will claim that prefixes signal the presence of a verbal stem, and that nominalizations may be derived either on a stem (if there is a prefix), or on a categoriless root. A similar analysis is proposed in Ferrari (2005). I further suggest, also following Ferrari (2005), and as opposed to Marantz (1997), that roots may be selected as stems already in the Lexicon (in the case of lexical prefixation). However, in this particular respect, I depart from Ferrari’s (2005) proposal. She claims that only stems are modifiable in syntax and that all stem formation takes place in the Lexicon. I propose instead that, only in the case of (lexical) prefixation, stems should be selected to form the

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6 Georgiev (1999) claims that ‘-a’, like –KA, is an eventive suffix which reveals the result of some action. Yet, he never considers the possibility of gender being a nominalizer. In my analysis, ‘-a’ is clearly a gender suffix that marks nouns as feminine and nominalizes the root or stem at a previous state in the derivation.

7 Recall that masculine nouns in Bulgarian end in a consonant (stol ‘chair’, zavod ‘factory’, prozorets ‘window’). We observe that masculine gender-derived nouns as in (1a) end in a consonant too. Thus, we may consider (1a) a case of nonovert (zero) masculine derivation.

8 For a more detailed description of gender in Bulgarian, see section 2.1.1 above.

9 Bulgarian grammarians consider prefixation a way to derive a new verb from another verb. Yet, prefixation is also a way to derive verbs from nouns (i) and adjectives (ii):

(i) svinja > o-svin-va-m se

pig > o-pig-IMPF-m.1PS.SG se.REFL

‘a pig’ > ‘get dirty (like a pig)’

(ii) cheren > PO-chern-ih (se)

black > PO-black-ih.Aor.1PS.SG (se.REFL)

black > I got black (+ ‘se’)/ I made black (- ‘se’)

Catalan shows similar behaviour with the verbs emporcar(-se) and ennegrir(-se), which correspond to the Bulgarian verbs in (i) and (ii) respectively.
numeration for a given DP and project as the lexical category LP. Otherwise, we have a root which becomes a verbal stem via “verbalization” (by a VP projection) be it overt or covert. For ease of exposition and to facilitate the discussion, I use the label √P for roots and LP for stems in the representations that follow.10

In (3) below, I provide a syntactic analysis of the gender nominals listed in (1) with the corresponding bracketed step-by-step movement operations involved in their derivation (3a′, b′, c′):

(3) The Syntax of Gender Nominals:


[RAZ-kaz]-út ‘the story’:

10 To refer to the root, I use the symbol √. In order to show the presence of a prefix, I separate it from the root by a dash. The prefixed stem is then introduced in square brackets to show that it forms a unit:

(i) [RAZ-kaz]-va-m ‘narrate’

Thus, whenever we have square brackets, it means that (i) there is a prefix inside them and that (ii) we have a stem, not a root.
a’. Bracketed step-by-step movement representation:

1. \([_{LP} [RAZ-kaz]-] \) (stem LP merging with n)

2. \([_{nP} [LP [RAZ-kaz]]_1 [Ø] t_1] \) [TO SPEC, nP]

3. \([_{DP} [nP [LP [RAZ-kaz]]_1 [Ø] t_1}_2 [-ūt] t_2] \) [TO SPEC, DP]


[za-shtit]-a-ta ‘the defense’:

b’. Bracketed step-by-step movement representation:

1. \([_{LP} [ZA-shtit]] \) (stem LP merging with n)

2. \([_{nP} [LP [ZA-shtit]]_1 [-a] t_1] \) [TO SPEC, nP]

3. \([_{DP} [nP [LP [ZA-shtit]]_1 [-a] t_1}_2 [-ta] t_2] \) [TO SPEC, DP]
c. Neuter (tegl-o ‘weight’) (see (1c) above)

   tegl-o-to ‘the weight’:

   DP
   ┌─ D' ─┐
   │     │
   │  D  │
   │   ┌─ nP
   │   │     │
   │   │     │
   │   n'    │
   │     -o  │
   └─ √P    │
       √tegl

   c'. Bracketed step-by-step movement representation:

   1. [√tegl-]                                (root merging with n)

   2. [nP[√tegl-]i [-o] t_i] [TO SPEC, nP]

   3. [DP[nP[√tegl-]i [-o] t_i]_2 [-to] t_2] [TO SPEC, DP]

   The data and representations in (3) show that gender nominals are formed by merging a gender marker and either a root √P as in (3 c), or a stem LP, as in (3 a, b). It is the gender marker itself that nominalizes √/LP. The lexical projection √P or LP moves to Spec, nP so that the gender morpheme, a nominalizing head, will surface as suffixed to it. Then, the whole nP moves further to Spec, DP as in the bracketed representation [DP[nP[√tegl_j [-o] t_j]_i [-to] t_i], which shows the relevant traces. Recall, from the discussion in Section 2.1.5, that the Bulgarian definite article surfaces as a suffix to the newly formed noun. Note that I am proposing that the order of suffixes in the nominal sequence is derived via phrasal
movement exclusively.\textsuperscript{11} It obtains by the same morpho-phonological procedure that results in English constructions showing the so-called Saxon Genitive (i.e. $\textbf{[DP John [s’s] (friend)]}$) according to Abney’s (1987) now classic proposal.

As for the status of the movement operations involved, I claim that all movement up to Spec, nP is syntactic. However, I regard the movement of the nominalization [nP, √/(LP)] up to Spec, DP, where the definite article is attached, as post-syntactic, driven by morphological wellformedness conditions. Recall from section 2.1.5 that the definite article in Bulgarian must always obey Wackernagel’s (1892) Law and thus appears invariably in the second position DP internally. Thus, in cases where no external argument is projected, as in (3) above, the moving of nP to Spec, DP is, in my analysis, a post-syntactic operation. In those cases where an external argument is projected, and in cases where it appears in the Genitive, the nominalization moves up to Spec, nP but not any further. When the DP merges with nP, it is the external argument, in the Genitive, that moves up to Spec, DP, leaving the rest of the nominalization in Spec, nP. Such a movement is, in my analysis, syntactic, driven by case checking requirements and at the same time satisfying wellformedness conditions (see § 4.1.4).

The same procedure as the one described for (3) holds for ‘other-suffix’ nominals, as shown in (4) below. The only difference is that the nominalizer is now the suffix already inflected for inherent gender, and not just the gender morpheme:

(4) \textit{The syntax of ‘other-suffix’ nominals}


\textsuperscript{11} In fact, suffixes have been previously analysed as involving head movement (Babko-Malaya (1999), among many others). Yet, see fn. 28 for some problems that such an analysis raises.

plam- ŪK-út

flame- ŪK.MASC.SG-the.MASC.SG

‘the flame’

\[\text{deistv-IE-to}\]
\[\text{act-IE.NEUT.SG-the.NEUT.SG}\]
‘the action’

We have already seen in section 2.2.3 that all gender nouns and the majority of the ‘other-suffix’ nouns denote objects, abstract concepts, agents, places, results of actions, etc. There are some cases of ‘other-suffix’ nominals, especially those formed by the suffixes –BA, -EŽ, -ITBA, which can also denote events.\(^{12}\) One way to account for this fact is to suggest that it is the suffix that brings about the eventive reading of these nouns, as proposed by Georgiev (1999).\(^{13}\) We have other evidence in favor of this suggestion, obtained from the derivation of these nouns, that may help us explain their eventive interpretation. In my view, it is the presence of a verbal thematic vowel that is responsible for it, rather than the presence of the suffix itself.\(^{14}\) To see how this may be so, let us

\(^{12}\) Reichenbach (1948) claims that ‘happen, take place, occur’ can only be predicates of events. Thus, whenever a nominalization appears as the subject argument of these predicates, it is event-denoting in my analysis.

\(^{13}\) Georgiev (1999) claims that suffixes do play a role in the eventivity nature of nominalizations. For him, suffixes like –BA/-ITBA and –EŽ have highly eventive semantics. Thus, the nouns derived by these suffixes could mean immediate, repeated or durative actions. Additionally, he proposes that suffixes may substantivize the action denoted by the verb to different degrees, the most eventive of which is the process –NE suffix.

\(^{14}\) In fact, Svenonius (2004a) makes a similar proposal. For him, nominalizations may be formed on ‘verbal roots’ (i.e. roots conventionally considered to be verbal) or verbal stems, including the thematic
take a noun such as *kraž-BA ‘theft’. The root of this noun is √KRAD and not √KRAŽ. The final consonant of the root [D] is palatalized to [Ž]. To account for palatalization, I follow Svenonius (2004a: 180), who claims that consonant mutation is an important rule of Slavic morpho-phonology. It consists of palatalization of the final consonant of the root before certain suffixes. It has been argued that consonant mutation in the root can reveal the underlying presence of a vowel, which is deleted on the surface (see Halle (1963) and Flier (1972) for Russian and Scatton (1983) for Bulgarian, among others).15 We may thus suppose that final consonant palatalization in the nominal kraž-BA ‘theft’ reveals that a vowel deletion process has taken place. Following Svenonius (2004a), I suggest that the deleted vowel is the thematic vowel. The root √KRAD is first “verbalized” by a thematic vowel. When the nominalizer –BA attaches to the newly formed verbal stem, i.e. the root plus thematic vowel, the vowel is eliminated and the final [D] of the root softens to [Ž], which indicates vowel reduction. In other words, it is not merely the suffix that brings about the eventive nature of these nouns, but the thematic vowel itself.16

As for the eventive ‘other-suffix’ –EŽ and –ITBA nominals, we may reanalyze them as containing a thematic vowel as well. Such suffixes may be further decomposed as containing a thematic vowel (-e, -i) and a suffixal element (-Ž and –TBA). The difference between these nouns and the –BA nominals briefly discussed above is that, in this instance, the thematic vowel is overt (-e, -i) whereas in the former case it is covert. Recall that palatalization of the final root consonant signals its underlying presence. Again, it is the thematic vowel and not vowel. When formed directly on the root, they tend to refer to objects or results of events. If, on the other hand, they are formed on the stem, then they tend to refer to events.

Svenonius (2004a) accounts for this fact by a more general morpho-phonological rule in Slavic, the regressive Vowel-Vowel (henceforth VV) simplification. That is, he proposes that, for a consonant to mutate, there need to be two vowels. For him, certain underlying sequences of two vowels result in palatalization of the preceding consonant. Palatalization takes place when one of the vowels is eliminated.

The fact that suffixes cannot bring about eventivity on their own is revealed by their ambiguous interpretation. There are cases where the same suffix may form result/object nominals and cases when it derives an event noun. Let us consider the suffix –BA. When it attaches to a root as in √mol-BA (request) the noun denotes an object. If, on the other hand, it attaches to a verbal stem as in kraž-BA ‘sale’ we obtain an event interpretation. Thus, (i) is grammatical but (ii) is not:

(i) kraž-BA-ta stana v 3 chasa (the sale occurred at 3 o’clock)
(ii) *mol-BA-ta stana v 3 chasa (*the request occurred at 3 o’clock)

The same holds for certain English suffixes such as -(t)ion (see Grimshaw 1990).
the suffix that accounts for the eventive nature of such nominals. A possible syntactic derivation of these nouns is represented in (5) below:

(5) Eventive ‘other-suffix’ nominals (kraž-Ø-BA-ta ‘the sale’, pal-E-Ž-ǔt ‘the arson’, kos-I-TBA-ta ‘the mowing’, etc.):

```
DP
   D'    nP
   D    -ęt (1)
       -ta (2, 3)
           n'
               VP
                   V'
                        V
                            -E (1)
                            -I (2)
                            -Ø (3)
                            √god (1) ‘god-e-ž’ (engagement)
                            √kos (2) ‘kos-i-tba’ (mowing)
                            √krad (3) ‘kraž-Ø-ba’ (theft)
```

From the representation in (5) we see that the derivation of these nouns is again obtained by the movement of maximal projections from Spec to Spec. In (6) below I present the movement operations observed in (5) with their corresponding traces:

(6) Movement operations: god-e-ž-ǔt ‘the engagement’

```
<table>
<thead>
<tr>
<th>Movement</th>
<th>Expression</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>[vP √god-]</td>
</tr>
<tr>
<td></td>
<td>(ROOT MERGING WITH V)</td>
</tr>
<tr>
<td>b.</td>
<td>[VP [vP √god-] j [E] t]</td>
</tr>
<tr>
<td></td>
<td>TO [SPEC, VP]</td>
</tr>
<tr>
<td>c.</td>
<td>[nP [VP [vP √god-] j [E] t] j [∅] t]</td>
</tr>
<tr>
<td></td>
<td>TO [SPEC, nP]</td>
</tr>
<tr>
<td></td>
<td>TO [SPEC, DP]</td>
</tr>
</tbody>
</table>
```
If we compare the representation in (5) with those in (4) above, we can see that there is an additional layer in the derivation of these nouns, the VP projection. I consider V a “verbalizer” that contains the thematic vowel.\(^{17}\)

In conclusion, there are two ways of forming what I have labelled as ‘other-suffix nominals’:

(i) Either by overt suffixation as in (2) above where the suffixes [-BA, -KA, -IE, (E)Ž, etc.] carry an inherent gender marker, or

(ii) By simply adding a gender marker to the root or stem as represented in (1) above.

In the case of feminine or neuter nouns, the gender marker is overt and realised by the suffixes [-a] or [-o/-e] respectively. In the case of masculine nouns, the gender marker is covert [Ø] as in (1a). Yet, in both cases, what nominalizes the root (or stem) is either the gender morpheme (be it covert or overt) or an overt suffix with inherent gender.

As for the interpretation of these nouns, the majority of them denote objects or results. Yet, we have also seen that they may denote events, a fact that I can explain by considering that the presence of a thematic vowel additionally “verbalizes” the structure. My analysis supports Svenonius’ (2004a) claim that verbal thematic vowels play a crucial role in the interpretation of nominalization processes.

\(^{17}\) The syntactic object ‘V’, labeled as “verbalizer” here, is headed by the thematic vowel(s) in my analysis. It should not be confused with the “small v”. The specifier of “small vP” will host the agent/causer argument (see fn. 37, 38).
4.1.2. “Voice –IE” nominalizations

The second type of nominalization in Bulgarian is what I label “Voice –IE nominals”. These are the expressions formed from past passive participial verbal bases.

We have already mentioned that Bulgarian grammarians claim that there are two types of nominalizations in Bulgarian, process –NE nouns and result -NIE nouns (Pashov (1999), Georgiev (1999), Steinke (1999), DV&M (2006), Gradinarova (1999), Popova (2006), among others). Contrary to previous assumptions, I claim that all the cases of the traditionally labelled –NIE nominals are, in fact, instantiations of –IE nouns. In my analysis, the –IE suffix attaches to the past passive participial base of both perfective and imperfective verbs. Such a claim is diachronically sound. Vinogradov and Svedova (1964) state that, diachronically, -NIE nominals in Russian are byproducts of passive verbal formation, with the suffix –NIE having been added to the passive participle in an unrestricted way. If the passive participle was non-existent, a dummy passive morpheme was added to the verbal stem in order to keep the nominalization pattern consistent. In addition to the diachronic facts, we also have syntactic evidence obtained from the derivation of these nouns that clearly shows that they are formed from past passive participial bases.

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18 Recall that -NIE nominals are traditionally considered to be derived from both perfective and imperfective verbal bases, in contrast to –NE nominals which are formed exclusively from imperfectives ones (Pashov, 1999).
19 Passive participles can be formed from both perfective (i) and imperfective (ii) verbal bases in Bulgarian:
   (i) prodade-n
   sell.PF-n.PASS.PRT
   ‘sold, which is sold’
   (ii) prod-ava-n
   sell-ava.IMPF-n.PASS.PRT
   ‘sold, which was being sold’
20 Concerning this fact, there is a small group of –NIE nominals in Bulgarian that cannot be analysed as being derived from past passive participial bases due to the fact that the corresponding verb has no such participle. Additionally, they cannot be instantiations of neuter ‘other-suffix’ –IE nominals in the same way as deistv-IE (action) is (see 4c). A possible explanation is the fact that these nouns have entered Bulgarian directly through Russian. In fact, all of these nominalizations do exist in Russian. Bearing in mind that the –NIE suffix has entered Bulgarian through Russian, this is plausible. Some examples of such nouns are padenie ‘fall/disgrace’, priznania ‘confession’, kolebanie ‘hesitation’, bdanie ‘watch over’, sūzdanie ‘creation’, napreženie ‘tension’, mūchanie ‘silence’, sūvpadenie ‘coincidence’, sūmnenie ‘suspicion’, sūstojanie ‘state/status’, and tūrpenie ‘patience’.
The past passive participles in Bulgarian are formed by either a –T suffix or an –N one. The –T suffix is found in a limited number of verbs, all from the first conjugation. An example is given in (7):

(7) a. pija > pi-h > pi-t
    drink > drink-h.AOR.1PS.SG > drink-T.PASS.PRT
    drink > drank > drunk

    a’. pi  -t  -ie  -to
    drink-T.PASS.PRT-IE.NEUT.SG-the.NEUT.SG
    ‘the drink’

    b. brășna > brășna-h > brășna-t
    shave > shave- h.AOR.1PS.SG > shave-T.PASS.PRT
    shave> shaved > shaved

Other verbs form the past passive participle with the suffix –N. An example is provided in (8) below:

(8) a. pisha > pisa-h > pisa-n
    write > write-h. AOR.1PS.SG > write-N.PASS.PRT
    write > wrote > written

    a’. pis  -a  -n  -ie  -to
    write-a.TH.VOW-N.PASS.PRT-IE-the.NEUT.SG
    ‘the writing’

    b. cheta > cheto-h > chete-n
    read > read- h.AOR.1PS.SG > read-N.PASS.PRT
    read > read > read

21 See fn. 39, chapter 2.
22 The passive past participle is formed from the aorist stem of verbs. The aorist suffix –h is deleted and the participial suffix –T/-N is added.
When a nominal is derived from a –T participial base, we observe that the –T suffix is preserved, as in (7a’). If the participle is formed by an –N suffix then the nominalization takes –N, as in (8a’). My analysis of the facts supports the claim that these nouns do in fact derive from participial bases and not simply from perfective or imperfective aorist stems as has traditionally been assumed.

Additional support for such a claim is provided by the interpretation of these nouns. The past passive participle is used to express the result that the action has on the object (Pashov (1999: 205)). In the nominalization process, this idea is preserved in the majority of cases. Thus, a participial -IE nominalization such as ‘pis-a-n-ie-to’ (see 8a’) means ‘writing, the thing that has been written’, izobret-e-n-ie-to ‘invention, the thing that has been invented’, etc. What is more, almost all –IE nominals denote the results of actions (or certain abstract concepts such as vüzpît-a-n-ie ‘upbringing’) as opposed to the –NE nominals, which denote processes (DV&M (2006), Pashov (1999), Georgiev (1999), Popova (2006)). There is also a small group of event-denoting –IE nouns, but they have an exceptional character and will not be of my particular concern in the present context.23

Still further evidence for the participial derivation of –IE nouns is obtained from transitivity-related phenomena. Passive past participles obtain mainly from transitive verbs, which take an internal argument.24 A syntactic representation of

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23 We can account for this fact historically. The –NE suffix is typically Bulgarian. To the best of my knowledge, it is found in no other Slavic language. This suffix appears in Bulgarian later than –NIE through colloquial speech (in the 19th century, as claimed by Gradinarova 1999). This leads us to suspect that at former stages, when only –IE nominals existed (or Rappaport’s (2000) –N/–T or the traditional –NIE nouns), both processes and results could be denoted by them, as the unambiguously process –NE nouns were still lacking. In fact, this situation holds for Macedonian and Czech, for example, where the –NIE/–NE contrast does not exist, since there are only –NIE noun. Thus, –NIE nouns in these languages can denote both results and processes (the same holds for the rest of the Slavic languages, which lack the –NE pattern as well). As for Bulgarian, we may further speculate that once the –NE suffix enters the language, a distinction can be made between the process interpretation of –NE nouns and the preferable result interpretation of –(N)IE nouns. The fact that there are some –IE nominals that denote (atalic) events (such as gonenie ‘persecution’) could be due to the fact that these nouns probably have preserved their double interpretation from previous stages of development in Bulgarian before the –NE nouns entered the language. Yet, this is an exceptional case as the majority of –(N)IE nominals denote results or abstract concepts.

24 There are cases of intransitive past passive participles. However, they are very limited. An example is given in (i):
their derivation is offered in (9a) with the relevant step-by-step movement operations involved, as in (9b) below:

(9) Pis -a –n -ie -to

write-a.TH.VOW-N.PASS.PRT-IE-the.NEUT.SG

‘the written (thing), the writing’

(i) vůzgordja-h > vůzgordjia-n chovek
become proud-h. AOR.1PS.SG > become proud-N. PASS.PRT man
became proud > a man who is proud/ a proud man

Similar cases of intransitive past passive participles are zasmjan ‘smiling’ (like ‘who is smiled’), usmihnat ‘smiling’, zagržen ‘preoccupied’, zamislen ‘thinking’, vůzbuden ‘excited’, otdaden ‘dedicated’, among a few others. Yet, these forms would not result in an –IE derived nominal due to the fact that another suffix is attached when they are nominalized, namely, the suffix –OST/(-EST) used for the derivation of abstract deadjectival nouns (mlad ‘young’ – mlad-OST ‘youth’, gord ‘proud’ - gord-OST ‘pride’, etc). An example is given below:

a. zagržen > zagržen-OST
   preoccupied . PASS.PRT > preoccupied. PASS.PRT-OST
   preoccupied > preoccupation (the state of being preoccupied)

b. vůzbuden > vůzbuden-OST
   excited- PASS.PRT > excited- PASS.PRT-OST
   excited > ‘excitedness’ (the state of being excited)

Due to the scarcity of examples of intransitive past passive participles and to the fact that they are nominalized by the abstract suffix –OST and not -IE, I will not examine them furthermore in this study. It could be claimed that they denote states or certain abstract concepts in the same way that deadjectival nouns do. Additionally, we may also suggest that examples like those in (a) and (b) above are not intransitive past passive nominalizations but a case of adjectival passives, i.e. intransitive past passive participles which have become first adjectivized and then nominalized by adding the –OST/-EST adjectival suffixes.
b. Step-by-step movement operations:

1. Verbalization: Root merging with V in Spec, VP:

2. [VP, √P] moves to Spec, VoiceP
3. \([\text{VoiceP, VP, } \sqrt{P}]\) nominalizes by moving to Spec, nP

\[
\begin{array}{c}
\sqrt{P}_1 \\
\sqrt{P}_2 \\
\sqrt{P} \\
\sqrt{\text{PIS}}
\end{array} \rightarrow
\begin{array}{c}
\text{VP}_2 \\
\text{VoiceP}_3
\end{array} \rightarrow
\begin{array}{c}
nP \\
n'
\end{array}
\]

\[\sqrt{P} \rightarrow \sqrt{\text{V}} \rightarrow \text{Voice'} \rightarrow n' \rightarrow \text{D'} \rightarrow t_3 \rightarrow \text{D} \rightarrow t_4 \rightarrow t_5 \rightarrow t_6 \rightarrow t_7 \]

4. \([\text{nP, VoiceP, VP, } \sqrt{P}]\) attaches the definite article by moving to Spec, DP

\[
\begin{array}{c}
\sqrt{P}_1 \\
\sqrt{P}_2 \\
\sqrt{P} \\
\sqrt{\text{PIS}}
\end{array} \rightarrow
\begin{array}{c}
\text{VP}_2 \\
\text{VoiceP}_3
\end{array} \rightarrow
\begin{array}{c}
nP_4 \\
n'
\end{array} \rightarrow
\begin{array}{c}
\text{DP} \\
\text{D'} \rightarrow t_3 \rightarrow \text{D} \rightarrow t_4
\end{array}
\]

From (9) we see that thematic vowels (‘-a’ in this case) are “verbalizers” according to my analysis; that is, they turn a categoriless root into a verbal stem.\(^{25}\) In my view, this is a necessary step to take in order to enable the participial morphemes –N/-T to be further licensed and joined up. In the previous section we saw that thematic vowels give an eventive interpretation to the derived nominal.

\(^{25}\) Svenonius (2004a) makes a similar proposal for thematic vowels in the Slavic languages which he calls ‘theme vowels’. In his analysis (and in mine too), the thematic vowel is what makes a root a verbal stem. Similar to Marantz’s (2001) proposal, a root is categoriless unless it combines with a categorical head (the thematic vowel in my analysis here).
In the case of Voice –IE nominals this is not the case. Although -IE nominals contain a thematic vowel, in the majority of cases they denote results of events or objects.\footnote{See fn. 23 for a possible explanation of event-denoting Voice –IE nominals which have an exceptional character.} This is due to the presence of the participial morpheme. Participial suffixes, in my analysis, are Voice heads (see Cinque (1999)\footnote{Following Cinque (1999:101-103), all past participles of active and passive verbs are initially generated under VoiceP.} and Ferrari (2006)) that have the effect of turning a verbal stem into a participle, thereby assigning a resultative meaning to the derived noun. In other words, it is the participial suffix –N/-T that neutralizes the otherwise eventive denotation that the thematic vowel would assign. The fact that Voice is hierarchically up in the structure explains why the participle scopes over the thematic vowel, bringing about the result interpretation to the corresponding nominalization. The present analysis further supports the claim that these nouns are really formed on past passive participial bases. This is the reason I label these nouns “Voice –IE nominals”.

As in my previous analyses, the derivation proceeds by XP raising to Spec positions. The sequential order of successively merged syntactic objects for the noun pisanieto ‘the writing’ in (9), for example, is obtained as shown in the above representation: by four successive phrasal movements in a similar fashion as for the ‘other-suffix’ nouns already examined above in (9b).\footnote{Following Cinque (2000, 2005), I consider phrasal movement only. It has been suggested that head movement poses some problems. Mahajan (2000), for example, claims that head movement (i) is counter-cyclic, (ii) complicates the notion of c-command because a raised head does not c-command its trace in a straightforward manner, and (iii) does not affect meaning, in contrast to XP movement. Cinque (2000) argues for XP movement exclusively within DP. For him, the order of syntactic objects can be derived by successive leftward movement of larger and larger XPs. The same remnant movement (but without pied-piping the containing phrase) may be involved in the traditionally considered N-to-D raising. Similar proposals for phrasal movement are found in the works of Kayne (1994, 2000, 2001, 2002, 2003), Koopman and Szabolcsi (2000), and Ferrari (2006).} Recall from section 4.1.1 that any movement up to Spec, nP is syntactic whereas the movement of nP to Spec, DP is post-syntactic. This is so because there is no external Genitive argument projected in the nominalization in (9).

Having discussed the main characteristics of the basic derivation of the morpheme sequences for Voice –IE nominals, I will now proceed to a discussion
of the syntactic analysis of the traditionally labelled ‘process’ –NE nouns in
Bulgarian.

4.1.3. –NE nominals

We have seen in section 2.2.1 that –NE nominals are unanimously labelled
‘deverbal’ nominals in the Bulgarian linguistic tradition (Pashov (1999), Georgiev
(1999), Steinke (1999), Gradinarova (1999), and DV&M (2006), among many
others). All grammarians agree on the fact that these nouns denote processes, as
they are formed exclusively on imperfective verbal bases. Yet, I will show in this
section that there is more diversity than is generally acknowledged in this type of
nominalization and that a more fine-grained analysis is needed than those
previously offered in the literature. More specifically, I propose that –NE nominals
can be divided in two major groups:

(10) –NE nominals:

a. Gerundive constructions
b. Derived nominal constructions

I will start the discussion with the first group (10a).

In Bulgarian, there is no such form as a “typical” gerund. Nevertheless,
bare –NE forms can be used as gerundive-like constructions in this language.  

Bulgarian –NE gerundive forms do not have all the functions of the English or Romance gerunds but
only that exemplified in (11a). There is, though, another form in Bulgarian, the so called Verbal Adverb
(“deeprichastie”) that can take over another function of a gerundive construction. The Verbal Adverb is
used to denote a secondary action simultaneous to the state of affairs denoted by the verbal predicate. It is
formed only from imperfective verbs with the suffix –iðki (-йки) attached to their aorist stem. These
forms can only be used when the subject of the primary action and that of a secondary one coincide. An
example is given in (i):

(i) Detsata tichaha iz dvora, smee-jki se i vdiga-jki strashen shum.
    'The children were running in the yard, laughing and
    making a terrible noise'
As denoted by its traditional name ‘deeprichastie’ (dee/active-participle), this form has more in common
with participles (i.e. the active present participle) than with gerunds. However, though English and
Romance gerunds, for example, may have a participial function, the Bulgarian –NE gerunds cannot. This
shows that languages may use different morpho-syntactic devices for one and the same function, which is
Like verbal gerunds, bare –NE constructions take a direct object without any preposition, as we can see in (11a) below. These particular constructions do not license a definite determiner and never allow for the article to be attached to them. In (11b) we see that the construction is ungrammatical if the definite article appears at the right of the NE-formation:

(11) a. [o-chak]-va-ne velik-a-ta promjana
    wait-va.IMPF-NE great-FEM.SG-the.FEM.SG change.FEM.SG
    ‘waiting the great change’

b. * [o-chak]-va-ne-[t]o velik-a-ta promjana
    *wait-va.IMPF-NE-the.NEUT.SG great-FEM.SG.the.FEM.SG change.FEM.SG
    *the waiting the great change

The behaviour of the examples in (11a, b) allows us to suggest that the NE-construction in (11a) behaves in the same way as verbal gerunds in languages like English. These types of constructions should now be compared to those of type (12) below, which are not verbal gerunds but rather true derived nominals, similar to what Grimshaw (1990) characterizes as complex event nominals in English. Not only do constructions of type (12) appear with the determiner, but the direct object must also be introduced by the preposition na ‘of’ (e.g. “The waiting of [= for] the great change”). Formations of the types shown in (12) are the primary interest of this section and I offer more details on this type of construction in what follows:

in fact no surprising news. In relation to this claim, there is also another gerundive function of the Bulgarian –NE constructions as presented below:

(ii) a. na vliza-NE b. predi/sled trugva-NE
   on entering before/after going

DV&M (2006) claim that –NE nominals in Bulgarian can be used adverbially, as complements of prepositions (see § 3.3.1). However, cases like (ii) above cannot be considered nominalizations but rather should be analysed as verbal formations taking over either a gerundive function like the English ‘on coming’, or an infinitival one like the Spanish ‘al entrar’.

30 I use the abbreviation IMPF to refer to the (secondary) imperfective suffix –va (or one of its allomorphs –a-, -ja-, -ava-, -java-, -iva-).
(12) [o-chak]-va-ne-to *(na) velik-a-ta promjana
wait-va.IMPF-NE-the.NEUT.SG of great-FEM.SG -the.FEM.SG change.FEM.SG
‘The waiting of [= for] the great change’

Traditionally, -NE nominals have been claimed to denote processes and never results (as opposed to ‘-NIE’ or those I have labelled “Voice –IE” nouns). However, contrary to previous assumptions, I will show that the process reading is not the only one available for such nominalizations. Though it is always available in every –NE nominal, there are cases when –NE nouns denote objects as well, as shown in (13):\(^{31}\)

(13) **Object-denoting –NE nominals:**\(^{32}\)

a. **Transitive –NE nouns:**

(i) jad-e-ne pi-e-ne im-a-ne
eat-e.TH.VOW-NE drink-e.TH.VOW-NE have-a.TH.VOW-NE
‘meal/eating’ ‘drink/drinking’ ‘possession/having’

(ii) **Resultative prefixed –NE nominals:**\(^{33}\)

\[s\text{-puk}\]-va-ne \[o\text{-drask}\]-va-ne
\[S\text{-crack}\]-va.IMPF-NE \[O\text{- scratch}\]-va.IMPF-NE
‘puncture/cracking’ ‘scratch/scratching’

b. **School disciplines:**

pe-e-ne smjat-a-ne
sing-E.TH.VOW-NE calculate-A.TH.VOW-NE
‘singing’ ‘arithmetic/calculating’

---

\(^{31}\) Gradinarova (1999) gives many examples where –NE nominals have ‘concrete’, or, in her terms, ‘non-verbal’ uses. Yet, her primary concern is the semantics of –NE and –(N)IE nominalizations in Russian and Bulgarian, thus paying no attention to their syntactic derivation.

\(^{32}\) All these examples are taken from Gradinarova (1999).

\(^{33}\) Examples taken from Gradinarova (1999: 118).
c. **Intransitive result –NE nouns:**

vjar-va-ne [za-bol]-java-ne
believe-va. IMPF-NE become ill-java.IMPF-NE
‘belief/believing’ ‘illness/becoming ill’

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d. **Impersonal result –NE nouns:**

ům-va-ne
dawn-va.IMPF-NE
‘dawn, daybreak/dawning’

From the glosses of the examples above we can see that though –NE nominals may denote some kind of object or result, the process reading is always available (marked in italics in the glosses). This fact can be explained in historical terms. Gradinarova (1999) claims that the –NE suffix entered Bulgarian in the 19th century when the –NIE suffix was still very productive. In the 20th century, however, it ceased to be productive. This may suggest that as the –NIE suffix faded, –NE took over its functions. Thus, when a new result noun was derived, the suffix that served this function was –NE (from the 20th century onwards). –NE always preserved its traditional process denotation though it could develop a secondary result meaning when the context allowed such reading. This observation is also supported by Gradinarova’s (1999) claim that the non-verbal or result meanings of –NE nominals are newly formed, i.e. they appeared once the old –NIE suffix had ceased to be productive.

-NE constructions are always formed on imperfective verbal bases (see section 2.2.1). This fact allows me to propose the syntactic representation given in (14):

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34 Note that something similar happens in English too. The Bulgarian –NE suffix corresponds to the English –ING in various respects: (i) they can form gerunds; (ii) they can always derive complex event nominals in Grimshaw’s (1990) terms; and (iii) sometimes, they can also denote objects. Borer (2003) comments on cases of object-denoting –ING nominals such as ‘building’, or ‘drawing’, which contradict the traditional assumption that the English –ING nouns are exclusively event-denoting.

35 A close relationship between –NE nominals and the past passive participle is suggested by Nandris (1959) and Stoyanov (1966). Yet, to claim that these nouns derive from the past passive participial base, like their ancestor, the -(N)IE nominals, would wrongly predict that intransitives will not nominalize, and that the participial morpheme, be it –T or –N, would be preserved in the nominalization. Neither of the
From the representation above we see that the lexical category shows the prefix [Na-], which indicates that we have a stem LP and not simply a root. We could arguably say that the root is “verbalized” in the Lexicon and then enters the Numeration as a stem. If so, there might be no verbalizing projection (VP) present in the structure. This solution would also allow for the imperfective suffix –ava to attach to the LP stem after LP movement. For the sake of uniformity and consistency with some of our previous representations, we could also regard a VP

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two predictions holds. Bulgarian –NE nominals can be formed from any verb, whether transitive (see 13) or intransitive (see 13c), and the –T suffix never appears, as shown in (i):

(i) brūšna ‘shave’ > brūšn-a-T ‘shaven’ > brūšn-e-NE ‘shaving’
Additionally, such a claim would also wrongly predict that –NE nouns, if derived from participles, could be formed on both perfective and imperfective bases. However, these nouns can be never formed on perfective bases. Thus, –NE nouns cannot be participial nominalizations, unlike –IE nouns, which can be, as we have seen.
as headed by a phonologically null thematic vowel merges with LP, as shown above. Be that as it may, in order to account for the fact that these nouns are derived from imperfective verbal bases only, I derive the secondary imperfective morpheme ‘-ava’ as the head of the functional projection Aspect Imperfective Phrase (AspP).\textsuperscript{36} I suggest that it is the imperfective suffix, overt (see (14)) or covert (see (15) below), that is the syntactic object that accounts for the availability of the process reading of these nouns. In (15) we see that sometimes the imperfective suffix may not be overtly expressed:

\begin{equation}
(15) \quad \text{pis-a-ne-to} \quad \text{na pisma}
\end{equation}

\begin{equation}
\text{write-a.TH.VOW-NE-the.NEUT.SG of letter-PL}
\end{equation}

\begin{equation}
\text{‘the writing of letters’}
\end{equation}

\textsuperscript{36} Remember that in Bulgarian and all Slavic languages verbs can have both perfective and imperfective forms. In order to make a perfective form imperfective, we add the secondary imperfective suffix ‘-va’ or one of its allomorphs (see § 5.1 for more details). Svenonius (2004a: 181) regards –(a)va and its variants –ova, -uva, etc. as a thematic vowel. Yet, in my analysis, these secondary imperfective suffixes are derived as heads of Asp Imperfective Phrase (henceforth, AspP). A similar proposal is made by Isratkova (2004), who claims that the secondary imperfective morpheme ‘–va’ is the overt expression of imperfectivization derived in an Asp node. Ramchand (2004), on the other hand, suggests that the secondary imperfective morpheme is the instantiation of the same Aspect head, which otherwise expresses perfectivity.
In (15) we see that Asp$^1$P, though present, is not overtly expressed. This is due to the fact that the verb ‘pisha’ (write) is primary imperfective, i.e. it needs no secondary imperfective suffix to make it imperfective. This may further suggest that the unmarked option is the imperfective, which is syntactically present but phonologically null (like, for example, masculine gender, singular number, or VP in (14) above). Thus, an imperfective projection with a phonologically null head is possible.

As for the morphological order of suffixes in these nouns, recall once more that I propose (following Cinque (2000, 2005); Mahajan (2000) and Ferrari (2005)) that only phrasal movement is possible (see fn. 28). Thus, the lexical projection $\sqrt{P}$ first moves to Spec, VP and the thematic vowel (the phrasal head plus a bound morpheme) attaches to the raised root at the morphophonological component. The same procedure is then applied, moving successively towards the upper Spec positions. The complex [VP, $\sqrt{P}$] moves to Spec, Asp$^1$P headed by the imperfective aspectual morpheme, which will also morphophonologically attach to this stem. The newly formed complex [Asp$^1$P, VP, $\sqrt{P}$] raises further up, to
Spec, nP, where it gets “nominalized”. This is the category headed by the nominalizing element –NE. Finally, the whole [nP, Asp¹P, VP, √P] structure moves to Spec, DP so that the definite article, also a suffix in Bulgarian, will appear to its right. Recall from section 4.1.1 that this is a post-syntactic movement operation required by morphological wellformedness conditions where the definite article must always appear in the second position DP, thus internally obeying Wackernagel’s Law.

A step-by-step representation of the movement operations involved in (15), with their corresponding traces, is provided in (16) below:

(16) Bracketed step-by-step representation:

a. \([√P pis-] \) (ROOT MERGING WITH V)

b. \([VP [√P pis-], [-A] t] \) TO [SPEC, VP]

c. \([AspIP [VP [√P pis-], [-A] t], [O] t] \) TO [SPEC, Asp¹P]

d. \([nP [AspIP [VP [√P pis-], [-A] t], [O] t], [-NE] t] \) TO [SPEC, nP]

e. \([DP [AspIP [VP [√P pis-], [-A] t], [O] t], [-NE] t, [-NE] t] \) TO [SPEC, DP]

For ease of exposition, I provide the same step-by-step movement operations from (16) but represented by syntactic trees in (17) below:
(17) Step-by-step movement:

a. \[ \sqrt{\text{pis}}- \] (ROOT MERGING WITH V)

b. 

c.
The derivation above, as well as other derivations with relatively similar characteristics, poses an apparent problem for the XP raising hypothesis for suffixation that I am adopting in this study. The apparent problem is that of accounting for the right sequence of morphemes when lexical heads select, or license, complements. Note that the step-by-step derivation represented in (17) above shows that the lexical root √pis- ‘write’ may license the DP complement (na) pisma ‘of letters’, which is, of course, also moved up in the first raising cycle together with the √P that immediately dominates the DP. Such a DP keeps remnant raising with its √P host in each of the subsequent XP raising operations (see (17a-d) above). The suffixes -a-Ø-NE-to must stay attached to the root √pis-, the construction resulting in the final sequence pis-a-Ø-NE-to na pisma (lit: ‘writing-the of letters’, i.e. ‘the writing of letters’).

After the first raising operation, the derivation cannot result in the impossible sequence *pis- na pisma-a-Ø-NE-to (something literally similar to *write- of letters-ing-the), which could hypothetically have resulted if the suffixes attached to the DP complement and not to the root by successive XP raising.

This apparent problem is taken care of under the theory of Phases proposed in Chomsky (2001 et seq.), according to which Spell-Out operations apply cyclically. A Phase is a coherent and independent (phonological and semantic) unit and constitutes a domain on which the Spell-Out operation applies, “sending”
structure chunks to the PF or LF components. In the example under discussion, the DP complement of the root $\sqrt{\text{pis}}$- (or, for that matter, any DP or PP complement of a lexical head) constitutes a Phase and is therefore “invisible” for any morphosyntactic operation, as the derivation of the nominal structure proceeds up to DP. Therefore, the only possible obtainable sequence is the grammatical \textit{pis-a-Ø-NE-to na pisma} and the ungrammatical one is absolutely ruled out under the Phase Theory hypothesis.

4.1.4. A brief note on the position of the external argument

For the sake of completeness, this subsection briefly describes my suggestions with respect to the functional projection that hosts the external argument. The hypothesis adopted in this study that there is no head movement but only XP movement (Cinque (2000, 2005), Mahajan (2000), Ferrari (2005)), raises some problems when we consider the derivation of nominalizations that have external arguments. In this section, I will suggest a tentative solution to some of these problems.

An argument bearing the Agent or Causer theta role will merge with a “small” vP (Chomsky 1995 et seq.),\textsuperscript{37} as shown in the structure in (18) below:

(18) a. [NA-kaz]-va-ne-to na uchenits-i-te ot Ivan
    punish-va.IMPF-NE-the.NEUT.SG of student-PL-the.PL by Ivan
    ‘The punishing of the students by Ivan’

b. Ivan-ov-o-to [NA-kaz]-va-ne na uchenits-i-te
   Ivan-ov.GEN-o.NEUT.SG-the.NEUT.SG punish-va.IMPF-NE of student-PL-the.PL
   ‘Ivan’s punishing of the students’

\textsuperscript{37} Kratzer (1994a) proposes that Agents are derived in Spec, VoiceP. Recall that, in my analysis, this position is occupied by the moved [VP, LP] structure in Voice nominalizations (see 9) where the suffixal participial morpheme $-N/-T$ is attached to the moved stem. Roeper (2004), on the other hand, derives Agents (and Causers) in Spec, Voice-EventP. I do not assume the presence of any Eventive Phrase. For me, event semantics is licensed by syntactic structure, more precisely, by the presence of thematic vowels and imperfective aspectual morphemes.
From the derivation in (18) we see that Ivan merges with vP.\textsuperscript{38} For it to be able to be interpreted as the Agent (Causer), we should have either (i) \textit{ot}-NP ‘by-NP’ insertion (18a), or (ii) Genitive assignment by the suffix –\textit{ov},\textsuperscript{39} corresponding to English [’s] as in (18b).

\textsuperscript{38} In fact, the vP projection is needed not only to host the Agent/Causer in its specifier position but also to account for the causative-inchoative alternation. That is, in Bulgarian, and in many other languages, there are causative morphemes which make a verb causative. Consider the examples below:

(i) (a) Az \textbf{pjah} dva chasa  \hspace{1cm} (b) Az \textbf{RAZ-pjah} petel-a  
I sang two hours \hspace{1cm} I CAUS-sang cock-the.MASC.SG

‘I sang for two hours’ \hspace{1cm} ‘I made the cock sing’

(ii) (a) Az se \textbf{smjah} dva chasa  \hspace{1cm} (b) Az \textbf{RAZ-smjah} bebe-to
I se-REFL laughed two hours \hspace{1cm} I CAUS-laughed baby-the.NEUT.SG

‘I laughed for two hours’ \hspace{1cm} ‘I made the baby laugh’

From the examples above we see that if we add the causative prefix ‘RAZ-’ to a verb we causativize this verb. Additionally, the insertion of this morpheme may also make an intransitive verb transitive (iib), yet the causative reading is present too. Thus, we may tentatively suggest that causative morphemes, in this case the prefix ‘RAZ-’, constitute the head of small vP. In cases where the \textit{v} head is occupied by a causative morpheme, the external argument, projected in the specifier of vP, is interpreted as the Causer.

\textsuperscript{39} The genitive NP is formed by a personal noun such as Ivan to which the genitival suffix –\textit{ov} (for masculine personal nouns) or –\textit{in} (for feminine) is attached:

(i) Masc: Ivan > Ivan-\textbf{ov} (Ivan’s) \hspace{1cm} (ii) Fem: Penka > Penk-\textbf{in} (Penka’s)
Let us first consider the derivation of (18a), i.e. when the external argument is introduced by an *ot*-NP (by-NP). The derivation in (18a) results from four XP movement operations. First, the stem LP enters the derivation and then moves to Spec, VP. Then, the whole structure [VP, LP] further moves to Spec, Asp¹P so that the imperfective morpheme –va, a suffix, would surface to its right. The newly formed complex [Asp¹P, VP, LP] then moves to Spec, nP where it gets nominalized by attaching the nominalizer head –NE, a suffix as well. This explains why –NE would correctly surface on the right of the structure. Finally, the definite article, a suffix too, attaches to the already nominalized structure [nP, Asp¹P, VP, LP] once this complex has previously moved to Spec, DP. A more detailed representation is provided in (19) below:

(19) **The external argument: *ot*-NP (by-NP):**

[NA-kaz]-va-ne-to na uchenits-i-te ot Ivan
punish-va.IMPF-NE-the.NEUT.SG of student-PL-the.PL by Ivan
‘The punishing of the students by Ivan’

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This genitival suffix agrees in gender with the noun it modifies. If the noun it modifies is masculine, then no further gender suffix is attached to the genitival suffix (a); if the noun is feminine, then the –a gender marker is attached (b) and if it is neuter, -o attaches to it (c):

(a) Ivan-ov-ijat stol (b) Ivan-ov-a-ta kniga (c) Ivano-ov-o-to bebe
Ivan-ov-the.MASC.SG chair (b)Ivan-ov-a.FEM.SG-THE.FEM.SG book (c) Ivan-ov-o.NEUT.SG-THE.NEUT.SG baby
Ivan’s chair (b) Ivan’s book (c) Ivan’s baby
In a similar way as the derivation in (17), there is no possibility for attaching any suffix to the DP complement of the stem (\textit{na uchenitsite} ‘of the students’) in (19). This is so because such complements constitute Phases and are thus invisible for any morphosyntactic operations as the derivation of the nominalization proceeds up to the dominating DP. Therefore, the only possible obtainable sequence is \textit{[NA-kaz]-Ø-va-NE-to na uchenitsite} (‘the punishing of the students’) but not the ungrammatical \textit{*[NA-kaz]- na uchenitsite-Ø-va-NE-to} (*‘punish-of the students-Ø-ing-NE-the’). A similar explanation can be provided for the intervening \textit{vP} between the Asp'P and the nominalizer phrase nP that hosts the external argument. Adopting the theory of Phases (Chomsky 2001), the DP \textit{Ivan}- in the Specifier of \textit{vP} constitutes a Phase. Thus, in the same way as the DP complement of the stem, it is invisible for any morphosyntactic operations and does not intervene during the derivation of the nominal structure.
I will claim that the small vP remains in the complement position of nP, at its right. As noted, this projection contains in its specifier the prepositional phrase ot-NP (by-NP) where the external argument Ivan is inserted. The preposition ot ‘by’ assigns oblique case to the external argument Ivan. That is, once case assignment takes place, the external argument is frozen for further movement.

However, when the external argument is introduced by a Genitive NP, such as ‘Ivan-ov’ (‘Ivan’s’) (18b), the situation is different because this argument appears in the leftmost position and it is the element that hosts the Determiner. Consider the derivation in (20):

(20) The external argument: genitive case marking: -ov (‘s):

Ivan-ov-o-to 
[NA-kaz]-va-ne 
na uchenits-i-te
Ivan-ov-GEN-o.NEUT.SG-the.NEUT.SG punish-va.IMPF-NE  of  student-PL-the.PL
‘Ivan’s punishing of the students’

The word order in the grammatical sequence shows that it is not the nominalization that moves to Spec, DP to attach the definite article (vs. 19: 4) but rather the external argument. That is, the external argument, which shows genitive inflection, is the projection that must move to Spec, DP to attach the definite article, leaving the rest of the nominalization in Spec, nP. We may suggest a reason for this. The external argument, in Spec, vP, must move to Spec, DP to check or receive case. The definite article, the suffix –to, must always occupy the second position in the DP, under Wackernagel’s Law (see chapter 2). It must therefore appear suffixed to the raised genitive external argument and in second position.

We have some evidence for the fact that the Genitive external argument *Ivanov* (‘Ivan’s’) undergoes raising, unlike the prepositional external argument.
discussed above (i.e. *ot Ivan* ‘by Ivan’, in (19)). Both *Ivanov* (‘Ivan’s’) and the definite article [-to] agree in neuter gender with the nominalization. We could claim that this is required by the nominalizing head –NE, which assigns neuter to the nominalization. That is why both *Ivanov-o* (*Ivan’s-o.NEUT*) and the Definite article –to (the.-o.NEUT) should be also marked for Neuter. A possible explanation for this agreement relation is that the article –to has to agree in gender with its complement, i.e. the nominalizing head –NE. When *Ivan* moves to Spec, DP, then *Ivan* agrees with the definite article to- in Neuter through Spec-head agreement. This is a provisional solution and a purely technical one. However, for the time being, I cannot offer a better one in accordance with the premises adopted here.

Apart from the Agent/Causer interpretation, the external argument can also denote a Possessor, a Source, an Experiencer, etc. In such cases, I propose that it be projected in Spec, NP, found above the nominalizer phrase nP, as shown in (21) below:

(21) The external argument: other readings:

a. zavesht-a-n-ie-to na baba mi
   will-a.TH.VOW-N.PASS.PRT-IE-the.NEUT.SG of grandmother my
   ‘The testament of my grandmother’ [*of my grandmother*: Possessor]
b. Syntactic representation:

Like that in (19), the nominalization in (21) involves four XP movement operations. Thus, the stem LP first moves to Spec, VP to attach the thematic vowel [-a]. The newly formed complex [VP, LP] then moves to Spec, VoiceP, where it attaches the participial suffix [-N-]. After this, the whole structure [VoiceP, VP, LP] nominalizes by moving to Spec, nP, where the nominalizer head [-IE] attaches. The external argument *na baba mi* ‘of my grandmother’ merges in Spec, NP. The fact that it is introduced by the preposition *na* (of) suggests that it is assigned oblique case by this preposition. Thus, similar to the nominalization process in (19), the external argument is frozen in place and moves no farther up in the derivation. This further suggests that, in order to satisfy Wackernagel’s Law for the second position of the definite article, the rest of the nominalization [nP,
VoiceP, VP, LP] is what moves higher up to Spec, DP, where the definite article [-to] is attached.

The claim that the external argument, when it does not refer to the Agent/Causer, is projected in Spec, NP is supported by Longobardi’s (2003) proposal that the arguments of the head noun are hierarchically ordered DP-internally in a way roughly similar to that found in clauses. Longobardi (2003) suggests that thematic subjects (e.g. agents) are higher than direct objects (e.g. themes) and other complements. Additionally, DP also allows for another argument, or quasi-argument, to appear. This quasi-argument is the so-called Possessor. Longobardi claims that Possessors are hierarchically higher than subjects, i.e. agents (Longobardi (2003: 562-563)). My representation in (20) captures such a hierarchy, whereby Possessors are higher than Agents.

In my analysis, Spec, NP is thus occupied by external arguments which allow for various interpretations: Possessors, Experiencers, Sources, Goals, etc. These external arguments are not real notional subjects of the nominalization. Rather, they are quasi-external arguments. A real notional subject, in my analysis, would only be Agents or Causers projected in Spec, vP (see 18, 19, 20).

I assume, without much discussion, that one may arguably consider the mark of structural or inherent case to be the preposition na (of).40

Having discussed the basic characteristics of the morphosyntax of Bulgarian deverbal nominals, I devote the next section to supporting some of my previous proposals by showing that the difference in the syntactic composition of nominal constructions results in a difference in their syntactic behaviour as well. In §4.2.1, we will see that only a subset of –NE nouns can have an argument structure, following thus the behavior of English complex event nominals (Grimshaw 1990). These types of nominalizations never allow for a possessive

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40 The preposition ‘na’ in Bulgarian behaves in a similar way to ‘de’ in Spanish (or Catalan) and ‘of’ in English. It can be used to assign a Possessor theta role, or the Theme, Experiencer or Creator roles. Sometimes, though, it may also refer to the Agent.
interpretation of their external argument whereas other types of nominalizations accept such an interpretation. In section 4.2.2 we will further see that all nominalization types accept nominal modifiers. However, some differences are detected in adverbial modification (§4.2.3) and telicity tests (§4.2.4).

4.2 On the difference between nominalization types in Bulgarian: some tests

4.2.1. Argument structure

In this section I will show that only some of the transitive and prefixed process –NE nominals have true argument structure and must satisfy the Projection Principle, i.e. they require their internal arguments obligatorily. Eventive Voice –IE nouns and eventive ‘other-suffix’ nouns do allow for internal and external arguments to be projected but this is only optional. Thus, I will claim that instead of having argument structure, these eventive nouns (i.e. the eventive Voice -IE, “other-suffix” and some –NE nominals) have a ‘participant’ structure (Grimshaw (1990)). As for the rest of these nouns, i.e. gender-derived nominals and object-denoting (‘other-suffix’, -IE and –NE) nouns, they have neither argument nor participant structure as they cannot denote events. Instead, I will claim that these nouns have modifiers.

Let us first consider the case of object-denoting nominals. In (22) I give an example of gender-derived nouns (22a), object-denoting ‘other-suffix’ nouns (22b), object Voice –IE nouns (22c) and object –NE nominals (22d):

(22) Argument structure: object-denoting nouns:

a. Gender-derived nouns:

[Raz-kaz]-ut ot/na Ivan [ot: Source/*Agent; na: Possessor]
narrate-the.MASC.SG *by/from/of Ivan
‘The narration *by/from/of Ivan’
b. Object-denoting ‘other-suffix’ nouns:

*[PO-stroj]-ka-ta \textit{na} nov-a-ta sgrada \textit{ot} Ivan [ot: *Agent] construct-KA-the.FEM.SG of new-FEM.SG-the.FEM.SG building \textit{by} Ivan

*The construction \textit{of} the new building \textit{by} Ivan

b’. [PO-stroj]-ka-ta \textit{na} Ivan [na: Possessor] construct-KA-the.FEM.SG \textit{of} Ivan

‘The construction \textit{of} Ivan’

c. Object-denoting Voice -IE nouns:


*the writ/writing of the book by Ivan

c’. pis -a- \textit{n} -ie-to \textit{na/ot} Ivan e na masa-ta [na: Possessor, ot:*Agent/Source] write-A.TH.VOW-N.PASS.PRT-IE-the.NEUT.SG \textit{of/ by/from} Ivan is on table-the.FEM.SG

‘The writ/writing \textit{of/ by/from} Ivan is on the table’

d. Object-denoting –NE nouns:

[ZA-bol]-java-ne-to \textit{*ot/na} Maria [ot: *Agent, na: Possessor] become-ill-java.IMPF-NE-the.NEUT.SG \textit{*by/of} Maria

‘The illness \textit{by/of} Maria (Maria’s illness)’

d’. jad-e-ne-to \textit{ot/na} Ivan e na masa-ta [ot: Source/*Agent, na: Possessor] eat-e.TH.VOW-NE-the.NEUT.SG \textit{*by/from/of} Ivan is on table-the.FEM.SG

‘The meal \textit{by/from/of} Ivan is on the table’
From the examples in (22) we conclude that object-denoting nouns cannot have an event interpretation. They are also unable to take internal arguments (22b, c). Though they accept an external argument, it is introduced by the possessive na-NP (of-NP) but it can never have a true agent interpretation. The Agent in Bulgarian can be introduced by either an ot-NP (by-NP), a na-NP (of-NP), or a genitival NP (marked by the genitival suffix –ov). From the examples above we see that though the ot-NP (by-NP) is sometimes acceptable, it denotes the Source but not the Agent (22a, c, c’, d’). It should be noted that the Source reading is licensed thanks to the ambiguity of the preposition ot, which can refer either to the English agentive ‘by’ or to ‘from’. However, in the case of true argument structure –NE nominals, this preposition is always interpreted as the Agent and never as the Source.

As for eventive ‘other-suffix’ (23a below) and Voice -IE (23b) nominalizations, all of them allow for internal and external arguments to be projected. Yet, in neither case is their presence obligatorily required (e.g. 23a”, b’, b”). Additionally, though the Agent interpretation is present in such cases, it is not the only reading available. Apart from it, the Source and Receiver readings are also possible. An example is given in (23):

41 It can be observed that the object-denoting (‘other-suffix, -NE, and –IE) nouns behave like simple concrete nouns. Like simple concrete nouns (i), object nominalizations use the ot-NP (by NP) to denote the Source, but never the Agent. In such cases, this preposition should be translated as the English ‘from’ and not ‘by’:

(i) kniga-ta ot Ivan  
book-the.FEM.SG by Ivan  
The book from Ivan

(ii) [PRI-kaz]-ka-ta ot Ivan  
The narration from Ivan

If we want to refer to the person who has written the book, we use the possessive na-NP ‘of-NP’. Nevertheless, the interpretation we get is not truly agentive since it actually refers to something like an ‘intellectual’ possessor of the book.

42 Prepositions are always difficult to translate from one language to another. That is why we often have approximate translations. For the sake of better comprehension, I will try to offer all of the possible readings of a given preposition. For instance, the Bulgarian preposition ‘ot’ can have either the Agentive ‘by’ or the Source ‘from’ reading.
(23) a. Eventive ‘other-suffix’ nominals

a. [PRO-d]-a-žba-ta na stok-i ot Ivan [ot: Agent/Source]
sell-a.TH.VOW-ŽBA-the-FEM.SG of goods.PL by/from Ivan
‘The sale of goods by/from Ivan’

a’. [PRO-d]-a-žba-ta na Ivan na stok-i [na: Agent, Receiver of goods]
sell-a.TH.VOW-ŽBA -the-FEM.SG of Ivan of goods.PL
‘The sale of/to Ivan of goods’

a’’. [PRO-d]-a-žba-ta stana v tri chasa
sell-a.TH.VOW-ŽBA -the-FEM.SG occurred at three o’clock
‘The sale took place at three o’clock’

b. Eventive Voice –IE nominals

b. vůzpít-a-n-ie-to na chovek ot roditel-i-te mu
zapochva ot negov-o-to raždane [na: Theme, ot: Agent]
upbring-a.TH.VOW-N.PASS.PRT-IE-THE.NEUT.SG of man by parent-PL.THE.PL his-
DAT.CL begins from his-NEUT.SG.the.NEUT.SG birth
‘The upbringing of a man by his parents begins at his birth’

b’. sůbr-a-n-ie-to (na deputat-i-te) prodůlži tri chasa
meet-a.TH.VOW-N.PASS.PRT-IE-THE.NEUT.SG (of deputy.PL.the.PL) lasted three hours
‘The meeting of the deputies lasted three hours’ [na: Agent, Possessor]

b’’. iztez-a-n-ie-to (na zatvornits-i-te ot nadziratel-i-
te) e postojanno
torture-a.TH.VOW-N.PASS.PRT-IE-THE.NEUT.SG (of prisoner-PL.the.PL by jailer-
PL.the.PL) is constant [na: Theme, ot: Agent]
‘The torture of the prisoners by the jailers is constant’

43 Here, the parentheses mean that introducing the na/ot-NP (of/by-NP) is optional.
From the above examples we can conclude that though the external argument is always available, it allows for various interpretations. Thus, in (23a), the *ot*-NP (by-NP) can denote (i) that Ivan sells the goods (i.e. Ivan is the Agent), or (ii) that we have taken the goods we sell from Ivan (i.e. Ivan is the Source). Additionally, we can also observe that the Agent should not be obligatorily introduced by the agentive *ot*-NP (by-NP). It can also take the form of a *na*-NP (of-NP) as in (23a’, b’). If so, we then again obtain more than one interpretation apart from the agentive one, namely those of Receiver (23a’) and Possessor (23b’). As for the internal argument, we observe that it is always introduced by the *na*-NP (of-NP). Yet, in neither case are the internal and external arguments obligatory.

These facts may further suggest that these nouns have no true argument structure as they allow for various interpretations of the external argument and do not require their internal arguments obligatorily. We may conclude that, when they appear, the arguments of such nouns simply modify the event denoted by the noun. That is, they are modifiers of events rather than true obligatory arguments required by the verb. The above observations suggest that instead of argument structure, these nouns have a ‘participant’ structure where the external and the internal arguments are participants in Grimshaw’s (1990) terms. This is not the case with true argument structure –NE nominals, as we shall see below.

Among the process –NE nouns, there are some that allow for the omission of their arguments (24a, a’, b) and some that require them obligatorily (25a, b, c):

(24) –NE nominals: optional arguments:

a. push-e-ne-to (na cigar-i ot Ivan) mu izleze skũpo
smoke-e.TH.VOW-NE-the.NEUT.SG (of cigarret-PL by/from Ivan) him turned out expensive
[na: Theme, ot: Agent, Source]
‘The smoking of cigarettes by/from Ivan cost him a lot’

44 Recall that Grimshaw (1990) distinguishes between true syntactic arguments (which are available only for verbs and the complex event nominals) on one hand, and ‘participants’, on the other. The latter are not real arguments but serve to restrict the denotation of the nominal in various ways (see fn. 12, chapter 3).
a’. push-e-ne-to (na₁ Ivan) (na₂ cigar-i) mu izleze skūpo
smoke-e.TH.VOW-NE-the.NEUT.SG (of Ivan) (of cigarret-PL) him turned out
expensive
‘The smoking of cigarettes of Ivan cost him a lot’ [na₁: Agent, na₂: Theme]

b. pe-e-ne-to (na pesen-ta) ne beshe mnogo korektno
sing-e.TH.VOW-NE-the.NEUT.SG (of song-the.FEM.SG) not was very correct
‘The singing of the song was not very correct’ [na: Theme]

(25) –NE nominals: obligatory internal arguments:

a. resh-ava-ne-to *(na zadach-i-te po matematika) (ot
Ivan) mu otne tri chasa
solve-ava.IMPF-NE-the.NEUT.SG *(of exercise-PL.the.PL on mathematics) (by
Ivan) him took three hours [na: Theme, ot: Agent]
‘The solving of the exercises on mathematics by Ivan took him three hours’

b. chup-e-ne-to (na₁ Ivan) *(na₂ chash-i) stana negovo hobi
break-e. TH.VOW-NE-the.NEUT.SG (of Ivan) *(of glass-PL) became his hobby
‘The breaking of glasses by Ivan became his hobby’ [na₁: Agent, na₂: Theme]

c. [IZ-p(e)]-java-ne-to *(na pesen-ta) (ot strana na Maria)
ne beshe mnogo korektno
[IZ-sing]-java.IMPF-NE-the.NEUT.SG *(of song-the.FEM.SG) (on part of Maria)
not was very correct [na: Theme, ot strana na: Agent]
‘The singing to the end of the song on behalf of by of Maria was not very correct’

From the examples above we again observe that in cases where the arguments are optional, the external argument can be introduced either by an ot-NP (by-NP) as in (24a) or by a na-NP (24a’). Additionally, apart from denoting the Agent, the ot-NP (by-NP) can also denote the Source (24a). The internal
argument, on the other hand, is always introduced by the *na*-NP (of-NP) but it is also optional. This suggests that these nouns behave in exactly the same way as the eventive participant-structure ‘other-suffix’ (23a) and Voice –IE (23b) nominals. Thus, they have participant structure but not a true argument structure.

There are nouns that require the presence of the internal argument obligatorily. This happens in the cases of some transitive –NE (25a, b) or prefixed nominals (25c). The external argument, though, is always optional. It may be introduced by an *ot*-NP (by-NP) as in (25a, c) or by a *na*-NP (of-NP) as in (25b). Yet, when introduced, it unambiguously refers to the Agent (25a, b). This further suggests that it is the transitive nature of the verbal base that demands the projection of its internal argument (25a, b). In the case of prefixed nominalizations, we could suggest that the prefix sets some requirements so that the internal argument is obligatorily projected (see chapter 5). Thus, in (24b), when the verbal base *pe(ja)* ‘sing’ remains unprefixed, the internal argument is optional. Yet, in (25c), when prefixed (*IZ*-pe(ja) ‘sing out’), the internal argument is obligatorily required. This shows that contrary to the participant-structure (‘other-suffix’, Voice –IE and –NE) nouns, these nouns are instantiations of true argument-structure nominals due to the obligatory projection of their internal argument.

Additional support for such a claim is revealed by the fact that the external argument of the argument-structure –NE nominals, when projected, never allows for a possessive interpretation\(^{45}\) but always refers to the agent, as shown in (26a):

(26)  
\begin{itemize}
\item a. **Argument structure –NE nominals:**
\item Ivan-*ov*-o-to \hspace{1cm} [PRO-d]-ava-ne \hspace{1cm} *(na diamant-i)
\item Ivan-*ov*.GEN-o.NEUT.SG-THE.NEUT.SG sell-ava.IMPF-NE \hspace{1cm} *(of diamond-PL)
\end{itemize}

‘Ivan’s selling of diamonds’ \hspace{1cm} [-ov: Agent/*Possessor]

\(^{45}\) The possessor in Bulgarian can be realized either by a genitive NP (see fn. 39) or by a *na*-NP (of-NP).
a’. Ivan-ov-o-to [RAZ-kaz]-va-ne na prikazk-i (*e na masa-ta)
Ivan-ov.GEN-o.NEUT.SG-THE.NEUT.SG narrate-VA.IMPF-NE of story-PL (*is on table-the.FEM.SG)
‘Ivan’s narrating of stories’ (*is on the table)

b. Voice –IE nominals:
Ivan-ov-o-to izobret-e-n-ie e na masa-ta
Ivan-ov.GEN-o-NEUT.SG-THE.NEUT.SG invent-e.TH.VOW-N.PASS.PART-IE is on table-the.FEM.SG [-ov: Possessor]
‘Ivan’s invention is on the table’

c. ‘Other-suffix’ nominals:
Ivan-ov-a-ta kraž-ba (na diamant-i) se publikuva vův vestnik-a
Ivan-ov.GEN-a-FEM.SG-THE.FEM.SG steal-BA (of diamond-pl) se.REFL published in newspaper-the.MASC.SG [-ov: Possessor, Agent]
‘Ivan’s theft of diamonds got published in the newspaper’

From the examples above we observe that the possessive interpretation of the external argument is never available with argument-structure –NE nominals (26a). This is so because it obligatorily denotes the Agent in cases where the internal argument is inserted. If the internal argument is omitted, and the external one is present, then the external argument is interpreted as the theme. Thus, if we omit the internal argument ‘of diamonds’ in (26a) the interpretation we get is that Ivan is being sold. This is due to the fact that such nouns require the presence of their internal arguments obligatorily. As for the other type of nouns, we see that they always allow for a possessive interpretation of their external argument. This may also be due to the fact that these nouns can be used in object-denoting constructions of the kind ‘is on the table’ (26b), or ‘got published’

46 Picallo (1991) uses this construction to disambiguate the result vs. process denotation of certain ambiguous Catalan nominals. Thus, she claims that expressions denoting events or processes can be located in time, but only their outcoming result can be published (p. 290).
contrast, argument structure –NE nominals never do this (e.g. 26a’). The reason is that they denote processes and never ‘simple’ events, results or objects.

4.2.2. Nominal modifiers (pluralization, demonstratives, indefinites and numerals)

In this section I will show that despite their different semantics, all of the Bulgarian nominalizations accept nominal modifiers. As for ‘other-suffix’ nominals, both object-denoting (27) and event-denoting (28) types can pluralize (27⁴⁷a, a’; 28a), and can take any kind of determiner, such as indefinites (27b, b’; 28b), numerals (27c, c’; 28c) and demonstratives (27d, d’; 28d):

(27) ‘Other-suffix’ object-denoting nouns: nominal modifiers

a. sresht-i-te s prijatel-i mi dostavjat udovolstvie [Plurality]
meet-PL-THE.PL with friend-PL me give pleasure
‘The meetings with friends give me pleasure’

a’. [ZA-pis]-k-i-te po istorija sa na masa-ta
note-KA-PL-the.PL on history are on table-the.FEM.SG
‘The notes on history are on the table’

b. ima edin [RAZ-kaz] za životn-i v kutija-ta [Indefinites]
there is one-MASC.SG story about animal-PL in box-the.FEM.SG
‘There is one story about animals in the box’

b’. ima-sh edna gresh-ka na izpit-a po himija
have-2PS.SG one-FEM.SG mistake-KA on exam-the.MASC.SG on chemistry
‘You have one mistake in the exam on Chemistry’

⁴⁷ The examples in (27a, b, c, d) refer to gender-derived object nominals, whereas those in (27a’, b’, c’, d’) refer to ‘other-suffix’ nouns.
c. **tri-te** glob-i sa mo-i  
three-the.PL tax-PL are my-PL

‘The three taxes are mine’

c’. imash **pet** [IZ-vest]-ija ot director-a za tazi godina  
have-2PS.SG five notify-IE.PL by director-the.MASC.SG for this.FEM.SG year

‘You have five notifications from the director for this year’

d. **tozi** izbor e okonchatelen  
this.MASC.SG choose-Ø is definitive

‘This choice is definitive’

d’. **tova** negov-o bezdel-ie ne mi haresva  
this.NEUT.SG his-o.NEUT.SG idle-IE not me like

‘I do not like this idleness of his’

(28) Eventive ‘other-suffix’ nominals: Nominal modifiers

a. kraž-b-i-te na diamant-i sa chesto javlenie tuk  
steal-BA-PL-the.PL of diamond-PL are frequent phenomenon here

‘The theft of diamonds are a frequent phenomenon here’

b. vchera stana **edn-a** kraž-ba v tsentür-a na grad-a  
yesterday happened one-FEM.SG steal-BA in center-the.MASC.SG of town-the.MASC.SG

‘A/one theft took place yesterday in the center of the town’

c. **chetiri-te** kraž-bi na diamant-i v ramkite na edin mesets razoriha sobstvenik-a  
four-the.PL steal-BA-PL of diamond-PL in period of one month ruined owner-the.MASC.SG

‘The four thefts of diamonds in the period of one month ruined the owner’
d. **tozi** god-e-ž vchera mi napomni za star-i-te vremena
   ‘This engagement yesterday reminded me of the old times’  
   [Demonstratives]

   From the data above we see that whether eventive (28) or not (27), all ‘other-suffix’ nominals accept nominal modifiers. The same holds for all –IE and –NE nominals. In (29) I give an example of Voice –IE object-denoting (29a, b, c, d) and eventive (29a’, b’, c’, d’) nouns.

(29) **Voice –IE nominals: Nominal modifiers**

   a. pis-a-n-ija-ta na Ivan sa na masa-ta  
      write-a.TH.VOW-N.PASS.PRT-IE.PL-the.PL of Ivan are on table-the.FEM.SG
      ‘Ivan’s writings are on the table’

   a’. sübr-a-n-ija-ta na aktsioner-i-te stavaha tajno
      meet-a.TH.VOW-N.PASS.PRT-IE.PL-the.PL of shareholder-PL-the.PL occurred secretly
      ‘The meetings of the shareholders took place secretly’

   b. **edno** zavesht-a-n-ie beshe namereno vchera
      one-NEUT.SG will-a.TH.VOW-N.PASS.PRT-IE was found-NEUT.SG yesterday
      ‘A/one will was found yesterday’  
      [Indefinites]

   b’. vseki zatvornik poluchi po **edno**  
      every prisoner received by one-NEUT.SG punish-a.TH.VOW-N.PASS.PRT-IE
      ‘Every prisoner received one punishment each’

   c. **tri-te** Ivan-ov-i tvor-e-n-ija specheliha pūrva nagrada
      three-the.PL Ivan-ov.GEN-PL create-e.TH.VOW-N.PASS.PRT-IE.PL won first prize
      ‘Ivan’s three creations/works won first prize’  
      [Numerals]
c’. tri-te Ivan-ov-i nakaz-a-n-ija v ramkite na edin mesets dovedoha do negov-o-to uvoln-e-n-ie

three-the.PL Ivan-ov.Gen-PL punish-a.TH.VOW-N.PASS.PRT-IE.PL in period of one month led to his-NEUT.SG-the.NEUT.SG dismiss-e.TH.VOW-N.PASS.PRT-IE

‘Ivan’s three punishments in the period of one month led to his dismissal’

d. stignah do tez-i chetiri zakluch-e-n-ija [Demonstratives]

arrived-AOR.1PS.SG at this-PL four conclude-e.TH.VOW-N.PASS.PRT-IE.PL

‘I arrived at these four conclusions’

d’. tez-i gon-e-n-ija i iztez-a-n-ija

na ezichnits-i-te ot hristijan-i-te bjaha postojann-i

this-PL persecute-e.TH.VOW-N.PASS.PRT-IE.PL and torture-a.TH.VOW-N.PASS.PRT-IE.PL of pagan-PL-the.PL by Christian-PL-the.PL were constant-PL

‘These persecutions and tortures of the pagans by the Christians were constant’

From the facts in (29) we see that all –IE nominals accept any nominal modifier. Thus, object-denoting –IE nouns accept pluralization (29a), indefinites (29b), numerals (29c) and demonstratives (29d). Similarly, eventive participant-structure –IE nominals allow such modifications as well, as observed in (29a’, b’, c’, d’) respectively. This suggests that the eventive denotation of such nouns does not block nominal modification. The same holds for –NE nouns.

I provide examples for object-denoting (30a, b, c, d) and process (30a’, b’, c’, d’) –NE nominals below:

(30) –NE nominals: Nominal modifiers

a. chest-i-te [za-bol]-java-n(e)-ija na Vasil me plashat

frequent-PL-the.PL become ill-Java.IMPf-NE-PL of Vasil me frighten

‘The frequent illnesses of Vasil frighten me’ [Plurality]

48 Remember that some intransitive –NE nominals do not usually have a plural form (e.g. mechtane ‘dreaming’, mislene ‘thinking’, etc.)
a. [sū-bir]-a-n(ē)-ija-ta na dokazatelstv-a ot advokat-a mu otne tseli pet mesets-a
gather-A.IMPF-NE-PL-the.PL of proof-PL by lawyer-the.MASC.SG his took whole five month-PL
‘The “gatherings” of proofs by his lawyer took five whole months’

b. vчera stana edн-o goljam-o [ZA-drüst]-va-ne na kol-i
pred dom-a mi
[yesterday happened one-NEUT.SG big-NEUT.SG jam-va.IMPF-NE of car-PL
in front of home-the.MASC.SG my
‘Yesterday a/one big traffic jam took place in front of my home’

b’. edн-o [PO-vish]-ava-ne na zaplat-i-te se ochkava ot vsichk-i
one-NEUT.SG raise-ava.IMPF-NE of salary-PL-the.PL se.REFL await by all.PL
‘A/one raising (= raise) in the salaries is awaited by everyone’

c. ima samo tri vižd-a-n(ē)-ija po vūrpos-a
[Numerals]
‘There are only three see-A.IMPF-NE-PL on question-the.MASC.SG

‘There are only three points of view on the question’

c’. posledn-i-te tri mo-i izliz-a-n(ē)-ija na kino bjaha mnogo zabavn-i
last-PL-the.PL three my-PL go out-A.IMPF-NE-PL to cinema were very fun-PL
‘My last three going-outs (= sorties) to the cinema were very fun’

d. tov-a tvo-e [s-hvasht]-a-ne ne e praviln-o
this-NEUT.SG your-NEUT.SG understand- A.IMPF-NE not is correct-NEUT.SG
‘This understanding of yours is not correct’

[Demonstratives]

d’. tez-i tvo-i chest-i pis-a-n(ē)-ija po tsjala nosht me plashat
this-PL your-PL frequent-PL write-A.TH.VOW-NE-PL at all night me frighten-PL
‘These frequent writings of yours all night frighten me’ (= ‘the all-night writing sessions of yours frighten me’)

From the data in (30) we conclude that object-denoting –NE nouns accept pluralization (30a), indefinites (30b), numerals (30c) and demonstratives (30d). The same holds for process –NE nominals (30a′, b′, c′, d′, respectively). In the case of process –NE nominals, it should be noted that when in the plural, they may sometimes agree with the verb in singular (30a′)\(^49\). In this case, all of the ‘gatherings of proofs’ are viewed as a whole process and the stress is on the process and durative meaning of the nominalization. This is never true of plural event –IE and ‘other-suffix’ nouns, as they always agree with the verb in plural. In cases where a plural –NE nominal agrees with the verb in plural (30c′, d′), either the interpretation obtained is repetitive (30d′), meaning that ‘every night there is someone who writes’, or the emphasis is placed on the instantiations of undergoing the verbal action (30c′), meaning that each instance of ‘going out to the cinema’ was fun.

What becomes clear is that not only object-denoting (‘other-suffix’ (27), Voice -IE (29a, b, c, d) and –NE (30a, b, c, d)) nouns accept nominal modifiers, since eventive participant-structure (‘other-suffix’ (28), -IE (29a′, b′, c′, d′) and –NE (30d′)) nominals and process argument-structure –NE nouns (30a′, b′, c′) allow it too. Thus, eventivity does not seem to block nominal modification in the nominalizing process, since any type of nominalization accepts such modifiers.

4.2.3. Adverbial modification

In this section I will show that nominalizations behave differently with respect to adverbial modification.\(^50\) Object-denoting nominals do not accept adverbials or adverbial-related adjectives (31). Result nominals, on the other hand, allow for manner modification (31a: ii) or for the adjective ‘frequent’ (31a: iv). As

\(^49\) ‘otne’ (took) is singular vs. ‘otne-ha’ (took.PL), which is plural.

\(^50\) Direct modification by adverbials is rarely allowed inside a nominalization. This is due to the fact that adverbs modify verbs, not nouns. Thus, instead of adverbs, what we have inside nominals in most cases is adverbial-related adjectives.
for eventive nouns, all of them (participant-structure: ‘other-suffix’, Voice –IE and -NE nouns and argument-structure –NE nouns) accept time (32) and manner (33) adverbials (or adverbial-related adjectives), there being differences as far as agent-oriented adjectives (34) and the adverbial-related adjective ‘frequent’ (35) are concerned. The respective examples are provided below.

(31) **Object-denoting nouns: adverbial modification**

(a) **Object ‘other-suffix’ nominals**

(i) **Time adverbials**

*[U-kras]-a-ta vchera ot Ivan decorate-FEM.SG-the.FEM.SG yesterday by Ivan *

*the decoration yesterday by Ivan  [Ivan decorated something yesterday]*

(ii) **Manner adverbial adjectives**

spokojn-ijat [RAZ-kaz] na Ivan za životn-i-te calm-the.MASC.SG narrate of Ivan about animal-PL-the.PL

‘The calm narration of Ivan about the animals’

[Ivan narrated calmly about the animals]

(iii) **Agent-oriented adverbials**

*narochn-a-ta [ZA-pis]-ka po istorija deliberate-FEM.SG-THE.FEM.SG note-KA on history *

*The deliberate note on history [I noted down deliberately]*
(iv) The adjective ‘frequent’

\[ \text{chest-i-te} \quad [\text{PO-kup}-k-i \quad \text{na Ivan} ] \]
\[ \text{frequent-PL-the.PL buy-KA-PL} \quad \text{of Ivan} \]
‘The frequent buyings of Ivan’ \[ [\text{Ivan buys frequently}] \]

(b) Object Voice –IE nominals

(i) Time-related adverbials/adjectives

*\text{zavesht-a-n-ie-to} \quad \text{vchera} \quad \text{na baba mi} \]
\[ \text{will-a.TH.VOW-N.PASS.PART-IE-the.NEUT.SG} \quad \text{yesterday} \quad \text{of grandmother my} \]
*The will yesterday of my grandmother

\[ [\text{My grandmother made her will yesterday}] \]

(ii) Manner adverbials/adjectives

*\text{spokojn-o-to} \quad \text{pis-a-n-ie} \quad \text{na Ivan} \]
\[ \text{calm-NEUT.SG-the.NEUT.SG write-a.TH.VOW-N.PASS.PART-IE} \quad \text{of Ivan} \]
*The calm writ(ing) of Ivan

\[ [\text{Ivan wrote something calmly}] \]

(iii) Agent-oriented adjectives

*\text{narochn-o-to} \quad \text{zavesht-a-n-ie} \quad \text{na baba mi} \]
\[ \text{deliberate-NEUT.SG-the.NEUT.SG will-a.TH.VOW-N.PASS.PART-IE of grandmother my} \]
*The deliberate will of my grandmother

\[ [\text{the grandmother made the will deliberately}] \]
(iv) **The adjective ‘frequent’**

*chest-i-te* pis-a-n-i-jna Ivan

*frequent*-PL-the.PL write- a.TH.VOW-N.PASS.PART-IE.PL of Ivan

*the frequent writings of Ivan  [Ivan writes frequently]*

(c) **Object –NE nominals**

(i) Time-related adverbials/adjectives

*[ZA-bol]-java-ne-to vchera na Ivan
become ill-java.IMPF-NE-the.NEUT.SG *yesterday* of Ivan

*The illness yesterday of Ivan  [Ivan fell ill yesterday]*

(ii) Manner adverbials/adjectives

*razumn-o-to* vižd-a-ne po vūpros-a

*judicious*-NEUT.SG-the.NEUT.SG see-a.IMPF-NE on question-the.MASC.SG

*the judicious view on the question/topic  [I viewed the topic judiciously]*

(iii) Agent-oriented adjectives

*naroch-o-to* [ZA-drūst]-va-ne na kol-i pred doma mi

*deliberate*-NEUT.SG-the.NEUT.SG jam-va.IMPF-NE of car-PL in front of home my

*the deliberate traffic jam of cars in front of my home [Cars jammed deliberately]*

(iv) The adjective ‘frequent’

*chest-i-te* [ZA-bol]-java-n(ë)-ija na Ivan

*frequent*-PL-the.PL become ill-java.IMPF-NE-PL of Ivan

*the frequent illnesses of Ivan  [*Ivan falls ill frequently]*

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51 These nouns, in fact, always allow for adverbial modification because the process reading is always available. Yet, in cases where we want to stress the object interpretation, this is not possible.
From the data in (31) we see that object-denoting nouns allow for neither any kind of adverbial modification, nor adverbial-related adjectives. However, nouns which denote results accept manner modification (31a: ii), or the adjective ‘frequent’ (31a: iv). These nouns do not denote events but rather denote the result obtained from some verbal action. The fact that they allow such modification may possibly be related to the fact that there is some implicit event denotation. Otherwise, without event (be it implicit or not), there is no result of such an event. Thus, we may provisionally suggest that this implicit event is what licenses manner modification in order to show the way in which the result has obtained. However, further research is required.

As for time (32) and manner (33) adverbials, all of the eventive nouns (‘other-suffix’ (32a, 33a), –IE (32b, 33b) and –NE (32c, 33c) nominals) allow such modification. An example is provided below:

(32) **Time modification**

(a) Eventive ‘other-suffix’ nouns

kraž-ba-ta **včera** na diamant-i dovede do sumatoha
steal-BA-the.FEM.SG **yesterday** of diamond-PL led to commotion
‘The theft yesterday of diamonds led to commotion’

[Someone stole something yesterday]

52 These nouns can have either an object denotation (i) or a result one (ii):

(i) [RAZ-kaz]-ǔ t e na masa-ta
    story-the.MASC.SG is on table-the.FEM.SG
    ‘The story is on the table’

(ii) spokojnijat [RAZ-kaz] na Ivan za životnite
    the calm narration/story of Ivan about animals
    ‘The calm narration by Ivan about the animals’

However, they denote not events (iii) but simply the output of such events:

(iii) * [RAZ-kaz]-ǔ stana v tri chasa
    *The story/narration took place at three o’clock

53 There are many other nouns which do accept manner modification, e.g. būrz tants ‘fast dance’; spokoen lekarski [PRE-gled] ‘calm medical check-up’, spokoen govor ‘calm speech’, prodūlžitelna zasada ‘a long-lasting ambush’, spokojna drjamka ‘a calm nap’, etc. Some of these nouns may be derived from verbal stems such as [PRE-gled] ‘check-up’, but others are not (tants ‘dance’, govor ‘speech’, etc.). We can also observe that many of them are derived from intransitive verbs (dance, speech, nap, etc.). However, at present, I have no detailed analysis to offer for this phenomenon.
(b) **Eventive –IE nouns**

[NA-rush]-e-n-ie-to na pravilnik-a za
dviženie **vchera** ot strana na Ivan mu donese trideset evro globa
violate-e.TH.VOW-N.PASS.PART-IE-the.NEUT.SG of regulation-the.MASC.SG for
driving *yesterday* on part of Ivan him brought thirty euros fine
‘The violation of the driving regulations yesterday by Ivan brought him a thirty
euros fine’  

*Ivan violated the driving regulations yesterday*

(c) **Process –NE nouns**

kup-uva-ne-to na pet shokolad-a **vchera** ot Ivan ot
supermarket-a me uchudi
buy-uva.IMPF-NE-the.NEUT.SG of five chocolate-PL *yesterday* by Ivan from
supermarket-the.MASC.SG me surprised
‘The buying of five chocolates yesterday by Ivan from the supermarket surprised me’  

*Ivan bought five chocolates from the supermarket yesterday*

(33) **Manner modification**

(a) **Eventive ‘other-suffix’ nouns**

kraž-ba-ta na stok-i **skrishom** ot sklad-a
steal-BA-the.FEM.SG of good-PL *secretly* from store-the.MASC.SG
‘The theft of goods secretly from the store’  

*goods are stolen secretly*

(b) **Eventive –IE nouns**

**tajn-o-to** sűbr-a-n-ie na deputat-i-te
secret-o.NEUT.SG-the.NEUT.SG meet-a.TH.VOW-N.PASS.PRT-IE of deputy-PL-the.PL
‘The secret meeting of the deputies yesterday at three o’clock’  

*the deputies met secretly*
(c) Process –NE nouns

krad-e-ne-to na stok-i skrishom ot sklad-a
jadosa shef-a mu
steal-e.TH.VOW-NE-the.NEUT.SG of good-PL secretly from store-the.MASC.SG
made angry boss-the.MASC.SG his
‘The stealing of goods secretly from the store made his boss angry’

[goods were stolen secretly]

From the examples above we see that when eventive, all nominalizations accept time and manner modification. In the examples, all are modified by the adverbial ‘vchera’ (yesterday) as in (32). As for manner modification, they may be either modified by an adverbial-related adjective (33b) or directly by a manner adverbial (33a, c). This suggests that such modification may be licensed by the eventivity character of these nouns, unlike the non-eventive object-denoting nominalizations (31), which do not allow it.

As for agent-oriented adjectives (34) and the adjective ‘frequent’ (35), a difference can be detected. Only true argument-structure –NE nominals allow for agent-oriented adjectives (34c). This is due to the fact that whenever introduced, the external argument refers to the Agent with these nouns. As for eventive –IE and ‘other-suffix’ nominals, we saw that apart from the Agent, other interpretations of the external argument are also possible (§4.2.1). Thus, they cannot license agent-oriented adjectives (34a, b) due to the ambiguous nature of their external argument:

(34) Agent-oriented adjectives
(a) Eventive ‘other-suffix’ nominals

*narochn-a-ta kraž-ba na diamant-i
*The deliberate theft of diamonds

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(b) Eventive Voice –IE nouns

*narochn-o-to sūbr-a-n-ie na deputat-i-te
deliberate-o.NEUT.SG-the.NEUT.SG meet-a.TH.VOW-N.PASS.PRT-IE of deputy-PL-the.PL
*The deliberate meeting of the deputies

(c) Process –NE nominals

narochn-o-to [ot-krad]-va-ne na dokazatelstv-a-ta ot strana na obvinjaem-ija ne moža da se dokaže
deliberate-o.NEUT.SG-the.NEUT.SG steal-va.IMPF-NE of proof-PL-the.PL on part of accused-the.MASC.SG not could to se.REFL proved
‘The deliberate stealing of the proofs by the defendant could not be proved’

Apart from the inability of the eventive ‘other-suffix’ (34a) and –IE (34b) nominals to take agent-oriented modifiers, they are also unable to appear in the singular when modified by the adjective ‘frequent’. Instead, these nouns must be in the plural and thus take the plural form of this modifier (35a, b). as we saw above, the same also holds for nominals denoting results (31a: iv). This further supports Grimshaw’s (1990) claim that whenever a result noun appears with modifiers like ‘frequent/repeated’, these nouns must be in the plural. Process –NE nominals, on the other hand, can appear either in the singular (35c: i) or in the plural (35c: ii) when modified by ‘frequent’:

(35) The modifier ‘frequent’

(a) Eventive ‘other-suffix’ nouns

(i) *Chest-a-ta kraž-ba na diamant-i
Frequent-a.FEM.SG-the.FEM.SG steal-BA of diamond-PL
*The frequent theft of diamonds
(ii) Chest-i-te kraž-b-i na diamant-i
    Frequent-PL-the.PL steal-BA-PL of diamond-PL
    ‘The frequent thefts of diamonds’

(b) Eventive –IE nouns

(i) *chest-o-to sūbr-a-n-ie na deputat-i-te
    frequent-o.NEUT.SG-the.NEUT.SG meet-a.TH.VOW-N.PASS.PRT-IE of deputy-PL-the.PL
    *The frequent meeting of the deputies

(ii) chest-i-te sūbr-a-n-ija na deputat-i-te
    frequent-PL-the.PL meet-a.TH.VOW-N.PASS.PRT-IE.PL of deputy-PL-the.PL
    ‘The frequent meetings of the deputies’

(c) Process –NE nouns

(i) Chest-o-to kup-uva-ne na cigar-i
    Frequent-o.NEUT.SG-the.NEUT.SG buy-uva.IMPF-NE of cigarette-PL
    ‘The frequent buying of cigarettes’

(ii) Chest-i-te kup-uva-n(e)-ija na cigar-i
    Frequent-PL-the.PL buy-uva.IMPF-NE-PL of cigarette-PL
    ‘The frequent buyings [= purchases] of cigarettes’

From the data above we can conclude that both eventivity and argument structure play a role in the behaviour of nominalizations. Non-eventive object-denoting nouns never allow adverbiaal modification. This is due to the fact that they have neither eventive interpretation nor argument structure. An exception is observed in the case of nouns that are ambiguous between a true object and a result interpretation. In their result reading, such nominals allow for manner modification (31a: ii) and accept the adjective ‘frequent’ when in the plural (31a: 128
iv). This may possibly be related to the fact that there is some implicit event inside such nominals which is responsible for their result interpretation. The adverbial modifiers thus relate to this implicit event, but not its output, i.e. the nominalization itself.

Eventive ‘other-suffix’, Voice –IE and -NE nominals, on the other hand, do allow for time and manner modification. Additionally, they also accept modification by the adjective ‘frequent’. This further suggests that it is their eventive semantics and ‘participant-structure’ that license such modification. That is, time and manner adverbials (and the adjective ‘frequent’) are allowed because what they minimally require is event structure and probably some participants in this event structure. Other adverbials, such as the agent-oriented ones, require argument structure in addition to event structure. As we have seen in section 4.2.1, only the argument-taking process –NE nouns allow for an unambiguous interpretation of their external argument as the Agent. Thus, only these nouns allow for agent-oriented adjectives to modify them.

Finally, in the next section I will show that there is an additional difference between the nominalization types in Bulgarian. This difference concerns telicity.

4.2.4. On telicity

As already mentioned, only eventive –NE nominals denote processes. The other nouns, though eventive, cannot have a true process reading. Additionally, it is only the -NE nouns that are always derived from the imperfective verbal base of the corresponding verb. An interesting question to ask is whether a nominalization can inherit the aspectual properties of its verbal base. The above facts suggest that this may actually be the case. That is, the presence of the imperfective morpheme

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54 Telicity is a semantic property that reflects the boundedness of events. Verbs that denote bounded events are telic. Those that denote unbounded events are atelic. Due to the fact that telicity depends on event structure, i.e. a nominal should have some kind of event semantics, I will not consider object-denoting nominalizations here but rather only eventive ones.
inside –NE nominals may license their process interpretation. Thus, it is the imperfective nature of the verbal base that gives rise to the process reading of such nouns, which allows them to denote durative, or unbounded, events.

A way to test such a claim is to see whether –NE nominals, which, in principle, denote processes, or unbounded events, always have an atelic interpretation. The most common diagnostics for testing telicity is the ‘in/for X time’ test. That is, if a verb (or a nominalization in this case) accepts a modifier such as ‘for X time’ (v prodūženie na), then it is atelic. If, on the other hand, it accepts the ‘in X time’ (za-NP) modifier, it is telic.

From the examples in (36) we can see that in fact only –NE nominals accept the atelic modifier v prodūženie na ‘for X time’ (36a, b) whereas their corresponding eventive ‘other-suffix’ (36a’) and Voice –IE (36a’’) nominals do not.

(36) Testing telicity:

-NE nominals:

(a) [NA-rush]-ava-ne-to na pravil-a-ta v prodūženie na dūlg-o vreme
(*za tri godini) vodi do mnogo glob-i violate-ava.IMPF-NE-THE.NEUT.SG of rule-PL-the.PL during long-NEUT.SG time
(*for three year-PL) leads to many tax-PL
‘The violating of the rules for a long time (*in three years) leads to many taxes’

(b) krad-e-ne-to na par-i ot majka mu v prodūženie na
(*za) pet godin-i se razbra ot vsichki steal-e.TH.VOW-NE-THE.NEUT.SG of money-PL from mother his during five year-PL se.REFL found out by everyone

55 In fact, Slavic languages differ in this respect. Schoorlemmer (1995) presents arguments to support the claim that Russian complex event nominals do not have aspect, unlike Polish ones, which do. Popova (2006) claims that Bulgarian behaves like Russian in this respect as there is no aspect assignment to the nominalization in these languages.
‘The stealing of money from his mother *for (*in) five years was found out by everyone’

‘Other-suffix’ nominals:

(a’) *kraž-ba-ta na par-i ot majka mu *v prodǔženie na pet godin-i se razbra ot vsichki
steal-BA-the.FEM.SG of money-PL from mother his during five year-PL se.REFL found out by everyone
*The theft of money from his mother for five years was found out by everyone

Voice –IE nominals

(a’’) *narush-e-n-ie-to na pravil-a-ta *v prodǔženie na
dǔlg-o vreme
violate-e.TH.VOW-N.PASS.PRT-IE-THE.NEUT.SG of rule-PL-the.PL during
long-NEUT.SG time
*The violation of the rules for a long time

The examples in (36) show that –NE nominals, in contrast to the other nouns, always accept the durative and atelic *v prodǔženie na ‘for X time’ modifier. Thus, the –NE noun in (36a) accepts this modifier whereas its corresponding –IE nominal (36a’’) does not. The same holds for the ‘other-suffix’ nominals. In (36b) we see that the –NE noun again requires the atelic modifier whereas its corresponding ‘other-suffix’ noun rejects it (34a’’).

In principle, –NE nominals can never appear with the telic modifier ‘in X time’ (36a, b) as they denote processes, i.e. unbounded events. Yet, in the case of intransitive (37a) or prefixed nominalizations (37b), they allow for this modifier:
(37) a. **Intransitive –NE nominals**

pǔt-uva-ne-to do Barselona v *prodůlžení na/za* edin den me izmori
travel-IMPF-NE-the.NEUT.SG to Barcelona *during/in* one day me tired
‘The travelling to Barcelona for/in one day tired me’

b. **Prefixed –NE nominals:**

Ivan-ov-o-to [IZ-jažd]-a-ne na zakuska-ta za (*v *prodůlžení na) tri chasa me uchudi
Ivan-ov.GEN-o.NEUT.SG-the.NEUT.SG [IZ-eat]-a.IMPF-NE of breakfast *for (*during)*
three hours me surprised
‘Ivan’s eating up of the breakfast in (*for) three hours surprised me’

We observe that the intransitive –NE nominal allows for both telic (‘in X time’) and atelic (‘for X time’) modifiers (37a). This was explained above by the presence of the telic PP ‘*do Barselona*’ (to Barcelona) together with the unergative nature of the verbal base which, when modified by this PP, becomes unaccusative (see chapter 3, section 3.3.2, fns. 39, 40 for further comments).

Prefixed –NE nouns, on the other hand, reject the atelic modifier, as they obligatorily require telic modification (37b). This may be due to the requirements imposed by the prefix. In Bulgarian, there are prefixes that bring about perfectivity (see §5.2.3). In doing so, they bind the event denoted by the verb. Thus, an atelic construction, when prefixed, becomes telic. This explains why prefixed –NE nominalizations reject the atelic modifier. Further examples supporting this claim are presented in (38) below:

(38) **Prefixed –NE nominals**

a. rush-e-ne-to na sgrada-ta v *prodůlžení na (*za) tri chasa
destroy- e.TH.VOW-NE-THE.NEUT.SG of building-the.FEM.SG *during (*in) three hours
‘The destroying of the building for (*in) three hours’

a’. [s-rut]-va-ne-to na sgrada-ta za (* v produljenie na) tri chasa
[S.PF-destroy]-va.IMPF-NE-THE.NEUT.SG of building-the.FEM.SG in (*during) three hours

‘The pulling down of the building in (*for) three hours’

From the examples above we see that whereas an unprefixed –NE nominalization (38a) allows only for the atelic ‘for X time’ modifier, when prefixed, the same nominalization (38a’) not only allows for the telic ‘in X time’ modifier but even rejects the atelic one. This is due to the fact that these prefixes delimit the event denoted by the verb and thus make it bounded.

From the facts described above we may conclude that only –NE nominals (when unprefixed) systematically allow for atelic modification. This is due to the fact that they express a durative, unbounded event, which may further suggest that they have inherited the aspectual properties of their verbal bases. That is, the hypothesis that they derive from imperfective verbal bases explains their durativity semantics. When prefixed, these nouns require the telic ‘za-NP’ (‘in X time’) because the event has become delimited via prefixation. Thus, though aspectual inheritance in the nominalizing process is present, we can further conclude that (a)telicity also depends on certain properties of the lexical stem (absence vs. presence of perfectivizing prefixes). Another exception holds in cases of intransitive –NE nominals, which allow both atelic and telic modifiers when a telic PP is inserted. The ‘other-suffix’ and –IE nominals, on the other hand, do not allow for atelic modification.

Recapitulating, we have seen that there are three types of nominals as far as argument structure is concerned. On one hand, we have true argument-taking –NE nouns (transitive and prefixed) which, in the same way as verbs, require their internal arguments obligatorily. These would correspond to Grimshaw’s (1990) complex event nominals. On the other hand, we have eventive participant-structure (‘other-suffix’, -IE and –NE) nominals, which allow for external and internal
arguments to be present, though this is only optional. Additionally, the external argument, when introduced, may have various interpretations and must not refer to the Agent exclusively. These would correspond to what Grimshaw (1990) labels *simple event nominals*. Finally, there is another group of nouns, the object-denoting (‘other-suffix’, -IE and –NE) nominalizations, which do not denote events and cannot take internal arguments. Thus, they have no argument-structure but simply modifiers that may or may not restrict the denotation of the lexical item. These roughly correspond to Grimshaw’s (1990) *result nominals*.

As for nominal modification, all of the nominalization types, in principle, accept Pluralization, Indefinites, Numerals and Demonstratives. This may suggest that eventivity plays no a role here. Rather, it is the syntactic category- a noun- that licenses such modification.

Adverbial modification, on the other hand, distinguishes between eventive and non-eventive nouns. Thus, pure object-denoting non-eventive nouns do not accept any adverbial modification. The other types of nouns (eventive participant-structure and argument-structure –NE nouns) allow manner and time modification and the adjective ‘frequent’. As for agent-oriented adverbials, only argument-structure –NE nouns accept them, which suggests that such modification, apart from eventive semantics, requires argument structure as well. An interesting case in this respect is the group of result nouns which are ambiguous between object and result interpretation. These nouns do not denote events but can still combine with manner adverbials and the adjective ‘frequent’. A plausible explanation for this was suggested to be that such modifiers do not relate directly to the noun, i.e. the output of the event, but to the implicit event which caused this output. However, more research is needed on this issue.

Finally, nominalizations behave differently as far as telicity is concerned. Whereas only process –NE nominals systematically allow for atelic modifiers, the remaining types of nouns do not. This may further support the hypothesis that –NE nouns inherit the aspectual properties of the verb, which in turn explains their
durativity semantics. However, (a)telicity also depends on certain properties of the
lexical item (the presence or absence of perfectivizing prefixes, the presence of
telic PPs, etc.).

By now we have seen that prefixation plays an important role in the
nominalizing process. Apart from rendering the roots as stems, it also intervenes
in (a)telicity modification. Moreover, prefixation may also require the presence of
the internal argument obligatorily (25c). Due to these facts, I devote the following
chapter to the topic of prefixation.
CHAPTER 5: THE ROLE OF PREFIXATION IN THE NOMINALIZING PROCESS

This chapter offers some details on the role of aspectual prefixation in the nominalizing process. However, this work is limited in scope. Thus, I will just briefly present the main lines of analysis as far as prefixes are concerned with emphasis on their syntactic rather than semantic representation.

The organization of this chapter is as follows. In section 5.1 I will briefly comment on the aspectual function of suffixation. The next sections will then offer details on aspectual prefixation (§ 5.2) together with a syntactic analysis of these prefixes (§ 5.3). Finally, some concluding remarks will close the chapter (§ 5.4).

5.1. The aspectual role of suffixation

Bulgarian is a language that has a rich aspectual morphology like all Slavic languages. Verbs form aspectual pairs in this language, perfective and imperfective.¹ That is, a single verbal meaning can yield both forms.²

Both suffixes and prefixes have an aspectual function in Bulgarian (and in all other Slavic languages). In this section I will discuss the role of suffixes.

---

¹ Bulgarian has often been claimed to be the Slavic language with the most grammaticalized aspectual system (Comrie (1976), Ivanchev (1976), Maslov (1959)), displaying almost non-defective aspectual derivation. This is so because an imperfective form can be derived from virtually any perfective verb. That is, imperfectivization is considered a sign of the productivity of the aspectual system. The other Slavic languages, on the other hand, do not reveal such productivity. There are many ‘perfectiva tantum’ verbs which have no imperfective counterparts in these languages. Additionally, many forms already bearing a perfective marker cannot be further imperfectivized. In this respect, Pashov (1999: 134) claims that ninety per cent of Bulgarian verbs form perfective-imperfective aspectual pairs.

² Bulgarian perfective verbs cannot be embedded within phrasal verbs (such as ‘begin/finish/continue’) and they are ungrammatical in main clauses in the present and imperfect tense. Additionally, they do not form negative imperatives, active present participles, and, as we have already seen, -NF nominals. As for imperfectivity, Isratkova (2004) claims that there are no positive tests to identify it.
In Bulgarian there are some verbs which are primary perfective\(^3\) or primary imperfective\(^4\). By ‘primary’ I mean that there are no morphological aspectual processes (e.g. prefixation or suffixation) involved in their derivation. That is, these verbs are not derived but are perfective or imperfective by default. From primary imperfective verbs we derive secondary perfectives via suffixation or prefixation. From primary perfectives, we derive secondary imperfectives via suffixation. First, let us consider the latter case.

Pashov (1999:134) claims that in the case of aspectual pairs, the imperfective verbal form is always obtained by the perfective one via aspectual suffixation.\(^5\) Suffixes that bring about imperfectivity are \(-a-(m), ja-(m), -va-(m), -ava-(m), -java-(m), and -uva-(m)\).\(^6\) These suffixes are known as secondary imperfective suffixes. They are added to perfective verbs, both prefixed (derived) and primary, to make them imperfective. An example is provided below:

\[\text{(1) The secondary imperfective suffix}\]

a. **Attached to primary perfectives:**

(i) kup-ja > kup-uva-m  
buy-ja.1PS.SG > kup-Ø.TH.VOW-uva.IMPF-m1PS.SG  
‘buy’ (PF\(^7\)) > ‘buy’ (IMPF)

(ii) skoch-a > skach-a-m  
jump-a.1PS.SG > jump-Ø.TH.VOW-a.IMPF-m.1PS.SG  
‘jump’ (PF) > ‘jump’ (IMPF)

---

\(^3\) Pashov (1999: 136) claims that in Bulgarian there are about fifty primary perfective verbs which contain neither a prefix nor the semelfactive perfectivizing suffix ‘n’-; some examples are ‘vidja’ (see), \(dam\) (give), kupja (buy), rodja (give birth), skochja (jump), hvärja (throw), chuja (hear), turja (put), and reka (say).

\(^4\) The majority of the verbs which lack any aspectual suffix or prefix are considered imperfective (Pashov, 1999: 136). Some examples are ‘nosja’ (carry), ‘cheta’ (read), ‘mija’ (wahs), and ‘jam’ (eat).

\(^5\) There are also biaspectual verbs in Bulgarian. These are almost exclusively loan words. They may be used as both perfective and imperfective without changing their form. Such verbs usually contain the suffixes \(-ira, -izira\): e.g. oper-\(ira\)(m) ‘operate’, reag-\(ira\)(m) ‘react’; and harakter-\(izira\)(m) ‘characterise’ (see Pahsov 1999: 138, for more details). I will not discuss them here.

\(^6\) The type of suffix depends on the conjugation of the verb (Pashov: 1999: 134).

\(^7\) IMPF is my abbreviation for ‘imperfective’ while PF stands for ‘perfective’.
(iii) rod-ja                         → ražd-a-m
  give birth-ja.1PS.SG    → give birth-Ø.TH.VOW-a.IMPF-m.1PS.SG
  ‘give birth’ (PF)          → ‘give birth’ (IMPF)

(b) Attached to Derived Perfectives

(i) pish-a          → [PRE-pish]-a                → [PRE-pis]-va-m
  write- a.1PS.SG > [PRE-write]- a.1PS.SG  > [PRE-write]-va.IMPF-m.1.PS.SG
  ‘write’ (IMPF)          > ‘copy’ (PF)                  > copy (IMPF)

(ii) chet-a       → [PRO-chet]-a               → [PRO-chit]-a-m
  read-a.1PS.SG  > [PRO-read]- a.1PS.SG > [PRO-read]-Ø.TH.VOW--a.IMPF-m.1.PS.SG
  ‘read’ (IMPF)   > ‘read completely’ (PF) > ‘read completely’ (IMPF)

From the examples above we see that, for a perfective verb to become
imperfective, the secondary imperfective suffix –va (or one of its allomorphs) is
needed. In (1a: ii) we observe that there is a change in the root vowel. Following
Svenonius (2004a), this may be accounted for by the regressive VV simplification
rule (see fn. 15, chapter 4). Thus, we may suppose that, when in contact with the
imperfective morpheme (‘-a’ in this case), the thematic vowel is eliminated.
Something similar happens in (1a: iii), where we have a consonant mutation.

Perfective verbs, on the other hand, can be derived either by prefixation
(which is the most usual case, e.g. 1(b)), or by suffixation. The relevant
perfectivizing suffix in this respect is the semelfactive morpheme ‘-n’ (abbreviated
as ‘SEM’ here). It is used to derive a perfective verb from an imperfective one as in
(2) below:

---

8 By ‘derived’ perfectives I mean perfective verbs which are derived from imperfective ones via
prefixation.
9 Isratkova (2004) also states that deriving (im)perfectivity often implies a change in the root vowel
or/and consonant gradation (pp. 301-302). On consonant mutation, see 4.1.
The semelfactive suffix

(a) dūrp-a-m > drūp-n-a
pull-a.TH.VOW-m.1PS.SG > pull-n.SEM-a.TH.VOW
‘pull’ (IMPF) > ‘pull’ (PF)

(b) rev-a > rev-n-a
cry-a.1PS.SG > cry-n.SEM-a.TH.VOW
‘cry’ (IMPF) > ‘raise a howl’ (PF)

Apart from having a perfectivizing function, the semelfactive suffix adds a new meaning to the derived verb. Thus, the newly formed verbs indicate punctual events. In fact, prefixes have similar functions. From the examples in (1b: i, ii) we observe that apart from rendering perfectivity, prefixes modify the meaning of the derived verb. Thus, from ‘pisha’ (write) we get ‘PRE-pisha’ (copy), from ‘cheta’ (read) we get ‘PRO-cheta’ (read through). Due to the great complexity of this topic, I will present just the most general aspects of prefixation in Bulgarian in what follows.

5.2. The role of prefixation: some introductory notes

Slavic prefixes are notoriously heterogeneous. Traditionally, they are divided in two types, lexical and super-lexical. However, following Svenonius (2004a), I will claim that there is a third group, the pure perfectivizing prefixes, that should be considered a separate class as well.

---

10 Svenonius (2004a) regards the semelfactive suffix (‘-n’, or ‘-nu’ in Russian) as a thematic vowel. Thus, he claims that ‘-n(u)’ stems are perfective. I will not further discuss this suffix due to the fact that it is not relevant to the proposals made in this work.

11 The term ‘super-lexical’ was first used by Smith (1991) to refer to Aktionsart. Townsend (1975) uses the term ‘sublexical’ to refer to what is generally known as ‘super-lexical’.

12 Babko-Malaya (1999), for example, claims that there are two classes of prefixes: lexical and super-lexical. For her, lexical prefixes can be divided into pure perfectivizing and resultative prefixes (pp. 50-51).
This section is organized as follows. I will start by discussing the lexical prefixes (§ 5.2.1) and then proceed to a more general view of the super-lexical prefixes (§ 5.2.2). Finally, in section 5.2.3, I will present details about the pure perfectivizing prefixes.

### 5.2.1. Lexical prefixes

Lexical prefixes are considered to have an unstable meaning and to display a rich idiosyncrasy. An example is given below:

\[ (3) \text{Lexical prefixes:} \]

\[
\begin{align*}
\text{(a) } & \text{kaža} > \text{DO- kaža} & \text{(b) dam} > \text{PRO-dam} \\
& \text{say} > \text{prove} & \text{give} > \text{sell}
\end{align*}
\]

We observe that lexical prefixes (3) derive a completely new verb, i.e. a verb with a new meaning. This may further explain why lexical prefixes often change the argument structure of the verb. Consider the examples below:

\[ (4) \]

\[
\begin{align*}
\text{(a) (i) kazvam neshto na njakoj} \\
\text{say.1.PS.SG something to someone} & \text{‘I say [something] [to someone]’}
\end{align*}
\]

\[
\begin{align*}
\text{(ii) kazvam na njakoj che shte dojda} \\
\text{say.1.PS.SG to someone that will come-1.PS.SG} & \text{‘I say [to someone] [that I will come]’}
\end{align*}
\]

---

13 Lexical prefixes are compared to particles in other languages. Consider (i) below:

\[ (i) \]

\[
\begin{align*}
\text{jam} & > \text{IZ-jam} \\
\text{eat} & > \text{eat UP}
\end{align*}
\]

for example, Ramchand (2003), Ramchand and Svenonius (2002) and others claim that lexical prefixes correspond to Germanic resultative particles.
(b) (i) **NA-kazvam** njakoj za neshto

[**NA-say**].1.PS.SG someone for something

[**punish**].1.PS.SG someone for something

I punish [someone] [for something]

(ii) *NA-kazvam* neshto na njakoj

[**NA-say**].1.PS.SG something to someone

[**punish**].1.PS.SG something to someone

*I punish [something] [to someone]*

*[NA-kazvam] che shte dojda*

[**NA-say**].1.PS.SG that will come-1.PS.SG

[**punish**].1.PS.SG that will come-1.PS.SG

*I punish [that I will come]*

From the data in (4) we see that whereas the unprefixed verb ‘kazvam’ (‘say’) can take either a direct object plus an indirect one (4a: i), or a CP complement (4a: ii), the lexically prefixed verb rejects both (4b: ii). Rather, it requires only a direct object and a prepositional complement (4b: i).\(^{14}\)

From the facts above we may conclude that instead of aspectual function, lexical prefixes have, rather, a lexical role, thus generating new lexical items.

5.2.2. Super-lexical prefixes

In contrast to the lexical prefixes, super-lexical prefixes are claimed to have a stable meaning like ‘begin’, ‘finish’, ‘do for a while’, etc. Consider the following examples:

---

\(^{14}\) In other languages, lexically-prefixed verbs have different case-assigning properties. Bulgarian, however, has lost nominal case distinctions.
From (5) we can observe that super-lexical prefixes behave differently with respect to lexical ones. Thus, instead of completely changing the meaning of the super-lexically prefixed verb, super-lexical prefixes just modify it. They are also claimed to correspond to aspectual words or adverbial phrases in English and other languages (see Babko-Malaya (1999: 76)). Additionally, super-lexical prefixes do not change the argument-taking properties of the verb they attach to.

In fact, prefixes with the same phonological content may be either lexical (6a) or super-lexical (6b):

(a) peja > PO-peja

(b) obicham > ZA-obicham

‘sing’ > ‘sing FOR A WHILE’

‘love’ > ‘START TO love’

(5) Super-lexical prefixes

From (5) we can observe that super-lexical prefixes behave differently with respect to lexical ones. Thus, instead of completely changing the meaning of the super-lexically prefixed verb, super-lexical prefixes just modify it. They are also claimed to correspond to aspectual words or adverbial phrases in English and other languages (see Babko-Malaya (1999: 76)). Additionally, super-lexical prefixes do not change the argument-taking properties of the verb they attach to.

In fact, prefixes with the same phonological content may be either lexical (6a) or super-lexical (6b):

(6) a. Lexical prefixes

(i) kaža > IZ- kaža / RAZ-kaža

‘say’ > ‘express’ / ‘narrate’

(ii) dam > IZ-dam / RAZ-dam

‘give’ > ‘publish’ / ‘distribute’

(b) Super-lexical prefixes:

(i) IZ-[RAZ-kaža]¹⁷

COMPLETELY-[RAZ-say]

COMPLETELY-[narrate]  (‘narrate completely’)

---

¹⁵ In this respect, Babko-Malaya (1999: 76-77) claims that super-lexical prefixes are modifiers of verbal phrases or whole sentences whereas lexical prefixes modify the meaning of the verb.


¹⁷ Henceforth, I will use square brackets for lexical prefixes and no brackets for super-lexical ones.
In (6a) IZ- and RAZ- are lexical prefixes, whereas they are super-lexical in (6b). It is thought that when internal to the verb, prefixes tend to be interpreted as lexical whereas when external, they are super-lexical. In (6b), for example, the internal RAZ- (6b:i, ii) and PRO- (6b:iii) are lexical prefixes in that they change the meaning of the verb completely. The external IZ- (6b: i, ii) and RAZ- (6b: iii) are super-lexical and usually translated as an adverbial (‘completely’, ‘excessively’). In fact, super-lexical prefixes are traditionally regarded as attaching external to lexical ones.\textsuperscript{18}

Isratkova (2004) provides the following inherent meanings of super-lexical prefixes in Bulgarian:\textsuperscript{19}

(7) \textit{Inherent meanings of super-lexical prefixes in Bulgarian}

(a) \textbf{PRE} - ‘to do again’ [PRE-kupja ‘buy again’]
(b) \textbf{RAZ} - ‘to do in excess, to the very end, in many directions’
\hspace*{1cm} [RAZ-prodam ‘sell \textit{excessively}’]
(c) \textbf{NA} - ‘cumulative’ (requires a plural or mass nominal argument)
\hspace*{1cm} [NA-prodam ‘sell \textit{a lot}’]
(d) \textbf{PO} -: three types:
\hspace*{1cm} (i) distributive over subjects and objects ‘little by little’
\hspace*{3cm} [PO-NA-prodam ‘sell many things \textit{little by little}’]

\textsuperscript{18} See Svenonius (2004a, b, c), and Isratkova (2004), among many others. However, it should also be clear that super-lexical prefixes may sometimes be attached directly to the verbal stem (e.g. peja ‘sing’ > ZA-peja ‘start to sing’).

\textsuperscript{19} Examples taken from Isratkova (2004: 312).
(ii) delimitative ‘for a while’ [PO-peja ‘sing for a while’]
(iii) attenuative ‘do with low intensity’ [PO-prodam ‘sell a little bit’]

(e) ZA- ‘to begin’ [ZA-peja ‘start to sing’]
(f) DO- ‘to finish’ [DO-peja ‘finish singing’]
(g) IZ- ‘to do completely’ [IZ-RAZ-prodam ‘sell completely in excess’]

As for the super-lexical prefix PO-, I follow Součková (2004) and thus consider there to be only one PO-. Součková (2004) claims that Czech PO- is an extensive measure function. Sometimes it quantifies times (‘for a short time’), sometimes distances (‘for a short distance’), and sometimes intensity (‘to a low degree’, ‘a little bit’). The author argues that in each case the same PO- is involved with a constant meaning.

Thus, we can observe that in contrast to lexical prefixes, super-lexical prefixes have an adverbial-like function but not a lexical one.

5.2.3 Pure prefectivizing prefixes

As already mentioned, there is a third group of prefixes with a pure prefectivizing role. These prefixes yield an imperfective verb perfective with no change in meaning.20 Thus, their function is to indicate that the process denoted by the verb is completed (Babko-Malaya (1999: 51)). Additionally, similarly to super-lexical prefixes and contrary to lexical ones, pure prefectivizing prefixes do not change the selectional restrictions of the verb. An example is given in (8):

(8) Pure prefectivizing prefixes

(a) jam > IZ-jam
    eat  > IZ.PF-eat
    eat (IMPF) > eat up/completely (PF)
(b) melja > s-milam
    grind > S. PF-grind
    grind (IMPF) > grind up/completely (PF)

20 Svenonius (2004a) claims that such prefectivized forms strongly resist conversion to secondary imperfective forms in most cases. He explains this by the notion of blocking. If the secondary imperfective would mean the same as the unprefix stem, then the simpler form might block the more complex one. However, he recognises that such an intuition is not yet fully worked out.
We have seen above that these prefixes also intervene in (a)telicity modification. Thus, a –NE nominal, when prefixed, allows for telic modification (see 37b, 38a’, chapter 4). This could be explained by the perfectivizing nature of such prefixes. That is, once attached to the verb, they show that the process denoted by this verb is completed. Hence, telic modification is licensed.

Moreover, these prefixes can also require the presence of the internal argument obligatorily (see 25c, chapter 4). More details on this will be provided in section 5.3.2.

Having shown the basic assumptions regarding aspectual morphology in Bulgarian, I devote the next section to my syntactic analysis of prefixation in this language.

5.3. The syntax of prefixation and its role in the nominalizing process

In this section I will offer a syntactic analysis of the three types of prefixes examined in the previous section. I will claim that both perfectivizing and super-lexical prefixes are syntactically derived and occupy head positions. As for lexical prefixes, they are lexically derived as part of the verbal stem because they form new lexical items. I will start by discussing lexical prefixes.
5.3.1. The syntax of lexical prefixes

As we have seen in the previous section, lexical prefixes yield new meanings. This suggests that lexically prefixed verbs should be listed as separate items in the Lexicon. Additionally, they change the argument-taking properties of the verb (see (4) above).

Because of these facts, I propose that lexical prefixes be inserted presyntactically, i.e. as part of the root. Additional evidence for such a claim is found in the present thesis I will examine only certain lexical prefixes of the type shown in (e.g. (3), (6), (9)), which have idiosyncratic meaning exceptionally and which always change the argument structure of the newly derived verb. I will claim that these prefixes are derived lexically. However, due to space reasons, I will not pay attention to prefixes that attach to verbs of motion as in (i) due to the fact that they do not have an idiosyncratic meaning and do not change the argument structure of the derived item. As for these prefixes, which we may provisionally label ‘directional’, they could be claimed to be derived syntactically as they often make a copy in syntax:

(i) Tja iz-leze iz zad masata
She out-went out behind the table
She went put from behind the table

Following Rojina (2004) we may tentatively suggest that ‘directional’ prefixes could be derived under Dir(ection)P as in (ii):

(ii) The syntax of ‘directional’ prefixes:

\[
\begin{array}{cc}
\text{VP} & \\
\text{DirP} & \\
\text{Dirº} & \\
\text{IZ-out} & \\
\text{Vº} & \\
\text{Vº} & \\
\text{\sqrt{LIZ}} & \\
\text{go} & \\
\text{Pathº} & \\
\text{PathP} & \\
\text{IZ} & \\
\text{out} & \\
\text{Placeº} & \\
\text{DP} & \\
\text{ZAD} & \\
\text{masata} & \\
\text{Behind} & \\
\text{the table} & \\
\end{array}
\]

In the present study, I will not analyse causative prefixes neither (see (iii)). However, we may also suggests that they are derived syntactically as heads of small \(v\)P:

(iii) Causative prefixes:

Ivan RAZ-plaka deteto
Ivan CAUS-cry child-THE
Ivan made the child cry

Nevertheless, I leave this topic for further research.

21 In the present thesis I will examine only certain lexical prefixes of the type shown in (e.g. (3), (6), (9)), which have idiosyncratic meaning exceptionally and which always change the argument structure of the newly derived verb. I will claim that these prefixes are derived lexically. However, due to space reasons, I will not pay attention to prefixes that attach to verbs of motion as in (i) due to the fact that they do not have an idiosyncratic meaning and do not change the argument structure of the derived item. As for these prefixes, which we may provisionally label ‘directional’, they could be claimed to be derived syntactically as they often make a copy in syntax:

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\[
\begin{array}{cc}
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\text{DirP} & \\
\text{Dirº} & \\
\text{IZ-out} & \\
\text{Vº} & \\
\text{Vº} & \\
\text{\sqrt{LIZ}} & \\
\text{go} & \\
\text{Pathº} & \\
\text{PathP} & \\
\text{IZ} & \\
\text{out} & \\
\text{Placeº} & \\
\text{DP} & \\
\text{ZAD} & \\
\text{masata} & \\
\text{Behind} & \\
\text{the table} & \\
\end{array}
\]

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(iii) Causative prefixes:

Ivan RAZ-plaka deteto
Ivan CAUS-cry child-THE
Ivan made the child cry

Nevertheless, I leave this topic for further research.

22 Babko-Malaya (1999) suggests that lexical prefixes are adjoined to a lexical head pre-syntactically. Ramchand (2003) derives prefixes as heads of the Resultative Phrase (RP). The RP is, in turn, a
by looking at the nominalizing process. In fact, all nominalizations can be formed on lexically prefixed verbs:

(9) **Lexical prefixes inside nominalizations:**

(a) Gender-derived nominalizations

[RAZ-kaz]-út za detsa  
[RAZ-say]-the.MASC.SG for children  
[narrate]-the.MASC.SG for children  
‘the story/narration for children’

(b) Other-suffix nominals

[PRO-d]-a-žba-ta na diamant-i  
[PRO-give]-a.TH.VOW-ŽBA-the.FEM.SG of diamond-PL  
[sell]- a.TH.VOW-ŽBA-the.FEM.SG of diamond-PL  
‘the sale of diamonds’

complement of V’ (see Svenonius 2004c: 312, for more details). Svenonius (2004c) offers a similar proposal. He suggests that lexical prefixes should be analyzed as small clause predicates assuming a R(esult) head below V, as in (i) below (taken from Svenonius (2004c: 206)):

(i) VP Helder ZA-brosil mjač v vorota angličan  
V throw  
RP Helder INTO-throw ball in goal English  
DP ball  
R’  
R PP ‘Helder kicked the ball into the English goal’

However, there is no need to derive lexical prefixes as R heads. First of all, not all lexical prefixes have resultative semantics (e.g. kazvam ‘say’ vs. [DO-kazvam] ‘prove’ vs. [PO-kazvam] ‘show’, vs. [NA-kazvam] ‘punish’ vs. [PRI-kazvam] ‘talk’, vs. [RAZ-kazvam] ‘narrate’, etc). Acquisition gives us further support for the claim that lexically prefixes verbs must be Lexical items, and not syntactically derived. My conjecture is that a child acquiring a language is not conscious of the fact that [DO-kazvam] ‘prove’ derives from kazvam ‘say’ via lexical prefixation. Rather, s/he learns the new lexical item [DO-kazvam] ‘prove’ independently and not necessarily having previously acquired kazvam ‘say’. I cannot support this conjecture with independent data on acquisition, but it seems to me a logical assumption. Moreover, lexically-prefixed verbs correspond to new lexical items in other languages (kazvam ‘say’, do-kazvam ‘prove’, pri-kazvam ‘talk’, etc). Thus, we have no reason to derive such items syntactically. Additional evidence is found in cases where we have two (or more) lexical prefixes attached to the root, which again suggests that they cannot be derived syntactically (see fn. 29).
(c) Voice –IE nominals

[NA-kaz]-a-n-ie-to na Ivan
[NA-say]-a.TH.VOW-N.PASS.PRT-IE-the.NEUT.SG of Ivan
[punish]-a.TH.VOW-N.PASS.PRT-IE-the.NEUT.SG of Ivan
‘the punishment of Ivan’

(d) –NE nominals

[RAZ-kaz]-va-ne-to *(na vits-ove)
[RAZ-say]-va.IMPF-NE-the.NEUT.SG of joke-PL
[tell/narrate]-IMPF-NE-the.NEUT.SG of joke-PL
‘The telling of jokes’

A syntactic analysis for the lexical prefixes in (9) is provided in (10) below:

(10) The syntax of lexical prefixes inside nominalizations:

(a) Gender-derived nominalizations (see 9a)

[RAZ-kaz]-ūt ‘the story/narration’
(b) ‘Other-suffix’ nominals (see 9b)

[PRO-d]-a-žba-ta  ‘the sale’

(c) Voice –IE nominals (see 9c)

[NA-kaz]-a-n-ie-to  ‘the punishment’
(d) \textit{–NE} nominals (see 9d)

\[ \text{[RAZ-kaz]-va-ne-to na vitsove ‘the narrating of jokes’} \]

From (10) we see that lexical prefixes derive as part of LP. Remember that lexical prefixes signal the presence of a stem and not simply a root (see fn. 9, 10, chapter 4). Thus, in the derivations in (10) we have a stem insertion (i.e. LP).

In the case of \textit{–NE} nominals, we saw that when transitive, such nominalizations may sometimes require their internal arguments obligatorily (see 9d). In this case, the internal arguments are projected as Complements of L' (see 10d).

5.3.2. The syntax of pure perfectivizing prefixes

We have already seen that the pure perfectivizing prefixes make the presence of the internal argument obligatory (see 25c, chapter 4). If we prefix a nominalization which can optionally appear with its internal argument, then the
internal argument becomes obligatory. Additionally, these prefixes are also capable of rendering an atelic structure telic (37b, 38a’, chapter 4).

However, as already mentioned, perfectivizing prefixes only make an imperfective verb perfective without any change in meaning. Thus, they should not be treated in the same way as lexical prefixes. Therefore we cannot claim that they are derived pre-syntactically. Additionally, they have an aspectual function and not a lexical one. As for their derivation, I follow Borer (2002) and propose that such prefixes are derived syntactically as heads of AspP (Aspect Quantity Phrase). The reason for adopting this functional projection is that such prefixes often have uses related to the notion of ‘quantity’. Hence, I use the labels ‘quantificational’ and ‘perfectivizing’ interchangeably.

For Borer (2002), Slavic languages assign a quantity value directly onto the head of AspP. This is done by means of the quantificational (perfectivizing) prefixes. Having marked the head of AspP as [+quantity], this further requires the presence of a theme DP argument marked for quantity. An example is given below:

---

23 Babko-Malaya (1999: 63) claims that the same holds for Russian. She says that imperfective unprefixed verbs in Russian usually have optional arguments. However, when a perfectivizing prefix is attached, the object becomes obligatory. In fact, Babko-Malaya states that all accomplishment verbs take internal arguments obligatorily. However, due to the scope of this work, I will not make any comments on this claim for the present time.

24 For Borer (2002) the definition of Quantity is the following:

(i) **Quantity:**
   (a) P is quantity if P is not homogeneous
   (b) P is homogeneous iff P is cumulative and divisive

She considers articles, possessive pronouns, numerals, and certain quantifiers as quantity expressions. For more information, see Borer (2002). In more general terms, quantity interpretation corresponds to Kiparsky’s (1998) notion of boundedness. For critical comments on Borer’s (2002) proposal, see Filip (2005).

25 In the majority of cases, it is really true that quantificationally prefixed verbs require not just any internal argument but a quantity one, which is revealed by (i-iv) below:

(i) iad-oh jabůlki
   *iz-iad-oh jabůlki
   ‘I ate apples’
   *IZ.PF-eat.AOR.1PS.SG apple.PL

(ii) iz-jad-oh tri/njakolko/mnogo jabůlki
   iz-jad-oh jabůlki-te
   ‘I ate up three/some/many apples’
   ‘I ate the apples’

Thus, though bare plurals are acceptable in cases of unprefixed verbs (i), they are not so in prefixed ones (ii). In order for a quantificationally (perfectivized) prefixed structure to become grammatical, the
(11) Quantity in nominalizations

(a) *IZ-jažd-a-ne-to na zakuska mu otne tri chasa
IZ.PF-eat-a.IMPF-NE-the.NEUT.SG of breakfast him took three hours
*the eating up of breakfast took him three hours

(b) IZ-jažd-a-ne-to *(na zakuska-ta) mu otne tri chasa
IZ.PF-eat-a.IMPF-NE-the.NEUT.SG of breakfast-the.FEM.SG him took three hours
‘The eating up of the breakfast took him three hours’

(c) S-mil-a-ne-to na brashno izliza skūpo
S.PF-grind-a.IMPF-NE-the.NEUT.SG of wheat turns out expensive
‘The grinding up of wheat costs a lot’

From the data in (11) we see that prefixed nominalizations cannot appear with bare nouns (11a) due to the fact that they are not quantities in Borer’s terms (see fns. 24). In order for (11a) to become grammatical we need a quantity theme argument, i.e. one that is quantificationally marked. One way to accomplish this is by means of the definite article (see fn. 24 for other possibilities). Thus, (11b) satisfies this requirement and is as a result grammatical. This further supports the claim that it is the prefix that puts restrictions on the denotation of its theme argument in such cases. However, as we saw in fn. 25, this holds only in cases where the internal argument is the incremental theme argument of the verb. Otherwise, such agreement is not obligatory (11c). A possible syntactic derivation is provided in (12):

internal argument of the prefixed verb must denote a quantity (see fn. 24). That is, we may either have some kind of a quantifier (iii) introducing the internal argument, or otherwise we need the definite article (iv) to make the DP a quantity in Borer’s (2002) terms. However, this is not always the case. Filip (2005) claims that this type of agreement relation between the prefixed verb and its internal argument holds only in cases of objects which are incrementally related to the verb, i.e. only when the object is an incremental theme argument of the verb (in Dowty’s (1991) sense). Thus, with verbs like ‘eat’, where the internal argument is incrementally related to the verb, such an agreement takes place. However, with verbs such as ‘carry’ or ‘stir’, the internal arguments do not stand in the Incremental Theme relation to the verb. Hence, ‘quantificational’ agreement between the verb and object is not obligatory. I leave this topic for further investigation. What this suggests is that the meaning of the main lexical verb is a crucial factor in the determination of the (a)telicity characteristics of complex verbal predicates. Filip (2005) further suggests that apart from this, the identification of a suitable incremental theme argument in turn may depend also on world knowledge and pragmatic principles of interpretation.
(12) **The syntax of quantificational prefixes** (see 11b):

`iz-jažd-a-ne-to na zakuska-ta` ‘the eating up of the breakfast’
b. Checking [+Q] in Spec, VP

![Diagram of sentential structure](image)

c. Step-by-step movement operations involved:

*iz-jažd-a-ne-to na zakuska-ta* ‘the eating up of the breakfast’

1. \( \sqrt{vp} \sqrt{jad-} \) Verbalization: ROOT MERGING WITH V IN [SPEC, VP]
2. (i): Quantificational stacking \((\text{Asp}_0 \text{IZ-})\) stacks to \([\text{VP}, \sqrt{\text{P}}]\) in Spec,VP
(ii): Feature checking/sharing and Agreement: \([\text{IZ-}]\) checks the
\([+\text{quantity}]\) feature of the DP complement in Spec,VP (only if the
internal argument is incrementally related to the verb).
3. Secondary imperfectivization (the complex [Asp_0P, VP, \sqrt{P}] moves to Spec, Asp_1P to attach the secondary imperfective suffix –a, an Asp' head)

4. Nominalizing: [Asp_1P, Asp_0P, VP, \sqrt{P}] moves to Spec, nP and attaches the nominalizing suffixal head –NE.
5. Attaching the definite article: \([nP, \text{Asp}'P, \text{Asp}_0P, \text{VP}, \sqrt{P}]\) moves to Spec,DP.

From the derivation in (12) we see that the theme argument is derived as Complement of \(\sqrt{}\). The root phrase \(\sqrt{P}\) then moves to Spec, VP to get verbalized there (12c: 1). Evidence for verbalization is found by the consonant mutation in the derived noun (i.e. the root is \(\text{jad} \) ‘eat’ whereas the nominalization is \(\text{iz-jažd-a-ne} \) ‘eating up’). Once verbalized, the perfectivizing prefix \([\text{IZ}-]\) attaches directly to the structure \([\text{VP}, \sqrt{P}]\) in Spec,VP without further movement (12c: 2(i)). That is, prefixation, and hence perfectivization, takes place in situ (in Spec,VP) without

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26 In this respect, my analysis differs from Borer’s (2002). Whereas Borer (2002) derives the complement DP in Spec,Asp,P, I derive it as Complement of \(\sqrt{}/L'. This is due to the fact that there is not a systematic ‘quantificational’ agreement between the prefixed verb and its internal argument as erroneously claimed by Borer (see fn. 25). As we saw, Filip (2005) claims that such an agreement relation obtains only when the internal argument is the Incremental Theme argument of the verb (see fn. 25). Thus, if, following Borer (2002), we derive the internal argument in Spec,Asp,P, this would wrongly predict that any internal argument of quantificationally prefixed verbs will always agree with these verbs in ‘quantity’ through Spec-Head agreement (see Filip (2005) for further critical comments on this assumption).
any movement. Once this happens, an agreement operation takes place (12c: 2(ii)). Thus, the quantity marked prefix [IZ-] checks the quantity specification of the theme argument ‘the apples’ (recall that such an operation is available for Incremental theme arguments only). Once feature agreement between the prefix and the theme argument takes place, the prefixed structure [IZ-, VP, √P] then further moves to Spec,AspP so that the imperfective suffix –a, an Asp head, can appear on its right (12c: 3). Then, the whole complex [AspP, AspQ, VP, √P] moves to Spec,nP, where the suffix –NE nominalizes the structure (12c: 4). Finally, the definite article, a suffix as well, is attached by moving the newly formed nominal [nP, AspP, AspQ, VP, √P] to Spec,DP (12c: 5). Again, we have an instantiation of Spec to Spec XP movement only. As for the possibility of the complement DP ‘na zakuskata’ (‘of the breakfast’) to intervene during the derivation, we again adopt the theory of Phases (Chomsky 2001) and claim that such a complement, being a phase, is invisible for any morphosyntactic operations during the nominalizing process. Thus, the ungrammatical sequence *IZ-jažd-na zakuskata-O-a-NE-to (literally ‘IZ-eat-of the breakfast-O-a-ING-the’) is completely ruled out.

As for the derivation of the AspQ projection, it should be derived below the AspP which hosts the secondary imperfective suffix. There are several reasons to follow this path of reasoning. Consider the examples below:

(13) (a) (i) jam > (ii) iz-jam > (iii) iz-jažd-a-m
    eat   > IZ.PF-eat > IZ.PF-eat-a.IMPF-m.1PS.SG
    ‘eat’ > ‘eat up’ (PF) > ‘eat up’ (IMPF)

(b) (i) pisha > (ii) na-pisha > (iii) na-pis-va-m
    write > NA.PF-write > NA.PF-write-va.IMPF-m.1PS.SG
    ‘write’ > ‘write down’ (PF) > ‘write down’ (IMPF)

---

27 Such a claim may at first sight appear counter to Kayne’s (1994) assumption that right movement is syntactically impossible. However, here there is no movement operation involved. Rather, the prefix [IZ-] and the verbalized complex [VP, √P] stack together in situ.
From (13) we see that quantificational prefixes attach to primary imperfective verbs (i) and thus make them perfective (ii). Then, the newly formed perfective verbs (ii) can be further made imperfective via secondary imperfective suffixation (iii). This would suggest that the secondary imperfective morpheme derives higher up in the structure. This explains the fact that it scopes over the perfective quantificational prefix thus rendering imperfectivity. That is why the Asp_P should be derived below Asp^P.

To recapitulate, we have seen that lexical prefixes must enter the derivation as part of the verbal stem, directly under LP (10). This explains why lexically prefixed verbs have different lexical meanings and argument structure compared to the unprefixed verb they apparently derive from. Their internal arguments (in the case of –NE nominals), when obligatory, are derived as complements of L′ (see 10d).

As for purely perfectivizing prefixes, they must be analysed as heads of Borer’s (2002) Asp_P. The reason for this is that such prefixes not only require the presence of their internal arguments obligatorily, but, in many cases, also impose further restrictions on these arguments. As we have seen, such arguments should be quantities, i.e. quantificationally marked (in cases where they are incrementally related to the verb).

Having discussed the basic assumptions regarding lexical and perfectivizing (quantificational) prefixes, I will now proceed to an analysis of super-lexical prefixes.

5.3.3. The syntax of super-lexical prefixes

We have seen above that super-lexical prefixes do not change the meaning of the verb (i.e. nominalization) they attach to (see 5, 6b). Rather, they modify it in a similar way to what adverbials do. We have evidence to claim that such prefixes are indeed related to adverbials. In (7) we saw that the inherent semantics
of super-lexical prefixes are adverbial in nature. Additionally, Isratkova (2004) claims that these prefixes appear in a fixed order when they stack, behaving thus in a similar way to adverbials, which are also hierarchically ordered.

Stacking is a common phenomenon in the Slavic languages where two or more prefixes attach to a single verbal stem. Thus, Russian allows for two (and very rarely three) prefixes to be attached to a verb, whereas in Bulgarian up to seven prefixes can stack on it. Following Babko-Malaya’s (1999) line of thought, Isratkova (2004) shows that in Bulgarian, whenever more than two prefixes stack on a single verbal stem, only the innermost is lexical whereas the rest are super-lexical (Isratkova, 2004: 306). As for the hierarchy in which these prefixes are ordered, I provide an example in (14):

\[(14) \text{The hierarchy of super-lexical prefixes} \text{ (Isratkova 2004: 318).}\]

attenuative PO- > ZA- > DO- > IZ- > distributive PO- > NA- > RAZ- > PRE- > semelfactive suffix –N > lexical prefix > VP

In order to syntactically derive super-lexical prefixes in Bulgarian, I follow Cinque’s (1999) hierarchy of aspectual features. Assuming that adverbs do not

28 Combinations of more than four prefixes are infrequent.

29 Though this is a common assumption among linguists working in this field, I believe that this is not always the case. In fact, at least in Bulgarian, we have instances where there are two or more lexical prefixes stacking on a verbal stem. Consider the data below:

\[\begin{align*}
\text{(i) pred-raz-po-} & \text{igail-a-m} \\
\text{PRED-RAZ-[PO]-igail}\text{-a.IMPF-m.1PS.SG} \\
\text{‘I pre-dispose’}
\end{align*}\]

\[\begin{align*}
\text{(ii) raz-pro-stran-java-m} \\
\text{RAZ-[PRO-avoid]-java.IMPF-m.1PS.SG} \\
\text{‘I spread’}
\end{align*}\]

From (i) we see that the cranberry root (i.e. a root which cannot exist on its own) [igail] undergoes lexical prefixation by three lexical prefixes which occur in a fixed order. Each of these prefixes gives a new lexical meaning to the item they attach to. Example (ii), on the other hand, shows that the lexical prefix [PRO-] cannot combine with the stem [stranja ‘avoid’] on its own as it does not ascribe a meaning to it. In fact, it needs the second lexical prefix [RAZ-] so that meaning can be ascribed to the verbal stem. There are, in fact, many cases where a lexical prefix needs the additional presence of another lexical prefix in order to ascribe a new meaning to the verb. This suggests that such prefixes must indeed be part of the stem and not syntactically derived as proposed by Svenonius (2004c), among many others (see fn. 22).

30 For more details on combinational restrictions of super-lexical prefixes in Bulgarian, see Isratkova (2004: 312-316).
move in syntax (apart from wh-movement and focalization cases), Cinque (1999) concludes that they are ordered along a fixed hierarchy of functional projections as in (15):


\[
\begin{align*}
\text{MoodP} & \quad \text{speech act} \\
& > \text{MoodP} \quad \text{evaluative} \\
& > \text{MoodP} \quad \text{evidential} \\
& > \text{ModP} \quad \text{epistemic} \\
& > \text{TP} \quad \text{Past} \\
& > \text{TP} \quad \text{Future} \\
& > \text{MoodP} \quad \text{irrealis} \\
& > \text{TP} \quad \text{anterior} \\
& > \text{ModP} \quad \text{alethic} \\
& > \text{AspP} \quad \text{habitual} \\
& > \text{AspP} \quad \text{repetitive(I)} \\
& > \text{AspP} \quad \text{frequentative(I)} \\
& > \text{ModP} \quad \text{volition} \\
& > \text{AspP} \quad \text{CELERATIVE(I)} \\
& > \text{AspP} \quad \text{terminative (no longer)} \quad \text{[DO- ‘finish’]} \\
& > \text{AspP} \quad \text{continuative} \\
& > \text{AspP} \quad \text{perfect} \\
& > \text{AspP} \quad \text{retrospective} \\
& > \text{AspP} \quad \text{proximate} \\
& > \text{AspP} \quad \text{durative} \\
& > \text{AspP} \quad \text{progressive}
\end{align*}
\]
I adopt the hierarchy in (15) because it presents the full spectrum of possible aspectual features. Additionally, and more important for the proposals made here, it also includes a position for Voice features. According to Cinque (1999), all past participles of active and passive verbs initially generate under VoiceP. This would mean that the past passive participial morpheme –N/-T heads this projection. Evidence for such a claim is found from the (un)availability of certain super-lexical prefixes within some nominalizations.

In (16) we see that whereas –NE nominals accept any kind of super-lexical prefixes (16a, a’), the rest of the nominalizations cannot. –IE nominals almost never allow for any super-lexical prefix (16b, b’) whereas the eventive ‘other-
suffix’ nominals allow only for RAZ- and PRE- (16c, c’). Consider the examples below:

(16) **Super-lexical prefixes inside nominalizations:**

(a) **–NE nominals:**

pre-raz-[PRO-d]-ava-ne-to na tursk-i stok-i
PRE-RAZ-[PRO-give]-ava.IMPF-NE-the.NEUT.SG of Turkish-PL goods-PL
AGAIN-IN EXCESS-[sell]-ava.IMPF-NE-the.NEUT.SG of Turkish-PL goods-PL
‘The selling again in excess of Turkish goods’

(a’) IZ-PO-PRO\(^{31}\)-chit-a-ne-to na star-i-te vestnits-i
IZ-PO-PRO.PF-read-a.IMPF-NE-the.NEUT.SG of old-PL-THE.PL newspaper-PL
COMPLETELY-LITTLE BY LITTLE-THROUGH-read-a.IMPF-NE-the.NEUT.SG of old-PL-THE.PL newspaper-PL
‘The reading through completely little by little of the old newspapers’

(b) **Voice –IE nominals:**

PRE-vůzpít-a-n-ie-to e trudn-a zadacha
PRE-educate-a.TH.VOW-N.PASS.PRT-IE-the.NEUT.SG is difficult-FEM.SG task
AGAIN-educate-a.TH.VOW-N.PASS.PRT-IE-the.NEUT.SG is difficult-FEM.SG task
‘The re-education is a difficult task’

(b’) *IZ-uvoln-e-n-ie-to na rabotnits-i-te
IZ-dismiss-e.TH.VOW-N.PASS.PRT-IE-the.NEUT.SG of worker-PL-the-PL
completely-dismiss-e.TH.VOW-N.PASS.PRT-IE-the.NEUT.SG of worker-PL-the-PL
‘The complete dismissal of the workers’

\(^{31}\) Note here that the perfectivizing prefix PRO- appears closer to the stem [PRO-chitam] ‘read through’. In fact, one might suggest that is must be derived in the lower AspCompletive II projection which, is situated just above the verbal stem (see 15). Yet, the fact that in (16a’) we have another completive prefix [IZ-] that derives under the higher AspCompletive I phrase makes this assumption impossible. This is due to the fact that we cannot have both lower AspCompletive II and higher AspCompletive I projections at the same time. Instead, the perfectivizing prefix [PRO-] derives under [Asp\(_P\)], probably located below AspCompletive II phrase, or perhaps competing with it for the same position.
(c) ‘Other-suffix’ nominals:

\[
\text{PRE-RAZ-[PRO-d]-a-žba-ta} \quad \text{na tursk-i stok-i} \\
\text{PRE-RAZ-[PRO-give]-a.TH.VOW-ŽBA-the.FEM.SG} \quad \text{of Turkish-PL goods-PL} \\
\text{AGAIN-IN EXCESS-[sell]-a.TH.VOW-ŽBA-the.FEM.SG} \quad \text{of Turkish-PL goods-PL} \\
\text{‘The sale again in excess of Turkish goods’}
\]

\[
\text{IZ-[PRO-d]-a-žba-ta} \quad \text{na tursk-i stok-i} \\
\text{IZ-[PRO-give]-a.TH.VOW-ŽBA-the.FEM.SG} \quad \text{of Turkish-PL goods-PL} \\
\text{COMPLETELY-[sell]-a.TH.VOW-ŽBA-the.FEM.SG} \quad \text{of Turkish-PL goods-PL} \\
\text{*The sale completely of Turkish goods}
\]

The data in (16) shows that whereas –NE nominals accept any kind of super-lexical prefixes (16a, a’), –IE nominals accept only the prefix PRE- (16b) and ‘other-suffix’ ones the prefixes PRE- and RAZ- (16c). Adopting the hierarchy in (15), an explanation comes to mind easily.

In my analysis, nominalizers should, in principle, be able to attach above any aspectual projection from Cinque’s (1999) hierarchy. However, once it is nominalized, aspectual prefixation is not allowed inside the nominal.

When we derive a Voice –IE nominal, the nominalizer –IE always attaches directly to the VoiceP projection hosting the past passive participial suffix –N/-T. Once nominalization has taken place, there is no further prefixation. This would suggest that aspectual projections above VoiceP would be incompatible with such nominals. Thus, such nouns would allow only for lower super-lexical prefixes such as the repetitive PRE- (16b).

As for –NE nominals, they accept any prefix because there is nothing in their derivation until they attach to the nominalizer –NE to block it. That is, there is no intermediate position such as VoiceP to which the nominalizer projection nP attaches to block further prefixation from above. In fact, the same should hold for the eventive ‘other-suffix’ nouns which, like –NE nouns, should, in principle,
allow for higher aspectual projections inside them. However, as we see from (16c), they can accept the prefixes PRE- and RAZ- only. For the time being, I have no plausible explanation to account for this fact. Yet, we may arguably assume that it is some semantic feature that accounts for the presence of such prefixes and the absence of the rest. As for eventive –IE nouns, it is their syntactic derivation (the participial suffix –N/-T derived under VoiceP to which the nominalizing head –IE attaches directly) that prevents higher prefixes from appearing inside them.

In my labelling of the projections hosted by super-lexical prefixes, I follow Svenonius (2004a: 195):

(17) **Labels for aspectual projections headed by super-lexical prefixes**

<table>
<thead>
<tr>
<th>Label</th>
<th>Gloss</th>
<th>Prefix</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Inceptive</td>
<td>INCP</td>
<td>ZA-</td>
</tr>
<tr>
<td>(ii) Terminative</td>
<td>TRMN</td>
<td>DO-</td>
</tr>
<tr>
<td>(iii) Completive</td>
<td>CMPL</td>
<td>IZ-</td>
</tr>
<tr>
<td>(iv) Delimitative</td>
<td>DLMT</td>
<td>PO-</td>
</tr>
<tr>
<td>(v) Attenuative</td>
<td>ATTN</td>
<td>PO-</td>
</tr>
<tr>
<td>(vi) Distributive</td>
<td>DSTR</td>
<td>PO-</td>
</tr>
<tr>
<td>(vii) Cumulative</td>
<td>CMLT</td>
<td>NA-</td>
</tr>
<tr>
<td>(viii) Repetitive</td>
<td>RPET</td>
<td>PRE-</td>
</tr>
<tr>
<td>(ix) Excessive</td>
<td>EXCS</td>
<td>RAZ-</td>
</tr>
</tbody>
</table>

A syntactic analysis is proposed in (18) below:
(18) The syntax of super-lexical prefixes:

(a) –NE nominals (see 16a’)

IZ-PO-PRO-chit-a-ne-to na star-i-te vestnits-i

‘The reading through completely little by little of the old newspapers’

32 Note that the root is ˈchet whereas once it becomes verbalized, we obtain [chit]. This change in the root vowel suggests that the thematic vowel is present though covert. Thus, the V head is occupied by the covert verbalizer [Ø].
(b) –IE nominals (see 16b)

\[ \text{PRE-vůzpíta-n-ie-to} \]  ‘the re-education’
From the representations in (18) we see that, in the same way as perfectivizing ones, super-lexical prefixes occupy the head positions of their corresponding aspectual projections.\(^{33}\) Again, we have phrasal movement only. Consider the derivation of (18a), for example. A detailed step-by-step movement

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\(^{33}\) See Svenonius (2004b) for an alternative proposal whereby super-lexical prefixes are claimed to be phrasal. However, bearing in mind that prefixes are drawn from the prepositional inventory (Svenonius 2004c), they thus share categorial features with prepositions. Svenonius (2004c: 217) claims that in the Slavic languages nearly all prefixes can be used as prepositions, or are homophonous with prepositions. Thus, given that prepositions are heads of their own projection (PP), I would rather consider prefixes heads of their corresponding aspectual projections as well.
representation for (18a) is provided in (19) below. The same mechanisms take place in the other two cases (18b, c):

(19) Step-by-step movement operations (see 18a):

IZ-PO-PRO-chit-a-ne-to  na star-i-te vestnits-i
‘The reading through completely little by little of the old newspapers’

1. $\sqrt{VP}\sqrt{chet-}$ Verbalization: ROOT MERGING WITH V IN [SPEC, VP]

![Diagram of VP structure]
2. (i): Quantificational stacking (Asp$_0$ (PRO-) stacks to [VP, √P] in Spec,VP)

(ii): Feature checking/sharing and Agreement: [PRO-] checks the [+quantity] feature of the DP complement in Spec,VP.

---

34 Here and in the following pages I abbreviate ‘starite vestnitsi’ (the old newspapers) as s.v. for lack of space.
3. Secondary imperfectivization: \([\text{Asp}_0 \text{P}, \text{VP}, \sqrt{\text{P}}]\) moves to Spec, Asp'P to attach the secondary imperfective suffix \(-a:\)

![Diagram of the process](attachment:diagram.png)
4. Super-lexical stacking: the attenuative super-lexical prefix [PO-] stacks to [Asp'P, Asp_0P, VP, √P] in situ, i.e. right on top of the quantificational prefix [PRO-] in Spec, Asp'P:
5. Super-lexical stacking: the completive super-lexical prefix [IZ-] stacks to [AspATTNP, Asp'P, Asp₀P, VP, √P] in situ, i.e. right on top of the attenuative super-lexical prefix [PO-]:

AspCMPL(I)P

AspCMPL(I)′

AspATTNP

AspCMPL

AspATTN′

AspATTN

AspP

Asp₀P

Asp′P

AspP₂

Aspₙ′

Asp₀

VP

Asp′

IZ- → PO- → PRO- → PRO-

[+quantity]

(i) √ DP χ χ

(ii) checking

(iii) checking 173
7. Attaching the definite article: the nominal complex \([nP, \text{AspCMPL}(I)P, \text{AspATTN}P, \text{Asp}^I P, \text{Asp}_0 P, \text{VP}, \sqrt{P}]\) moves to Spec, DP, where the definite article \([-\text{to}]\), a D suffixal head, attaches:
From the derivations in (19) we observe that movement is again of the phrasal type only. The Root phrase $\sqrt{P}$ moves to Spec,VP to verbalize (19: 1). Evidence for verbalization is found by the vowel mutation of the derived nominal (i.e. the root is [*chet* ‘read’ whereas the nominalization is *PRO-chit-a-ne-to* ‘the reading through’). Once verbalized in Spec,VP, the quantificational prefix PRO-stacks to the complex [VP, $\sqrt{P}$] in situ, i.e. in Spec,VP (19: 2). Then, the whole structure [Asp$_o$P, VP, $\sqrt{P}$] moves to Spec, Asp$^i$P so that the imperfective suffix [-a] can attach to it (19: 3). Once the structure has become imperfectivized, super-lexical prefixes stack one after another in situ. That is, I assume that super-lexical prefixes stack one on another in the hierarchical way in which they appear, without any movement. This may further explain the fact that higher super-lexical prefixes always scope over lower ones. Thus, the super-lexical prefix PO- from (18a) directly attaches to the complex [Asp$^i$P, Asp$_o$P, VP, $\sqrt{P}$] located in Spec, Asp$^i$P (19: 4). The higher super-lexical prefix IZ- then stacks directly ON the newly formed complex [PO-, Asp$^i$P, Asp$_o$P, VP, $\sqrt{P}$], thus scoping over the lower super-lexical prefix PO- (19: 5). Then, the whole structure [IZ-, PO-, Asp$^i$P, Asp$_o$P, VP, $\sqrt{P}$] moves to Spec,nP to get nominalized by the nominalizing suffix –NE (19: 6). Finally, the definite article is attached by moving the whole [nP, IZ-, PO-, Asp$^i$P, Asp$_o$P, VP, $\sqrt{P}$] to Spec,DP (19: 7). The final result is the nominalization IZ-PO-PRO-chit-a-ne-to ‘the reading through completely little by little’ (see 18a). Again, there is no possibility for the complement DP ‘*na starite vestnitsi*’ (‘of the old newspapers’) to intervene during the derivation due to the fact that it constitutes a phase (Chomky (2001)).

5.4. Some concluding remarks

To recapitulate, we have seen that both aspectual prefixes and suffixes play an important role in the process of nominalization. As for the former, I have proposed that whereas lexical prefixes are derived lexically as part of the verbal stem, pure perfectivizing (or quantificational) ones are derived syntactically as heads of Borer’s (2002) Asp$_o$P. In fact, we saw that there are several reasons for such a claim. Lexical prefixes, on one hand, derive new lexical items and thus
change the argument structure of the new prefixed verb (i.e. nominalization). Additionally, they appear in all of the nominalization types in Bulgarian. As for quantificational perfectivizing prefixes, they do not change the meaning of the derived verb. Rather, they simply perfectivize it. In doing so, the presence of the internal argument becomes obligatory. This was explained by the fact that once derived as heads of Asp_{Q}P, these prefixes mark this head as [+quantity]. This imposes further restrictions on the internal argument of the nominalization, which is subsequently checked for the feature [+quantity] by the quantificational prefix. Thus, this argument must always appear positively specified for the feature [quantity]. However, we have also seen that such an agreement relation obtains only in cases where the internal argument of the verb is also its Incremental Theme argument (see fn. 25). It has also been shown that there are syntactic reasons to claim that Asp_{Q}P is derived closer to the stem, below the projection hosting the secondary imperfective suffix.

As for super-lexical prefixes, I have proposed that they should also be derived syntactically. Due to their adverbial semantics, we saw that these prefixes can be analysed following Cinque’s (1999) hierarchy of aspectual features. Syntactically, they are heads of an aspectual projection found above VP.

We have also seen that not all nominalization types accept super-lexical prefixes. Thus, only –NE nominals allow for any super-lexical prefix to appear inside them. This is due to the fact that nominalizers nPs, in my analysis, derive above all of the aspectual projections hosting the super-lexical prefixes. Thus, on their way up to nP, –NE nominals can pick up any super-lexical prefix.

Voice –IE nominals, on the other hand, allow only for the repetitive [PRE-] prefix. The reason for this is syntactic. Once the verbal stem incorporates the passive participial suffix –N/-T, the nominalizer –IE immediately attaches to the structure. Once nominalized, further prefixation is blocked. Bearing in mind that the participial morphemes –N/-T derive under VoiceP, this explains why super-
lexical prefixes found below it are acceptable inside–IE nominals (i.e. the prefix PRE-). Higher prefixes, on the other hand, are not.

The eventive ‘other-suffix’ nouns, on the other hand, allow for the repetitive [PRE-] and excessive [RAZ-] prefixes. The reason for this cannot be syntactic because, as with –NE nominals, there is no intermediate position (such as VoiceP in the case of –IE nouns) that could block further prefixation. We may thus speculate that there is some semantic feature responsible for this behaviour. I leave this issue for further investigation.
In this work, I have tried to offer a detailed analysis of Bulgarian nominalizations within the Principles and Parameters framework (Chomsky 1981 et seq.). Starting from the assumption that the behaviour of nominals is linked to the functional layers of the construction (T, D, Asp, v, etc.) and the feature specification of such layers (Alexiadou (2001), and van Hout and Roeper (1998), among others), I have shown that morphologically we can distinguish among three types of nominalizations in Bulgarian.

The first type consists of nouns derived from roots or stems via the merger with a gender marker or a suffix marked for gender. These nominalizations, which I have labelled ‘other-suffix’ nominals, lack Aspect and Voice projections. This explains the fact that, in the majority of cases, such nouns denote objects or results, but not events. These nominalizations have received little or no attention in the previous literature.

The second nominalization type consists of nouns derived from Voice Phrases. Contrary to previous analyses, I have shown that these nouns, which I have labelled “Voice –IE” nominals, are what have been traditionally regarded as –NIE nouns in the literature. I have provided further evidence, both semantic and syntactic, to show that such nouns are in fact past passive participial nominalizations. This further explains the fact that in most cases they have a resultative meaning.

The third nominalization type consists of nouns derived from Aspect Imperfective Phrases. These are what have been traditionally regarded as –NE nominals in the literature. These nouns always allow for a process reading. It has been suggested that this is due to the fact that such nominals are always derived from imperfective verbal bases. I have also proposed that there is much more diversity among this group of nominalizations than has traditionally been acknowledged. Thus, I distinguish between gerundive –NE constructions and
derived nominal constructions. As for the first, we have seen that these formations take over some of the gerundive functions found in languages like English. The derived nominal group, on the other hand, corresponds to Grimshaw’s (1990) complex event nominals. However, contrary to previous assumptions, I have also shown that such nouns, apart from denoting processes, can sometimes denote objects as well, probably for historical reasons.

Crucial to my analysis of Bulgarian nominalizations is Grimshaw’s (1990) claim that without event structure there is no argument structure. I have shown, using data on Bulgarian deverbal nouns, that such a claim is confirmed. Thus, as far as argument structure is concerned, we can also distinguish among three nominalization types.

The first group consists of true argument structure nominals. It includes some transitive and prefixed process –NE nominalizations. These are nouns which, like verbs, require the presence of their internal arguments obligatorily. I have explained this behaviour in terms of syntactic structure and composition. That is, it is the transitive nature of such nouns or the presence of perfectivizing prefixes which makes the projection of the internal argument obligatory. These nominals would correspond to Grimshaw’s (1990) complex event nominals.

The second nominalization type consists of the so-called participant structure nominals (Grimshaw (1990)). It includes all of the eventive nominalizations (eventive ‘other-suffix’, -IE and –NE nouns). Though these nouns allow for internal and external arguments to be projected, this is only optional. Additionally, the external argument, when introduced, may have various interpretations and may not refer to the Agent exclusively. These would correspond to what Grimshaw (1990) labels simple event nominals.

Finally, the third nominalization type is the result nominals. These include object-denoting and result (whether ‘other-suffix’, -IE or –NE) nouns. These nominalizations do not denote events and hence cannot take internal
arguments. Thus, they have no argument structure. I have suggested that such nominals project modifiers that may restrict the denotation of the lexical item. These correspond roughly to Grimshaw’s (1990) result nominals.

From the data above we may conclude that each of these morphological nominalization types can include event-denoting and result- (i.e. object-) denoting nouns. The reason for this is syntactic. I have claimed that the event denotation is licensed by the presence of thematic vowels, either overt or covert. Apart from turning a root into a stem, such vowels additionally verbalize the structure. This further allows the nominals to denote events and hence take optional internal arguments thus becoming participant structure nouns (Grimshaw (1990)). Otherwise, they remain result or object-denoting nouns. However, only the transitive and prefixed process –NE nominals can be true argument structure nominals. This is due to the fact that they are always derived from imperfective verbal bases and hence always allow for a process reading. This makes them resemble verbs to a greater degree than the other nouns.

Apart from intervening in argument structure, the eventive/non-eventive distinction within nominals also accounts for the syntactic behaviour of such nouns. Thus, all eventive nouns allow for time and manner modification and the adjective ‘frequent’, whereas pure object-denoting nouns never do. As for agent-oriented adverbials, only the argument-structure –NE nouns accept them. This suggests that such modification, apart from eventive semantics, requires argument structure as well. An interesting case in this respect is the group of result nouns which are ambiguous between object and result interpretation. These nouns do not denote events. However, in their result interpretation, they can combine with manner adverbials and the adjective ‘frequent’. I suggest that a plausible explanation for this is that such modifiers relate not directly to the noun, i.e. the output of the event, but rather to the implicit event which caused this output. However, more research is needed on this issue.
Nominalizations behave differently as far as telicity is concerned. Whereas process –NE nominals systematically allow for atelic modifiers, the other nouns do not. This may further support the hypothesis that –NE nouns inherit the aspectual properties of the verb, which, in turn, explains their durativity semantics. However, (a)telicity also depends on certain properties of the lexical item (e.g. the presence or not of perfectivizing prefixes, the presence of telic PPs, etc.).

Finally, no matter whether they are eventive or not, all of the nominalization types accept nominal modification (Pluralization, Indefinites, Numerals and Demonstratives). This may suggest that eventivity does not play a role here. Rather, it is the syntactic category, a noun, that licenses such modification.

In this work I have shown that not only roots but also stems can be modified in syntax. I have further claimed that category-changing functional projections such as nominalizers (nP) are necessary in order for a non-nominal stem (or a categoriless root) to be interpreted as a noun. I have proposed that gender morphemes and derivational suffixes with inherent gender have such a nominalizing function in Bulgarian. Thus, they are nominalizing heads [n°] in my analysis.

Another issue examined in this work has been the role of prefixation within the nominalizing process. I have proposed that a triple distinction among prefixes should be made. I have provided evidence that the first group, the so-called lexical prefixes, must be derived lexically, i.e. as part of the verbal stem. The second group, the pure perfectivizing (or quantificational) prefixes, must be derived syntactically as heads of Borer’s (2002) AspQ. There are several reasons for such a claim. Lexical prefixes, on one hand, derive new lexical items and thus change the argument structure of the new prefixed verb (i.e. the nominalization process). Additionally, they appear in all the nominalization types in Bulgarian. As for quantificational perfectivizing prefixes, they do not
change the meaning of the derived verb but only perfectivize it. In doing so, the presence of the internal argument becomes obligatory. I suggest several factors to account for this behaviour.

The third group of prefixes consists of the so-called super-lexical prefixes. I have proposed that they must also be derived syntactically. Due to their adverbial semantics, I show that these prefixes can be analyzed following Cinque’s (1999) hierarchy of aspectual features. Syntactically, they are heads of an aspectual projection found above VP.

We have also seen that not all nominalization types accept super-lexical prefixes. Only the –NE nominals allow for a super-lexical prefix. Voice –IE nominals, on the other hand, allow only for the repetitive [PRE-] prefix. The reason for this has been shown to be syntactic. The eventive ‘other-suffix’ nouns also block certain types of super-lexical prefixes. Thus, they allow only for the repetitive [PRE-] and excessive [RAZ-] prefixes. To explain this, I have provisionally suggested that some semantic feature may be responsible for this behaviour.

Finally, I have also examined the types of movement operations involved in the nominalizing process. I have shown that movement is of the phrasal type only (Cinque (2000, 2005); Mahajan (2000); Ferrari (2005)). Contrary to previous head-incorporation approaches to suffixes (Baker (1988)), I have shown that there is no need to postulate head movement in order to account for the correct sequence of suffixes DP-internally. Instead, such a sequence can be accounted for by successive cyclic movements of larger and larger XPs from Spec to Spec positions inside the nominalization. As for the derivation of prefixes, I have proposed that they do not move in syntax. Rather, they stack to the preceding (whether previously prefixed or not) verbalized structure in situ. This claim is further supported by the scope dependencies and interactions between prefixes in cases of multiple prefixation, or what is known as stacking, where the higher prefix always scopes over lower ones.
There are many questions that remain unanswered. Many issues demand further and deeper analyses. For example, it would be interesting to find out why certain transitive –ne nominalizations project their internal arguments obligatorily whereas others do not. What exactly makes the projection of the internal argument obligatory? Is it Causativity that marks the difference? To what extent do telicity and perfectivization contribute to this phenomenon?

On empirical grounds, it would be also interesting to see whether other languages show parallel nominalization types as the ones studied in this work. (I have the intuition that they do, at least in the case of Catalan.) If so, do they behave in a similar way? Where do we detect differences among languages and why? What is cross-linguistically universal, i.e. given by Universal Grammar, and what is language-specific?

Finally, we have seen that many of the differences between nominalizations can be explained in terms of syntactic structural difference and composition. However, we have also seen that some of the facts cannot be explained syntactically. These include the unavailability of certain super-lexical prefixes inside eventive ‘other-suffix’ nouns, the availability of result nominals to modification by manner adverbials, etc. If so, to what extent and exactly where does semantics intervene in the behaviour of nominalizations? Of course, much remains to be done in this area, and for time being we may only speculate.
Appendix 1: Transliteration and transcription key

<table>
<thead>
<tr>
<th>Bulgarian Letters</th>
<th>Transliteration¹</th>
<th>Transcription IPA²</th>
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¹ There are several transliteration systems used for the Romanisation of Bulgarian Cyrillic. However, the system used by each has disadvantages. Here, I follow the United Nations and BGN/PCGN.
² I use the International Phonetic Alphabet (IPA) for the phonetic transcription.
³ Softens consonants before /ɔ/. 
### Appendix 2: List of Abbreviations

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<th>Abbreviation</th>
<th>Description</th>
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<td>first person</td>
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<td>genitive</td>
</tr>
<tr>
<td>IMPF</td>
<td>imperfective</td>
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