



Argument structure of Czech event nominals

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Abstract

The aim of this work is to contribute to the deeper insight into the internal structure of nominal phrase and the typology of its derivation. After sketching the general theoretical framework in the first chapter and after giving an overview of various types of nominals and distinct approaches to their analysis in chapter 2, I focus on one particular group of deverbal nominals in Czech, namely event-denoting nominals in *-(e)ní/tí*. Chapters 3 and 4 present an in depth investigation of verb-like versus noun-like properties of these nominals. Finally, in chapter 5 I provide the account of Czech *-(e)ní/tí* nominals in terms of an articulated functional architecture. My basic argument will be that a proper analysis of eventive nominals necessitates the presence of the extended VP (including VoiceP/vP and AspP but not IP) within the NP.

Keywords: VP, NP, nominalization, argument structure, external argument, internal argument, voice, aspect, functional sequence, eventive nominal, resultative nominal

Contents

Abstract	iii
List of abbreviations	ix
Acknowledgements	xi
1 Introduction	1
1.1 General background and stating the issue	1
1.2 DP-analysis (Abney 1987)	2
1.3 Approaches to nominalization	5
1.3.1 Chomsky (1970, 1965)	5
1.3.2 Lexicalism versus constructionalism	6
1.4 DM-architecture	7
2 Types of Czech nominals	11
2.1 Derived nouns in Czech	11
2.2 Deverbal nominals	12
2.3 Eventive vs. Resultative nominals	15
2.3.1 Grimshaw’s classes of nouns	17
2.4 Derivational approach to distinct types of nominals	25
2.4.1 Marantz (1997)	25
2.4.2 Borer (1999)	27
3 Similarities between verbs and nominals	31
3.1 Morphological issues	31
3.1.1 Derivation of verbal nouns	31
3.1.2 Aspectual morphology	34
3.1.3 Inflectional properties: gender, number and declension	36

3.2	Arguments of event nouns	37
3.2.1	Nouns derived from intransitive predicates	37
3.2.2	Nouns derived from transitive predicates	39
3.2.3	Structural Case: basic pattern	41
3.2.4	Nouns derived from predicates with non-direct objects	43
3.2.5	Nouns derived from ditransitive predicates	44
3.2.6	Hierarchical order of arguments: summary	45
3.3	Obligatoriness of arguments	46
3.3.1	The internal argument of eventive nominals	46
3.3.2	Implicit saturation of arguments	49
3.3.3	The internal argument of resultative nominals	53
3.3.4	Summary	55
4	Differences between verbs and nominals	57
4.1	Optionality of arguments	57
4.1.1	The external argument of eventive nominals	57
4.1.2	The external argument of resultative nominals	60
4.2	The sole argument of intransitives	60
4.2.1	Unaccusative predicates	61
4.2.2	Unergative predicates	62
4.2.3	Predicates with non-direct objects	63
4.3	Summary	64
4.4	Scope of the “passivizing” <i>-(e)n/t-</i> suffix	64
4.4.1	Verbal nouns vs. verbal passives	64
4.4.2	Verbal nouns vs. adjectival passives	66
4.4.3	Summary	67
4.5	Missing T-features	67
4.5.1	[EPP] and [Nom] features	68
4.5.2	Raising and ECM	69
4.6	D-related functional categories	71
4.6.1	Numerals with verbal nouns	71
4.6.2	Adjectival versus adverbial modification	74
4.7	Summary	76
5	Analysis of the nominalizing structure	77
5.1	IA licensing	78
5.1.1	IA of eventive vs. resultative nominals	79
5.2	EA licensing	82

5.2.1	EA optionality	84
5.3	Asp category and IA obligatoriness	88
5.3.1	IA \gg EA ordering	91
5.3.2	Category of Aspect and the intransitives' argument	92
5.4	-(<i>E</i>) <i>N</i> / <i>T</i> - morpheme of nominals	94
5.4.1	-(<i>E</i>) <i>N</i> / <i>T</i> - morpheme of verbal passives	94
5.4.2	-(<i>E</i>) <i>N</i> / <i>T</i> - morpheme of unaccusative adjectival passives	97
5.5	V to N categorial change	97
5.6	Nominal structural positions	100
5.6.1	Postnominal genitive and instrumental	100
5.6.2	Prenominal possessive phrase	102
5.7	Derivational phrase-marking	104
5.7.1	Eventive nouns: passive-like structures	104
5.7.2	Eventive nouns: active-like structures	108
5.7.3	Resultative nouns	112
6	Summary and conclusions	115

List of abbreviations

ABS	absolutive
ADJ	adjective
AG	agent
ACC	accusative
CP	complementizer phrase
DAT	dative
DP	determiner phrase
EA	external argument
EPP	extended projection principle
ERG	ergative
FEM	feminine
GEN	genitive
IA	internal argument
IMP	imperative
IMPF	imperfective
2IMPF	secondary imperfective
INF	infinitive
INTR	intransitive
INSTR	instrumental
MASC	masculine
N	noun, nominal
NEUT	neuter
NOM	nominative
NP	nominal phrase
OBJ	object
PAT	patient
POSS	possessive

PASS	passive participle
PAST	past participle
PF	perfective
PL	plural
PP	prepositional phrase
SG	singular
SUBJ	subject
TP/IP	tense/inflectional phrase
TRANSGR	transgressive
TR	transitive
V	verb
VN	verbal noun
VP	verbal phrase

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Out of the seminars I had the opportunity to participate in during my studies at CASTL, two were most fruitful with respect to the topic of my thesis: 'DP-analysis' by Knut Tarald Taraldsen and 'nano-seminar' by Michal Starke. Although I wasn't able to include all the stimulating ideas which got in these seminars into this work, my reflecting upon the argument structure of nominals owes these two teachers a lot. I thank them for personal discussions as well as for discussions which they excited among participants of their lectures. My thanks belong also to Gillian Ramchand and Klaus Abels who introduced me into the "mysteries of generative syntax" in the first year of my studies and enabled me to understand what was "going on" in the courses mentioned above. My classmates deserve acknowledgements for all the questions they have raised in these classes, especially for those which would never even come to my mind.

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does.

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If this work should be devoted to someone, it would be Dino and Tarald. Both of them know why.

Chapter 1

Introduction

1.1 General background and stating the issue

Distinguishing between grammatical (functional) and lexical categories of sign units is one of the main generalizations of linguistics as a theory of the semiotic system of natural language. While there is still no consensus with respect to the number and characterization of *functional categories* of language, nouns, verbs, adjectives and prepositions are widely accepted as the main representatives of *lexical categories* not only for the past few decades but basically from the time of the very first grammars (cf. e.g. Palek (1989); Roberts (1997)). Nonetheless, even this domain of the theoretical description of language is still under development.

Generative grammar has inherited from the structuralist theory of language a conception that takes the notion of category (in addition to constituency) as fundamental (Roberts 1997, pg. 9). Structures showing a mixed categorial behaviour, i.e. those that seem to share properties of more than one lexical category at a time, have always stood at the center of linguists' attention. The reason is obvious. They represent a "challenge of linguistic analysis" – they enable a better view not only of the system of syntactic categories itself but also of its interplay with the architecture of functional categories that are superimposed above the lexical entry.

One such categorially ambiguous structure, i.e. nouns which share many properties with verbs, stands in the focus of this thesis: the nouns concisely called 'verbal nominals' or 'verbal substantives' in Czech grammars. They have very close counterpart in the English 'ing-of' nominals, sometimes re-

ferred to as ‘action nominals’ or ‘nominal gerund(ive)s’ (Parsons 1990, pg. 132)¹. I will delimit this specific class within the category of Czech nouns in the chapter 2 of this work, here I give just one example (with the famous prototypical correlate in English):

- (1) zničení měst-a nepřítel-em
 destroying.NOM.SG city-GEN.SG enemy-INSTR.SG
 ‘the destroying of the city by the enemy’

The main observation driving the analysis presented here is that Czech verbal nominals seem to have argument structure identical to that of the corresponding verbs so that they induce the same obligatory and optional argument positions as verbal heads induce. Since argument structure is composed from the aspectual and the thematic analysis of a predicate in the sense that event participants are projected as syntactic arguments and any predicate lacking an aspectual analysis also lacks an argument structure, cf. Alexiadou (2001, pg. 10), we talk about argument-supporting nominals as ‘event’ or ‘process’ or ‘action’ nominals.

There is a long tradition of research on argument structure at the clausal level, but the nominal domain remains partly aside despite growing empirical and theoretical evidence that these two domains share striking similarities with regard to their formal structure and information packaging (see pilot studies of this area in Czech by Panevová (2000); Veselovská (2001); Karlík (2002)). The main task of this thesis is to fill the gap in the case of Czech verbal nominals in *-(e)ní/tí* by providing a systematic detailed account of the way in which these nouns license their (external and internal) arguments.

1.2 DP-analysis (Abney 1987)

The first and the most influential work where the internal structure of nominals was analyzed on a par with the internal structure of verbs is Abney’s doctoral dissertation (1987). He proposes the functional structure of a nominal mirroring that of a verb with the functional D-head being a parallel to the Infl-head of a clause. The novelty of Abney’s approach is that non-lexical

¹But see e.g. Pullum (1991) for different use of notions: while ‘nominal gerunds’ correspond to *-ing* constructions with nominal distribution and with structural Accusative, such as *(your) having broken the record*, ‘action nominals’ are those nouns in *-ing* which take *of*-phrase complements.

elements such as determiners of noun phrases are treated as heads of full phrases. They represent lexical instantiations of a functional D-head just as modals are lexical instantiations of a functional I-head.

(2) DP – IP parallelism:

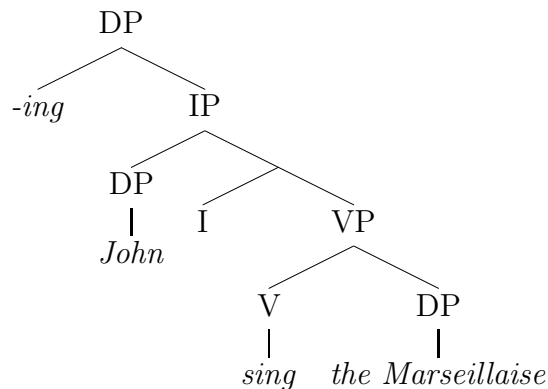


The DP-analysis of the noun phrase allows Abney to reduce the structural difference between various types of gerund in English to differences in the scope of the nominalizing suffix. The three main gerund-types in English, ‘Acc-ing’, ‘Poss-ing’ and ‘Ing-of’ are exemplified in (3):

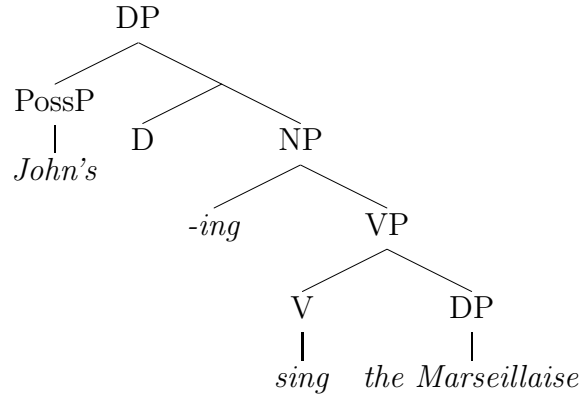
- (3)
- a. John singing the Marseillaise
 - b. John’s singing the Marseillaise
 - c. John’s singing of the Marseillaise

The nominalizer *-ing* takes always a verbal projection, and converts it into a nominal category. Under the assumption that syntactic adjunction is limited to a maximal category, the conversion can occur either at IP, at VP or at V⁰ level which gives rise (respectively) to the three types of gerund in (3), cf. Abney (1987, pgs. 141-142):

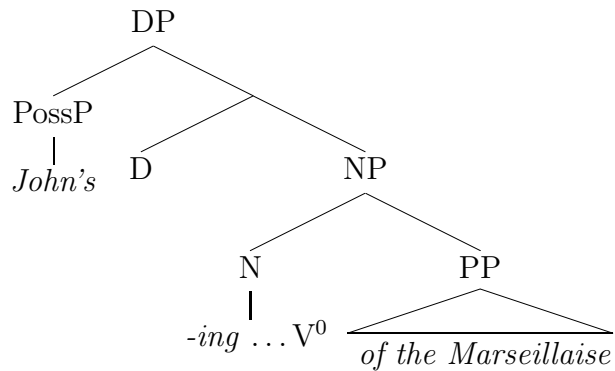
(4) ‘Acc-ing’



(5) ‘Poss-ing’



(6) ‘Ing-of’



The ‘ing-of’ gerunds (which seem to be the closest counterpart to Czech verbal nouns) take a possessive phrase and a complement in the *of*-PP form on account of the fact that they adjoin the *-ing* suffix directly to V^0 . Although Abney talks about all three cases of *-ing* adjunction as about “syntactic” affixation”, he characterizes ‘of-ing’ gerunds as “adjunction in the morphology”. Since the nominalizing suffix of these gerunds is a sister of the bare V which has not been syntactically projected yet, they have no Case-assignment properties associated with verbs.

The refinement of functional architecture since the times of Abney’s dissertation enables a proper syntactic derivation of all three relevant structures. The position of a complement of V is no longer associated with structural Case on its own so that the nominalizing *-ing* can adjoin to VP and still license the *of*-phrase which characterizes the ‘ing-of’ nominals. On the other hand, the syntactic derivation of ‘Poss-ing’ gerunds which have a direct object in the Accusative would require, in terms of Abney, the bigger “scope” for the nominalizer than just the one arising from sisterhood to the bare VP.

Regardless of the details concerning the derivation of gerunds, Abney's analysis of the nominal structure as a projection of the lexical head of Noun which is embedded within the functional projection of the category of Determiner is still accepted and I base my proposal on this analysis as well.

1.3 Approaches to nominalization

1.3.1 Chomsky (1970, 1965)

The correct balance between the lexicon and the categorial component of the grammar in case of the English nominalizing constructions is famously discussed in Chomsky's 1970 *Remarks on nominalization*. While he admits that gerunds of the type 'John's refusing the offer' are derived by syntactic transformation of the base sentence-like structure, the limited productivity and structural properties of derived nominals such as 'John's refusal/refusing of the offer' led him to the extension of base rules, and therefore to a simplification of the transformational component.

Although Chomsky calls his approach "lexicalist", it is a matter of discussion whether the enrichment of the base rules is identical with the growth of lexicon, cf. Marantz (1997). Crucial for Remarks is the rejection of the distributional definition of categories consequent upon the observation that not only verbs and adjectives but also nominals can take complements so that grammatical categories must be distinguished just by their internal features.

This way of systematically extending the base component of the grammar was enabled by a change in the overall framework of syntactic theory which was proposed already in Chomsky's 1965 *Aspects of the theory of syntax*. Instead of previous rewriting rules that applied to symbols for lexical categories and introduced strings of formatives, the syntactic base now contains a lexicon, i.e. simple list of unordered lexical entries which consist of a collection of specified syntactic features called a complex symbol. The lexicon is clearly distinguished from the categorial component which contains rewriting rules that apply to category symbols, generally involve branching, and generate so-called pre-terminal strings that consist of grammatical formatives and complex symbols. If the complex symbol of some lexical entry matches that found in the pre-terminal string, we can simply replace the grammatical formative by the lexical formative of the corresponding lexical entry.

Even though the theoretical framework has shifted significantly from the

time of ‘Aspects’ and ‘Remarks’, the division of labour between the lexicon and the computational system of syntax is still one of the lively issues of the theory of grammar.

1.3.2 Lexicalism versus constructionalism

Today, basically two ways of accounting for the specific argument-structure and eventivity-related properties of nouns derived from verbs can be distinguished; they are traditionally labeled as ‘lexical’ (or ‘lexicalist’) and ‘syntactic’ (or ‘constructionalist’).

In the first mentioned wide spread approach it is the *mapping between the verb and its derivatives in the lexicon* that assigns to the derived forms shared lexical-semantic properties of the root. The argument-structure changing functions operate on lexical entries, being the source for the projected syntactic structure which can be thus exclusively nominal.

The syntactic account, defended here, ascribes properties common to both verb and verbal nominal to the “full phrasal *syntactic projection of the stem within the structure of the derived word*, relying on syntactic operations, . . . to join together the stem and the affix” (Fu *et al.* 2001, pg. 551).

There is no a priori reason for preferring one way of explanation over another, merely because of the fact that nominalized verbs and their roots share selectional properties or have the same argument structure. Both approaches, i.e. enriched lexicon as well as enriched syntactic component, can account for this, as pointed out in Chomsky (1970). Both approaches have their own advantages and disadvantages. If deverbal nominals are constructed in the lexicon in the form of atomic listed lexical items, we can readily account for their idiosyncrasies which are attested in natural language but at the price of losing generalizations which arise on the basis of a unified structural account. On the other hand, if one adopts the view that nominalization is a syntactic process, the explanation of relations between event nominals and their arguments as compared to the relation between arguments and verbs is more straightforward. Nevertheless, the question arises whether the system does not overgeneralize.

The evaluation procedure for the proposed alternative grammars is a matter of empirically grounded hypotheses resulting from the analysis of linguistic data (cf. Chomsky (1970, pg. 185-187), which corresponds on the level of language acquisition to the child’s method for selecting one of the hypotheses about the structure of her mother tongue. Only explicit empirical facts can

serve as a basis for the argumentation in favour of one approach, and I claim that Czech data presented in the following chapters provide such evidence.

Together with (Borer 2003, pg. 3) I admit that some pairing of some listed items with unpredictable syntactic properties is inevitable, nonetheless “the cause of explanatory adequacy could be greatly served by a systematic investigation of the extent to which the structure does determine the syntactic environment of inserted listed items, rather than the other way around.” The fundamental hypothesis which I want to substantiate by this study is that by postulating the same deep structural positions within the verbal phrase and within the nominal phrase for internal argument as well as for the external, one is able to provide a full and satisfactory account of the systematic behaviour of Czech verbal nominals and of the character of their arguments. Moreover, I want to argue that even the surface obligatoriness of internal arguments of these structures does not in principle differ from that observed for constituents of active verbal structures.

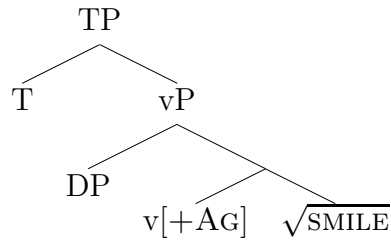
1.4 DM-architecture

My analysis of argument-structure nominals is built on the Distributed Morphology (DM) architecture of grammar where the syntax-morphology interaction is direct in the sense that syntax is the only generative component of the grammar. At morphological structure, i.e. at the syntax-phonology interface *Vocabulary Items* are inserted as terminal nodes into structural positions supplying complexes of morphosyntactic features with phonological features (see Halle and Marantz (1993, 1994). Since the output of the *syntactic derivation* directly feeds the *morphological spell-out* rules, we don’t need to assume any lexicon-specific processes of putting words/morphemes together.

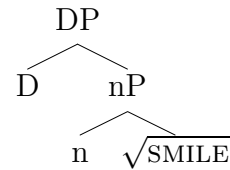
What we need to assume is the difference between the closed class of functional categories which are represented as (bundles of) abstract features on terminal nodes (heads) and the open class of category-neutral roots. These categorially unspecified lexical elements are introduced into variable syntactic environments where they obtain their *category specification* (see Borer (2003) for the related view). While for lexicalists the category of a lexical head determines that of a functional head, in the DM framework the word of a particular syntactic lexical category results from the functional projections that dominate the category-less root (for which the notation ‘ $\sqrt{\quad}$ ’ is standardly

used, borrowing the terminology from Pesetsky (1995)):

(7) ‘(to) smile’



‘a smile’



The theory of grammar presented in the DM-framework is based not only on the existence of the limited set of grammatical categories (which are distinct from the unlimited set of roots bearing lexical semantics) but also on the assumption that functional categories are ordered into a primitive “templatic” sequence. This functional sequence is more finely articulated than the one employed in Abney (1987) as was already mentioned in connection with Case-assignment properties of V-head in 1.2 and even than the one assumed in standard Minimalist Program (MP) where just T (Tense), C (Complementizer) and *v* (a light verb that introduces verbal phrases) are core functional categories. Moreover, it was already mentioned above that in DM categorial features are eliminated in favor of root structures with functional heads – while MP renders functional categories lacking semantic features as an unnecessary “complication of phrase structure theory”, cf. Chomsky (2001, pg. 7, fn. 12).

Unpredictable information such as the special meaning associated with idioms, or basic sound-meaning connections found in a $\sqrt{\text{ROOT}}$, as well as other aspects of language often referred to as “lexical semantics” are stored in a further component of the grammar, the *Encyclopaedia*.

From the point of view of the argument structure licensing it is important to note that Encyclopaedic knowledge provides also the semantic information about differences between roots which implies whether it will enter the transitivity/intransitivity alternation or not (cf. Embick (2004b, pg. 139)). In addition to this type of selectional information which has clear consequences for the *syntactic complementation* there were evidenced also *lexico-semantic selectional restrictions* associated with lexical entries that are relevant for the organization of a syntactic argument structure; cf. Ramchand (2005) where the first phase of syntactic representation corresponds to the decomposition of event structure into three subparts (initiation/causation, process and re-

sult state) which introduce basic syntactic argument types. On the other hand, see Marantz (1997) and Borer (2003) for the “strong computational position” which assumes “all selectional restrictions of Chomsky’s (1965) Aspects model . . . to be fundamentally conceptual and not grammatical” (Borer 2003, pg. 4), in other words all semantic selectional properties are reduced to the context which must be “felicitous” with respect to real world knowledge.

There is obviously no consensus in the literature with respect to how much of the lexical encyclopaedic content is actually needed for the adequate combinatoric component of the grammar, i.e. how much of the *Encyclopaedia* has to interact explicitly with the *computational system*. What is common to all these approaches is that the roots of themselves do not have any arguments since argument/complex-event structure is assumed to emerge through functional syntactic structure (possibly with verbalizing properties). This is the boundary-line which I acknowledge in my analysis of the argument structure of event nominals as well.

The consequences of employing the DM mechanism for the analysis of event nominals’ syntactic structure are quite straightforward. Since there isn’t anything like specific lexicon-internal processes, the distinction between lexical and syntactic derivation cannot be the source of differences between finite verbs and nominalized verbs nor between various types of nominalizations. Rather the main task of the analysis consists of *identifying the different structures and different features* that are responsible for the difference between nominalized and non-nominalized forms.

Chapter 2

Types of Czech nominals

2.1 Derived nouns in Czech

In terms of word-formation, Czech nominals can be divided into two main groups, derived and non-derived ones. Non-derived nouns have only the root and the declension ending, derived nouns are characterized by the presence of one or more derivational affix(es)¹. These affixes can be either prefixes which attach before the root or suffixes which attach after the root and before the declension ending²:

- (1) a. dům-∅ >> dom-**ek**-∅
house-NOM.SG.MASC – house-*deminutive*-NOM.SG.MASC
‘a house’ vs. ‘a small house’
- b. včel-a >> včel-**ař**-∅
bee-NOM.SG.FEM – bee-*agentive*-NOM.SG.MASC
‘a bee’ vs. ‘a beekeeper’
- c. mír-a >> **pře**-mír-a
extent-NOM.SG.FEM – *over*-extent-NOM.SG.FEM
‘extent’ vs. ‘excess’

The next distinction can be made according to whether a noun is derived from a word of the same category or not. While the nouns in (1) were all

¹In the following examples, derivational affixes are emphasized with the approximate denotation of their broad meaning in the glossing line.

²Declension ending often has a zero phonological realization in Czech, especially in the nominative case in singular. I note this “dummy” ending as ‘∅’ in examples (1) to (7), in the following examples it is not noted – if not relevant for the discussion.

derived from other nouns, the following nouns are derived from adjectives and verbs:

- (2) a. chytr-ý >> chytr-**ost**-∅
 clever-NOM.SG.MASC – clever-*property*-NOM.SG.FEM
 ‘clever’ vs. ‘a cleverness’
- b. chytr-ý >> chytr-**ák**-∅
 clever-NOM.SG.MASC – clever-*agentive*-NOM.SG.FEM
 ‘clever’ vs. ‘a clever fellow’
- (3) a. stavě-t >> stav-**ař**-∅
 build-INF – build-*agentive*-NOM.SG.MASC
 ‘to build’ vs. ‘a builder’
- b. stavě-t >> stav-**b**-a
 build-INF – build-*event*-NOM.SG.MASC
 ‘to build’ vs. ‘a construction’
- c. stavě-t >> stavě-**ní**-∅
 build-INF – build-*event*-NOM.SG.NEUT
 ‘to build’ vs. ‘building’

In this work I leave aside nouns derived from nouns and adjectives and I focus on nouns derived from verbs, namely on one of their subgroups which is in grammars traditionally called ‘verbal nominals’ or ‘verbo-nominal hybrids’. These nouns are derived from verbs by the suffix *-(e)ní/tí* and they have a zero declension ending in the nominative. One of its examples was already given in (3-c).

2.2 Deverbal nominals

There are many nouns in Czech which are perceived as being related to some verb. Among the most common ones are agentive nouns, nouns denoting devices of actions, nouns denoting results of actions and nouns denoting states and actions (“event nouns”). Secondly, event nouns can denote results as well. Each of these groups has its typical derivational suffixes, some of which are exemplified under (4) to (7). You can notice that some of nominalizing suffixes belong to many semantic classes at once, e.g. *-č*, *-čk-a*³.

³The derivational suffix is divided from the declension ending by ‘-’; where the declension ending has the null form, it is not noted in the list of suffixes but only on individual

The following review of Czech nominalizing suffixes draws on standard Czech grammars, more precisely on their sections on word-formation by Dokulil and Knappová (1986); Šlosar (1995). That is the place where much more elaborated survey of Czech derivational morphemes and their classes with respect to the general semantics they bear can be found.

- (4) Names of agents: *-tel*, *-č*, *-c-e*, *-ec*, *-ník*, *-ák*, *-ář/ář*
- a. *báda-t* » *bada-tel-∅*
 explore-INF – explor-*agent*-NOM.SG.MASC
 ‘to explore’ vs. ‘an explorer’
 - b. *topi-t* » *topi-č-∅*
 heat-INF – heat-*agent*-NOM.SG.MASC
 ‘to heat up’ vs. ‘a boilerman’
- (5) Names of devices: *-č*, *-ák*, *-ník*, *-k-a*, *-čk-a*, *-dl-o*, *-tk-o*, *-iv-o*
- a. *bí-t* » *bi-č-∅*
 whip-INF – whip-*device*-NOM.SG.MASC
 ‘to whip’ vs. ‘a whip’
 - b. *prá-t* » *pra-čk-a*
 wash-INF – wash-*device*-NOM.SG.FEM
 ‘to wash’ vs. ‘a washing machine’
 - c. *čisti-t* » *čisti-dl-o*
 clean-INF – clean-*device*-NOM.SG.NEUT
 ‘to clean’ vs. ‘a depurator’
- (6) Names of results of actions: *-ek*, *-k-a*, *-in-a*
- a. *sníma-t* » *sním-ek-∅*
 scan-INF – scan-*result*-NOM.SG.MASC
 ‘to scan’ vs. ‘an image’
 - b. *na-lepi-t* » *ná-lep-k-a*
 on-stick-INF – on-stick-*result*-NOM.SG.FEM
 ‘to stick on’ vs. ‘a sticker’
- (7) Names of events: *-∅*, *-∅-a*, *-ot*, *-b-a*, *-k-a*, *-(e)ní/tí*
- a. *vy-tisknou-t* » *vý-tisk-∅-∅*
 out-print-INF – out-print-*event*-NOM.SG.MASC
 ‘to print out’ vs. ‘outprint’

example words.

- b. utěši-t >> útěch-**Ø**-a
 console-INF – console-*eventive*-NOM.SG.FEM
 ‘to console’ vs. ‘consolation’
- c. vzlyka-t >> vzlyk-**ot**-**Ø**
 sob-INF – whine-*eventive*-NOM.SG.MASC
 ‘to sob’ vs. ‘sob’
- d. pře-stavě-t >> pře-stav-**b**-a
 re-build-INF – re-build-*eventive*-NOM.SG.FEM
 ‘to rebuild’ vs. ‘reconstruction’
- e. zkouše-t >> zkouš-**k**-a
 examine-INF – examine-*eventive*-NOM.SG.FEM
 ‘to examine’ vs. ‘exam(ination)’
- f. spá-t >> spa-**ní**-**Ø**
 sleep-INF – sleep-*eventive*-NOM.SG.NEUT
 ‘to sleep’ vs. ‘sleeping’

Although many of these nouns license arguments/event-participants which seem to be inherited from the semantic structure of the predicator, only nouns denoting events can have both the external (EA) as well as the internal (IA) arguments. All other deverbal nouns appear just in the distribution with internal arguments of a corresponding verb:

- (8) stavitel lod-í
 builder.NOM.SG ship-GEN.PL
 ‘a shipbuilder’
- (9) přestavb-a lod-í najat-ými dělník-y
 reconstruction-NOM.SG ship-GEN.PL hired-INSTR.PL worker-INSTR.PL
 ‘the reconstruction of ships by hired workers’

Among deverbal event-denoting nouns, nouns derived by the suffix *-(e)ní/tí* represent the most typical class of these nouns with respect to their productivity in the language and the most consistent class with respect to the internal distribution of their phrase structure. In accordance with the traditional terminology, I will refer to them as to “verbal nouns” or simply as “VNs” in this work. VNs allow the preservation of both agent-like as well as theme-like⁴ arguments of a verb, in contrast to other non-eventive nouns

⁴Abstracting away from the fine-grained thematic hierarchy I use the labels ‘theme’ (alternatively ‘patient’)/‘agent’ in the sense of Dowty’s (1991) generalized proto-roles which

derived from the same verb:

- (10) snímač nákres-ů
 scanner.NOM.SG design-GEN.PL
 ‘a scanner of designs’
- (11) Pavl-ův barevn-ý snímek nákres-u
 Pavel-POSS.NOM.SG colour-NOM.SG image.NOM.SG design-GEN.SG
 ‘Paul’s colour image of a design’
- (12) Pavl-ov-o čast-é snímání nákres-u
 Pavel-POSS-NOM.SG frequent-NOM.SG scanning.NOM.SG design-GEN.SG
 ‘Paul’s frequent scanning of a design’

Even though it might look like that the result noun in (11) occurs also with its external argument in the form of a possessive noun, the interpretation of the possessive DP in this case is much broader, with the agentive interpretation as just one of many possible interpretations. This contrasts to the possessive DP with the event noun in (12) where the EA interpretation is the only possible one.

2.3 Eventive vs. Resultative nominals

It was said that there is a whole group of deverbal event nouns in Czech which take arguments of the similar character as the verbs do. In the proper contexts, however, all of these nouns can denote results of events, in which case they can still appear with their arguments:

- (13) Jak se ti líb-í nov-á
 how REFL you.DAT like-3.SG.PRES new-NOM.SG
 výmalb-a pokoj-e?
 decoration-NOM.SG room-GEN.SG
 ‘How do you like the new decoration of a room?’

correspond in a finite active clause to the structural object/subject syntactic positions of the internal/external arguments of a predicate. For the second mentioned sometimes the labels as ‘deep subject’ or ‘logical subject’ are also used.

- (14) Ředitel-em včera vydan-é příkázání
 director-INSTR.SG yesterday issue-NOM.SG commandment.NOM.SG
 mlče-t vyvola-lo odpor všech zaměstnanc-ů.
 not-speak-INF call-3.SG.PAST protest.ACC.SG all.GEN.PL employee-GEN.PL
 ‘The commandment not to speak which was issued yesterday by the
 director caused the protest of all employees.’

In order to distinguish result-denoting nouns like ‘výmalba’ (a decoration) or ‘příkázání’ (a commandment) which can be ambiguous between eventive and resultative reading from deverbal result nouns that can denote *only* physical entities as e.g. ‘snímek’ (an image) mentioned in (6), I use the labels “eventive” vs. “resultative” for various interpretations of event nouns, in contrast to pure “result” nouns which only the resultative interpretation.

Resultative event nouns do not always denote true “results of events”. They can be just referential nominals with an idiosyncratic meaning, related to verbs from which they are derived on a basis of various semantic relations. See the shift in meaning between the eventive and the resultative interpretation of a noun ‘zastávka’ (a stop):

- (15) a. naš-e čast-é zastávk-y na piv-o
 our-NOM.PL frequent-NOM.PL stop-NOM.PL for beer-ACC.SG
 ‘our frequent stopping in order to have a beer’
 b. zastávk-a autobus-u čísl-o sedm
 stop-NOM.SG bus-GEN.SG number-NOM.SG seven
 ‘a bus stop nr. 7’

Some referential verbal nominals with a lexicalized meaning are characterized by the fact that they differ from the corresponding eventive verbal noun also by a different allomorph of their verbal stem:

- (16) a. stav-ě-ní domk-u
 building.NOM.SG house-GEN.SG
 ‘the building of a house’
 b. krásn-é selsk-é stav-e-ní
 nice-NOM.SG rustic-NOM.SG building.NOM.SG
 ‘the nice rustic building’

2.3.1 Grimshaw's classes of nouns

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

Grimshaw uses a number of tests in order to distinguish nouns with the complex event reading and associated argument structure such as ‘the destruction of a city’, ‘the examination of students’ from simple event-denoting nouns ‘the trip/race/exam/event’ and result nouns ‘the examination/exam/picture/dog’ that do not take obligatory arguments⁵:

- the possibility of aspectual and Agent-oriented modifiers like ‘frequent’, ‘constant’, ‘regular’, ‘intentional’, ‘deliberate’, aspectual adjuncts like ‘for an hour’, ‘in an hour’
- if modifiers like ‘frequent’, ‘repeated’ appear with resultative nouns, they must be in plural, in contrast to only singular eventive nouns: ‘the frequent examination(*s) of students’ vs. ‘the frequent exam*(s)’
- the argument-like (agentive) reading of a prenominal possessive phrase and of a postnominal *by*-phrase, the presence of which necessitates the presence of an object-like argument: ‘the enemy’s destruction *(of a city)’, ‘the examination *(of the students) by the teacher’
- impossibility of indefinite determiners: ‘*an examination of the students’ vs. ‘an examination’, ‘an exam’, ‘a picture’
- impossibility of pluralization: ‘*the examinations of the students’ vs. ‘the examinations’, ‘the exams’, ‘the pictures’
- impossibility of occurrence in the predicative position: ‘*This is the examination of the students’ vs. ‘This is the examination/the exam/the picture.’
- possibility of the implicit argument control ⁶ into an infinitival purpose clause: ‘the examination of all students (in order) PRO to prove

⁵For the overview of diagnostics distinguishing between eventive (event-denoting) and resultative (result-denoting) derived nominals see Borer (1999, pg. 1).

⁶Grimshaw actually argues that it is the “event” not the implicit external argument what controls PRO of the purpose clause, see Grimshaw (1990, pg. 129–133 and references therein).

their preparedness’ vs. ‘*the exam (in order) PRO to prove students’ preparedness’

Czech eventive nouns fit into Grimshaw’s classification according to some although not all of the diagnostics. They allow aspectual modifiers as well as manner modifiers and aspect-sensitive PPs. Last mentioned are however much better with verbal nouns in *-(e)ní/tí* since only these nouns show systematic aspectual distinction between perfective and imperfective type of stem.

- (17) a. *neustál-á/čast-á/rychl-á četb-a knih*
 constant/frequent/quick-NOM.SG reading-NOM.SG book.GEN.PL
 ‘the constant/frequent/quick reading of books’
 b. *neustál-é/čast-é/rychl-é čtení knih*
 constant/frequent/quick-NOM.SG reading.NOM.SG book.GEN.PL
 ‘the constant/frequent/quick reading of books’
- (18) a. ??*četb-a knih-y hodin-u*
 reading-NOM.SG book-ACC.SG hour-ACC.SG
 ‘the reading of a book for an hour’
 b. *čtení knih-y hodin-u*
 reading.IMPF.NOM.SG book-ACC.SG hour-ACC.SG
 ‘the reading of a book for an hour’
 c. *pře-čtení knih-y za hodin-u*
 PF-reading.NOM.SG book-ACC.SG in hour-ACC.SG
 ‘the reading through a book in an hour’

The adjective ‘častý’ (frequent) can occur with resultative nouns as well but never in the singular. This is possible for eventive nouns:

- (19) a. *(*čast-é) Hlášení přiš-lo pozdě.*
 frequent-NOM.SG announcement.NOM.SG come-3.SG.PAST late
 ‘The announcement came late.’
 b. *Do hlavní-ho stan-u přicháze-la čast-á*
 to main-GEN.SG tent-GEN.SG come-3.PL.PAST frequent-NOM.PL
 hlášení.
 announcement.NOM.PL
 To the main tent, frequent announcements were coming.
- (20) *Čast-é hlášení výsledk-ů je*
 frequent-NOM.SG announcement.NOM.SG result-GEN.PL be.3.SG.PRES

nezbytn-é.
 necessary-NOM.SG
 ‘The frequent announcement of results is necessary.’

Czech event nouns can also take an agentive postnominal *by*-phrase which necessitates the presence of the object:

(21) obhajob-a *(student-ů) učitel-em
 defence-NOM.SG students-GEN.PL teacher-INSTR.SG
 ‘the defence of students by the teacher’

(22) zničení *(měst-a) nepřítel-em
 destroying.NOM.SG town-GEN.SG enemy-INSTR.SG
 ‘the destroying of a city by the enemy’

The agentive *by*-phrases, however, are not always compatible with all (transitive) event-denoting nouns – although they are usually compatible with corresponding (transitive) *-(e)ní/tí* nouns:

(23) ??útěch-a pacient-ů jejich doktor-em
 consolation-NOM.SG patient-GEN.PL their.INSTR.SG doctor-INSTR.SG
 ‘the consolation of patients by their doctor’

(24) utěšování pacient-ů jejich doktor-em
 consolation.NOM.SG patient-GEN.PL their.INSTR.SG doctor-INSTR.SG
 ‘the consolation of patients by their doctor’

Since the Czech language doesn’t have an overt determiner system, the distinction between the possible definite vs. the impossible indefinite determiner cannot be used as an indicator of a complex event nominal in Czech.

In contrast to English event nouns, Czech event nouns do allow pluralization while still keeping the eventive interpretation:

(25) Čast-á hlášení výsledk-ů komentátor-em
 frequent-NOM.PL announcement.NOM.PL result-GEN.PL commentator-INSTR.SG
 jsou nezbytn-á.
 be.3.PL.PRES necessary-NOM.PL
 ‘The frequent announcements of results by a commentator are necessary.’

The infinitival purpose clauses are replaced by finite purpose clauses in Czech which have the (reflexive) passive form exemplified in (26). If we take the

subject position of a passive to be specified as a covert pronoun of some sort than there holds the identification relationship between the implicit external argument of the noun and between the implicit pronominal subject of the embedded CP (although we cannot talk about control in the true sense of this word on account of the finite form of the embedded purpose clause):

- (26) Právě probíh-á zkouška/zkoušení student-ů, aby
 just proceed-3.SG.PRES exam/examination.NOM.SG student-GEN.PL to
 se prokázala jejich připravenost na maturit-u.
 REFL prove-3.SG.PAST their.NOM.SG preparedness.NOM.SG for graduation-ACC.SG
 ‘Just now the exam/examination of students proceeds in order to
 prove their preparedness for the graduation.’

On the other hand, if the noun denotes the result of the action and not the process itself, their modification by the purpose CPs is impossible:

- (27) *Počítačově zpracovan-á zkoušk-a student-ů, aby se
 by-computer processed-NOM.SG exam-NOM.SG students-GEN.PL to REFL
 prokázala jejich připravenost na maturit-u,
 prove-3.SG.PAST their.NOM.SG preparedness.NOM.SG for graduation-ACC.SG
 se objevi-la v časopis-e.
 REFL appear-3.SG.PAST in journal-LOC.SG
 ‘The computer-based exam of students in order to prove their pre-
 paredness for the graduation turned up in the journal.’

The presence vs. absence of the semantic event structure determined by the above mentioned indicators is explained by Grimshaw as the presence vs. absence of the event (*Ev*) argument. The selection of this argument is what differentiates theta-marking/argument-taking complex event nominals (CEN) from the non-argument result nominals (RN) and simple event nominals (EN). RN and EN also have an external argument but of the type R (could be conceived as "what is predicated about/referred to by all NPs"):

- (28) a. Complex Event Nouns: observing/observation/expression(*Ev*)
 b. Event Nouns: race/trip/event(*R*)
 c. Result Nouns: book/dissertation/expression(*R*)

According to Grimshaw there is a correlation between the morphological device of nominalization and the type of a noun derived. While the nominalizing

-ing affix is always associated with the *Ev* argument and with the argument structure⁷, affixes like *-ation*, *-ment* are ambiguous between eventive and resultative derivation. Zero-derived nouns stand at the other extreme since they never contain complex event structure.

From the syntactic point of view, CENs are assumed to have the same phrase structure as any other noun; all their verbal properties are brought by their external *Ev* argument. On the lexico-semantic level, *Ev* takes over the internal thematic argument(s) of a predicate but suppresses the agentive one turning it into a kind of argumental-adjunct (a-adjunct):

- (29) a. EN/RN phrase structure: [Det(R) N(R)]
 b. CEN phrase structure: [Det(Ev) N(Ev(x- \emptyset (y)))], where x, y
 = inherited agentive and thematic arguments, \emptyset = suppression.

Grimshaw characterizes nouns as deficient theta-markers with no direct theta-marking capacity. That's why nominals need prepositions as transmitters of theta-role. Prepositions don't have any semantic roles to assign but furnish the predicate with the argument structure properties licensing syntactic expressions. In Czech the role of prepositions is obviously taken over by morphological cases, concretely by the genitive and the instrumental case.

“Paradox” of resultative nominals

In Grimshaw's approach RNs can never surface with true, theta-marked syntactic arguments – although they allow complements corresponding to argument positions in the lexical conceptual structure of a concrete predicate, so-called ‘lcs complements’. In contrast to resultatives, verbs and CENs “project (at least some) participants into their a-structure and thus make their participants grammatical arguments” (1990, pg. 54). Other nominals have only participants with the lcs status but not arguments.

It seems that *Czech resultative nominals can be complemented by their internal arguments to the same extent as their eventive counterparts* can, i.e. the object DP bears the same thematic and syntactic relationship to both the eventive and the resultative instance of a deverbal noun. We have already seen some evidence of this similarity in examples like (14) or (27) and we will get more evidence later. In contrast, the agentive *by*-phrase is not fully compatible with nominals which have the resultative interpretation.

⁷But see Borer (1999, 2003) for counterexamples.

- (30) Podrobn-ý popis *(naš-í cest-y)
 detailed-NOM.SG description.NOM.SG our-GEN.SG journey-GEN.SG
 pečliv-ým průvodc-em zabra-l hodin-u.
 careful-INSTR.SG guide-INSTR.SG take-3.SG.PAST hour-ACC.SG
 ‘The detailed description of our journey by the careful guide took an hour.’
- (31) Na nástěnc-e vise-l podrobn-ý popis
 on wall-LOC.SG hang-3.SG.PAST detailed-NOM.SG description.NOM.SG
 *(naš-í cest-y) (??pečlivým průvodc-em).
 our-GEN.SG journey-GEN.SG careful-INSTR.SG guide-INSTR.SG
 ‘The detailed description of our journey by the careful guide hung on the wall.’

The same holds for *-(e)ní/tí* nouns; in the examples (31) and (33) with a clear *resultative* reading IA complementation is even felt as necessary while the agentive *by*-phrase sounds again a bit unnatural:

- (32) Podrobn-é popsání *(naš-í cest-y)
 detailed-NOM.SG describing.NOM.SG our-GEN.SG journey-GEN.SG
 pečlivým průvodc-em zabra-lo hodin-u.
 careful-INSTR.SG guide-INSTR.SG take-3.SG.PAST hour-ACC.SG
 ‘The detailed describing of our journey by the careful guide took an hour.’
- (33) Na nástěnc-e vise-lo podrobn-é popsání
 on wall-LOC.SG hang-3.SG.PAST detailed-NOM.SG describing.NOM.SG
 *(naš-í cest-y) (??pečlivým průvodc-em).
 our-GEN.SG journey-GEN.SG careful-INSTR.SG guide-INSTR.SG
 ‘The detailed describing of our journey by the careful guide hung on the wall.’

“Paradox” of eventive nominals

The problem from the other side might be presented by the fact there are many clearly *eventive* nominals which do not have to appear with overt arguments:

- (34) Zkoušk-a trva-la jen hodin-u.
 exam-NOM.SG last-3.SG.PAST only hour-ACC.SG

‘The exam lasted only for an hour.’

- (35) Zkoušení probíha-lo cel-ý den.
 examination.IMPF.NOM.SG proceed-3.SG.PAST whole-ACC.SG day.ACC.SG
 ‘The examination proceeded for the whole day’

Examples of this type are inconvenient for Grimshaw’s analysis since for her the event structure associated with a noun crucially requires the presence of the argument structure with obligatory arguments. This point will be scrutinized in 3.3.

Nouns in *-(e)ní/tí* as Czech Complex Event Nouns

In spite of my disagreement with some aspects of her analysis, Grimshaw’s tests confirm that nouns in *-(e)ní/tí* (denoted in this work also by the abbreviation ‘VNs’) represent the most consistent complex event nouns in Czech. What differentiates these nouns from other event nouns in (7) is that even though many perfective deverbal nominals can take object complements, this complementation is not felt by speakers as obligatory. This is not the case with perfective nouns of *-(e)ní/tí* type, which do have obligatory objects:

- (36) a. Vý-stavb-a (dom-u) nám trva-la rok.
 PF-build-NOM.SG house-GEN.SG we.DAT last-3.SG.PAST year.ACC.SG
 ‘The build-up of a house took us a year.’
 b. Vy-stavění *(dom-u) nám trva-lo rok.
 PF-building.NOM.SG house-GEN.SG we.DAT last-3.SG.PAST year.ACC.SG
 ‘The building-up of a house took us a year.’

Verbal nouns in *-(e)ní/tí* are thus similar to the class of so-called gerundive nominals mentioned in Grimshaw (1990, pgs. 67, 121) which are supposed to be the most typical argument-taking event-denoting nouns in English. They do not show the ambiguities that characterize other kinds of nouns, for example with respect to the obligatoriness of their objects:

- (37) a. the felling *(of the trees)
 b. the destroying *(of the city) (Grimshaw 1990, pg. 50)

The same demand for the presence of the object characterizes corresponding Czech verbal nouns in *-(e)ní/tí*:

- (38) a. skácení *(strom-ů)
 felling.NOM.SG tree-GEN.PL
- b. zničení *(měst-a)
 destroying.NOM.SG town-GEN.SG

We will see further parallels between Czech verbal nouns and English gerundive nouns as the work proceeds since I will focus on this subclass of deverbal event nouns in the next chapters of my thesis. The main aim will be to give a satisfactory account of the argument-taking properties of these nouns.

2.4 Derivational approach to distinct types of nominals

2.4.1 Marantz (1997)

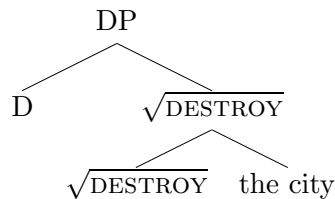
The specific character of *-(e)ni/ti* nouns in contrast to all other event nouns corresponds to the specificity of *-ing* nominals as argued for in Marantz (1997).

The variable behaviour of derived nominals with respect to the arguments they license reflects the various semantic categories of their roots. The basic three types might be exemplified by the following roots:

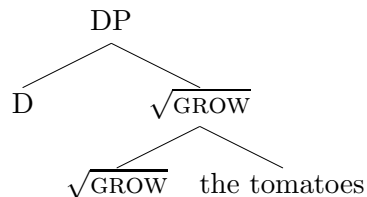
- (39) a. $\sqrt{\text{DESTROY}}$: change of state, implies external cause or agent
 b. $\sqrt{\text{GROW}}$: change of state, internally caused
 c. $\sqrt{\text{BREAK}}$: result of change of state, doesn't imply anything

See that there is nothing a priori different in the structure of nouns derived from these roots except the presupposed appurtenance of the root to the different semantic class:

- (40) the destruction of the city, the city's destruction
 (Marantz 1997, pg. 11)



- (41) the growth of the tomatoes, the tomatoes' growth
 (Marantz 1997, pg. 12)



According to Marantz (1997), the fact that in 'the enemy's destruction of a city' the possessive DP can be interpreted as an agent is due to the general behaviour of possessors of NPs which "may be interpreted in almost any kind of semantic relation with respect to the possessed NP that can easily be reconstructed from the meaning of the possessor and possessed by themselves" (Marantz 1997, pg. 11). If the embedded root denotes an externally caused

change of state as in case of ‘destruction’, the possessor is expected to be interpreted as the external causer/agent.

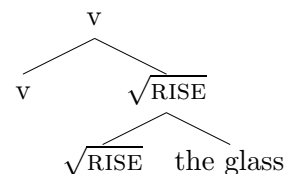
In contrast, $\sqrt{\text{GROW}}$ is underlyingly intransitive (cf. Chomsky 1970, pg. 214-215). That’s why the possessor in ‘my father’s growth of tomatoes’ might be interpreted as somehow responsible for the growth of tomatoes but never as the agent of the sort implied by $\sqrt{\text{DESTROY}}$. The obligatory “subcategorization” of roots of the $\sqrt{\text{GROW}}$ -type for internal causers is also related to the ungrammaticality of ‘my father’s growth’ in the sense of father being the grower.

On the other hand, the subject DP of the finite clause ‘My father grows tomatoes.’ will be always conceived as the true agent of the action. This is due to the presence of a verbal functional head (‘little v’) which projects the agent. This head is “verbalizing” in the sense that categorially unspecified roots become verbs in its environment. The roots of the $\sqrt{\text{GROW}}$ type are compatible with the agentive type of a little v head as well as with v which doesn’t project the agent. The $\sqrt{\text{DESTROY}}$ roots are compatible only with the first type of v on account of their underlying transitive semantics. See the following contrast:

- (42) a. My father grows tomatoes.
 b. Tomatoes grow.
 c. The enemy destroyed the city.
 d. *The city destroyed.

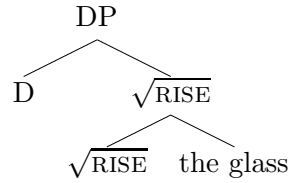
The specificity of the *-ing* nominalization consists in that they are “true” nominalizations in the sense that they are really made from verbs because they contain both a verbalizing v head and a nominalizing D head. This explains the changeable behaviour of roots under various nominalizing suffixes (including the zero-derivation) versus under the *-ing* suffix. Cf. for example the verb ‘rise’ of the $\sqrt{\text{BREAK}}$ -type which doesn’t imply any arguments on its no-internal cause reading⁸:

- (43) John is raising his glass. [agentive v]

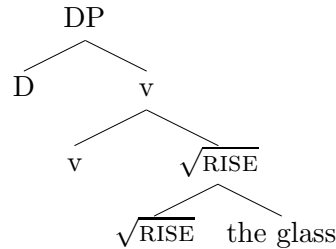


⁸On its $\sqrt{\text{GROW}}$ -like reading ‘rise’ can take the internal causer argument, e.g. ‘the elevator’s rise to the top floor’.

(44) *John's raise of the glass [no v]



(45) John's raising of the glass [agentive v]



My treating Czech *-(e)ní/tí* nouns as the closest parallel to English *-ing* nouns is based mainly on two facts:

- only these nouns systematically allow in case of the eventive meaning the complementation by the agentive *by*-phrase (expressed by a DP in the instrumental morphological case in Czech, cf. (23) versus (24)).
- only these nouns show systematic aspectual distinction between the perfective and the imperfective type of a noun (cf. (18)) which interacts with the complementation of these nouns by thematic DPs

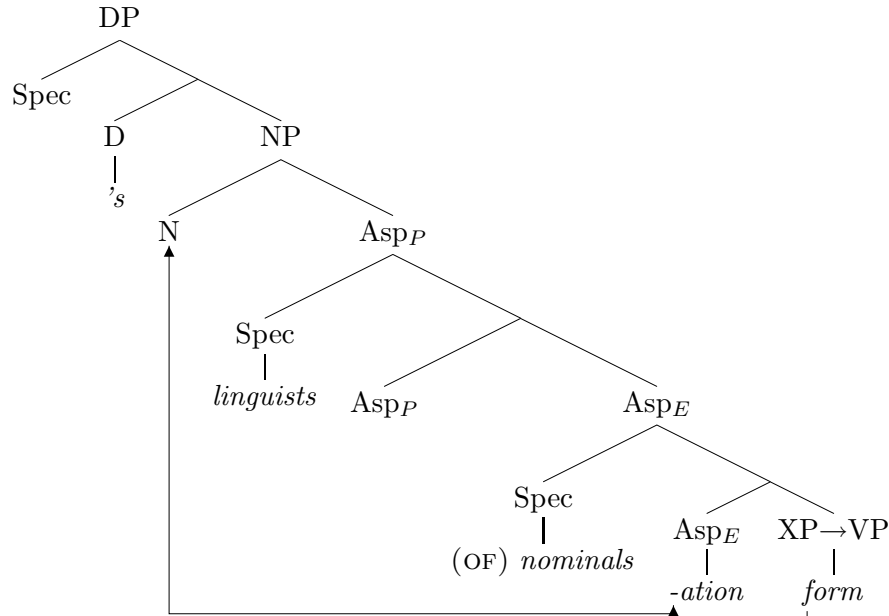
While the first fact might correspond to the projection of the verbalizing agentive v-layer within gerundive nominals as argued for by Marantz (1997), the second property goes in hand with Borer's inclusion of verbalizing aspectual heads within nominalization.

2.4.2 Borer (1999)

The distinction between complex event and other nouns corresponds roughly to the distinction between argument-structure and referential nouns in Borer (1999), for whom the way of derivation of a noun is crucial as to whether a noun will be interpreted as process-denoting or result-denoting. Since it is the presence of a functional structure which licences internal arguments, their presence gives rise to "verbalization" in the sense of syntactic structural determination of category-neutral roots.

Borer (1999) argues that English argument-structure nouns project an aspectual “event measure” head (Asp_E)⁹ which checks for N/D features in its specifier. The DP (or its trace) dominated by the Spec, Asp_E can be conceived as the “measurer of the event”.

(46) linguist’s formation of nominals (Borer 1999, pg. 5)



Borer supports her view of the interpretation of the object DP dominated by Spec, Asp_E by citing Tenny (1992):

The direct internal argument of the verb is constrained to measure out the event through a change in a single property. The change in the direct internal argument during the course of the event must be describable as a change in a single property. The event may be delimited linguistically through reference to that change or that property. . . [T]he direct internal argument measures out the event and an indirect internal argument may delimit it.

(Tenny 1992, pgs. 6-7)

⁹Although the Asp_E head is a structural equivalent of the AgrO head proposed in Chomsky (1995) and assigning accusative Case to the direct object, Borer does not presuppose a Case-assigning relation between the aspectual head and its specifier, at least not for the sake of argument-structure nominals.

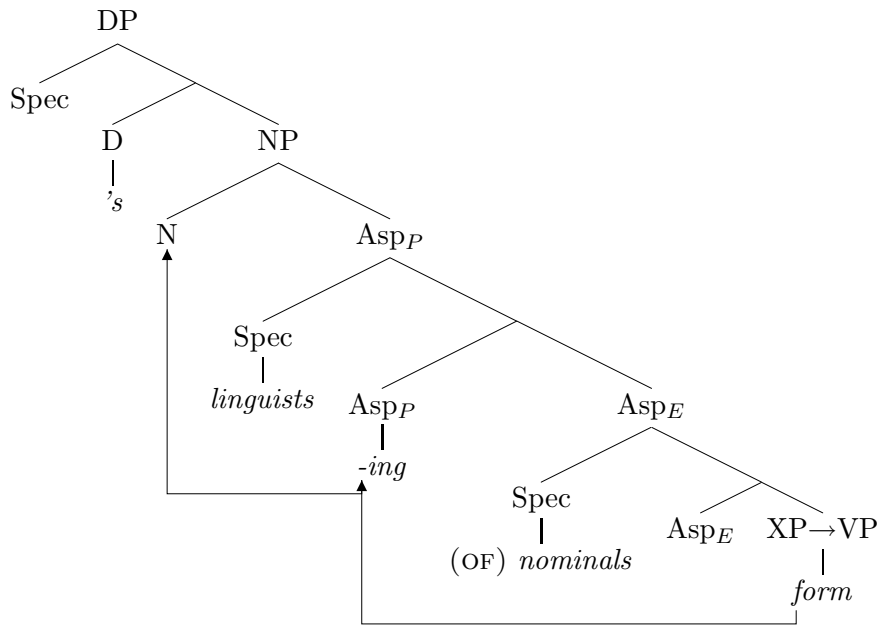
The event measurement interpretation is according to Borer associated with *unaccusative* syntactic diagnostics (Borer 1994, pg. 30), i.e. only DPs with the IA interpretation become the MEASURE arguments. With *unergative* verbs, as she argues, failure to measure an event is associated. Aspectual properties of Asp_E are not activated and its specifier is not projected so that a DP in need of Case must move directly to some Case-assigning position.

If the MEASURE argument is absent, there must be an (otherwise optional) ORIGINATOR argument licensed in the specifier of some higher aspectual node which ensures an agentive reading with unergative verbs. For Borer this is the Asp_P node, see (47).

In addition, Borer's system includes correlation of the nominalizing affix and the flavour of derivation: the *-ation* nominalizing suffix is projected as Asp_E node while the *-ing* suffix of gerundive nominals projects as Asp_P and checks for N/D features in $Spec, Asp_P$.

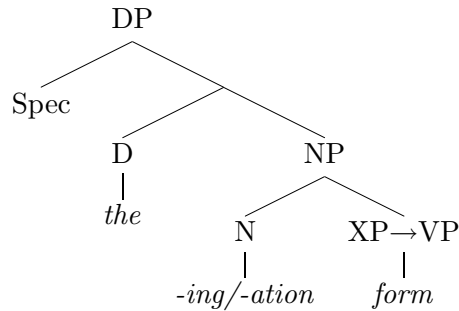
Of-insertion has the character of a structural Case which is available only in functional specifiers. In contrast to e.g. French and Spanish, English allows only one *of*-insertion which is compensated by the possibility of so-called Saxon genitive assigned in $Spec, DP$:

(47) linguist's forming of nominals (Borer 1999, pg. 5)



In contrast, if there is no functional structure as in referential nominals, the nominal features of *-ing* and *-ation* force them to be projected directly as N:

(48) the forming/formation (Borer 1999, pg. 4)



I perceive as an advantage of Borer's syntactic derivational approach that it relates argument-taking properties of a noun to its verbal aspectual properties since they seem to be relevant for the Czech eventive nominals as well. We have already seen some signs of this relation and we will get to more demonstrations of aspect and argument structure interaction later. Nevertheless, the concrete shape of the functional structure of Czech eventive nouns requires much more detailed examination of data. This is the matter of the following chapter in which *-(e)ní/tí* nominals will stand in the limelight.

Chapter 3

Similarities between verbs and nominals

3.1 Morphological issues

3.1.1 Derivation of verbal nouns

Together with specific argument-taking properties, nouns derived by the suffix *-(e)ní/tí* exhibit specific morphological characteristics. While all other deverbal event nominals attach their derivational suffix directly to the root, *-(e)ní/tí* suffix is attached behind the *thematic affix of the verbal stem*¹, see the difference between nominals in the second and the third column of the table (1) which have almost identical meaning (glossed in the fourth column) and which are derived from the same root.

(1) The preservation of thematic suffixes in verbal nouns:

PAST.PART	NOM.SG	NOM.SG	
<i>vy-tisk-(nu)-l</i>	<i>vý-tisk-∅</i>	<i>vy-tisk-nu-tí</i>	‘print-out’
<i>zkouš-e-l</i>	<i>zkouš-ka</i>	<i>zkouš-e-ní</i>	‘examination’
<i>pře-stav-ě-l</i>	<i>pře-stav-ba</i>	<i>pře-stav-ě-ní</i>	‘reconstruction’
<i>vzlyk-a-l</i>	<i>vzlyk-ot</i>	<i>vzlyk-á-ní</i>	‘sobbing’
<i>u-těš-ova-l</i>	<i>ú-těch-a</i>	<i>u-těš-ová-ní</i>	‘consolation’

¹There are five types of theme in Czech: *-∅-*, *-nu-*, *-e-*, *-i-*, *-(ov-)a-*; as a basic alternant of the theme is usually taken the one in the past participle.

According to thematic affixes five “infinitival” verbal classes are distinguished in Czech, cf. table (5). The same, infinitival type of a verbal stem as in verbal nouns appears in Czech in following verbal forms: infinitive, (active) past participle (*-l* participle), passive participle (*-(e)n/t* participle) and archaic past transgressive form:

(2)	INF	<i>nes-∅-t</i>	‘to carry’	<i>mi-nou-t</i>	‘to pass’
	PAST	<i>nes-∅-l</i>	‘carried’	<i>mi-nu-l</i>	‘passed’
	PASS	<i>nes-∅-en</i>	‘(to be) carried’	<i>mi-nu-t</i>	‘(to be) passed’
	TRANSGR.	<i>nes-∅-∅</i>	‘having carried’	<i>mi-nu-v</i>	‘having passed’
	VN	<i>nes-∅-ení</i>	‘carrying’	<i>mi-nu-tí</i>	‘passing’

What is more, the table above shows that *VNs* and *passive participles* don’t share only the form of a verbal stem, i.e. root + theme, but also a part of their derivational suffix, i.e. the *-(e)n/t-* morpheme:

- (3) a. *nes-∅-en* ‘carried’ vs. *nes-∅-en-í* ‘carrying’
 b. *mi-nu-t* ‘passed’ vs. *mi-nu-t-í* ‘passing’

This fact suggests the decomposition of the derivational *-(e)ní/tí* suffix into the “passivizing” *-(e)n/t-* suffix and the “nominalizing” *-í*. However, the same form of a sequence root + theme + derivational suffix is common to both a passive and a verbal noun only in case of transitive stems. It is a cross-linguistically observed fact that intransitives usually cannot passivize in sense of true verbal passives.

Next to the infinitival verbalizing affixes, five present thematic affixes, *-e-*, *-ne-*, *-(u-)je-*, *-í-*, *-á-* can join the root and create the present stem, according to which five “present” verbal classes are distinguished in Czech. The basic alternant is represented by the form of 3.SG.PRES which corresponds to the bare present stem, cf. the second column in the table (5). In contrast to other forms (1.SG, 2.SG, 1.PL, 2.PL, 3.PL), 3.SG doesn’t have any personal ending in present conjugation and represents thus a default form in Czech with respect to denoting the category of a verbal morphological person and number. Forms traditionally treated as based on this type of stem are (simple) present, imperative and present transgressive:

(4)	PRES	<i>nes-e</i>	‘(he) carries’	<i>tisk-ne</i>	‘(he) prints’
	IMP	<i>nes-∅</i>	‘carry!’	<i>tisk-ni</i>	‘print!’
	TRANSGR	<i>nes-a</i>	‘(when) carrying’	<i>tisk-na</i>	‘(when) printing’

By the combination of both “infinitival” and “present” classes of verbs one gets following classification of verbal nouns in Czech which exhausts basically all their formal derivational variants:

(5) Verbal nouns’ derivation²:

	PAST.PART	3.SG.PRES	PASS.PART	VN (NOM.SG)	
I.i	<i>nes-∅-l</i>	nes-e	<i>nes-∅-en</i>	<i>nes-∅-en-í</i>	‘carrying.TR’
	<i>kvet-∅-l</i>	kvet-e	—	<i>kvet-∅-ení</i>	‘flowering.INTR’
I.ii	<i>tisk-∅-l</i>	tisk-ne	<i>tišt’-∅-en</i>	<i>tišt’-∅-en-í</i>	‘printing.TR’
I.iii	<i>kry-∅-l</i>	kry-je	<i>kry-∅-t</i>	<i>kry-∅-t-í</i>	‘covering.TR’
	<i>plu-∅-l</i>	plu-je	—	<i>plu-∅-tí</i>	‘floating.INTR’
II.ii	<i>mi-nu-l</i>	mi-ne	<i>mi-nu-t</i>	<i>mi-nu-t-í</i>	‘passing.TR’
	<i>va-nu-l</i>	va-ne	—	<i>va-nu-tí</i>	‘blowing.INTR’
	<i>tisk-(nu)-l</i>	tisk-ne	<i>tisk-nu-t</i>	<i>tisk-nu-t-í</i>	‘printing.TR’
	<i>s-pad-(nu)-l</i>	s-pad-ne	—	<i>s-pad-nu-tí</i>	‘falling-down.INTR’
III.i	<i>po-zř-e-l</i>	po-zř-e	<i>po-zř-e-n</i>	<i>po-zř-e-n-í</i>	‘ingurgitation.TR’
	<i>po-mř-e-l</i>	po-mř-e	—	<i>po-mř-e-ní</i>	‘dying.INTR’
III.iv	<i>sáz-e-l</i>	sáz-í	<i>sáz-e-n</i>	<i>sáz-e-n-í</i>	‘setting.TR’
	<i>při-cház-e-l</i>	při-cház-í	—	<i>při-cház-e-ní</i>	‘coming.INTR’
IV.iv	<i>pros-i-l</i>	pros-í	<i>proš-∅-en</i>	<i>proš-∅-en-í</i>	‘begging.TR’
	<i>bloud-i-l</i>	bloud-í	—	<i>bloud’-∅-ení</i>	‘wandering.INTR’
V.i	<i>za-br-a-l</i>	za-ber-e	<i>za-br-á-n</i>	<i>za-br-á-n-í</i>	‘taking.TR’
	<i>skáč-a-l</i>	skáč-e	—	<i>skáč-á-ní</i>	‘jumping.INTR’
V.ii	<i>po-č-a-l</i>	po-č-ne	<i>po-č-a-t</i>	<i>po-č-e-t-í</i>	‘conception.TR’
V.iii	<i>kup-ov-a-l</i>	kup-uj-e	<i>kup-ov-á-n</i>	<i>kup-ov-á-n-í</i>	‘buying.TR’
V.v	<i>děl-a-l</i>	děl-á	<i>děl-á-n</i>	<i>děl-á-n-í</i>	‘doing.TR’
	<i>štěk-a-l</i>	štěk-á	—	<i>štěk-á-ní</i>	‘barking.INTR’

If we compare the past participle and the passive participle forms in the table (5) we can see a high degree of stem alternation which is a very common phenomenon in Czech (and in Slavic languages generally):

- softening of the final root consonant or consonantal cluster before the passivizing *-en-* affix in I.ii and IV.iv (The softening is in case of *-p-*, *-b-*, *-t-*, *-d-*, *-m-*, *-n-*, *-v-* represented graphically as “v” above the following *-e-*, cf. I.ii *tiskl* [ciskl] – *tištěn* [ciʃcen] – *tištění* [ciʃceɲi].)

²Capital roman number stands for the infinitival class, lowercase roman number stands for the present one.

- thematic *-i-* vowel disappearance in IV.iv accompanied by the above mentioned alternation of a final consonant or consonants before the inserted *-e-* vowel
- thematic vowel lengthening between the past and the passive participle in V.i, V.iii, V.v

On the other hand, there is almost no difference between the passive participle and the verbal noun form:

- *a > e* alternation in V.ii as the only case of a thematic vowel-quality alternation between the passive participle and the verbal noun, e.g. *poč-a-t* – *poč-e-t-í* ‘conception’; however, there is a strong tendency towards analogical forms of a passive and a VN, corresponding to those in II.ii: *poč-nu-t* – *poč-nu-t-í* ‘conception’
- vowel-shortening of imperfective stems in V.ii as the only case of productive alternation between passives and nouns: *br-a-l* – *br-á-n* – *br-a-n-í* ‘taking.IMPF’ which contrasts to *za-br-a-l* – *za-br-á-n* – *za-br-á-n-í* ‘PF-taking’

This whole derivational detour was made in order to show that nouns in *-(e)ní/tí* have a very specific morphological character which groups them together with verbal forms and sets them apart from the rest of nominals. Also the next section clearly supports this observation.

3.1.2 Aspectual morphology

It was already mentioned in connection with aspect-sensitive modifiers in 2.3.1 that only *-(e)ní/tí* nouns but not other event-denoting nouns systematically morphologically “inflect for aspect”, to the same extent as the corresponding verbs do:

- (6)
- číst ‘read.IMPF.INF’ – pře-číst ‘PF-read.INF’
 - čtení ‘reading.IMPF.NOM.SG’ – pře-čtení ‘PF-reading.NOM.SG’
 - četba ‘reading.NOM.SG’ – *pře-četba ‘PF-reading.NOM.SG’

Nouns in *-(e)ní/tí* can be derived from verbs with any aspectual affix, lexicalized as well as purely grammatical. On the other hand, if a nominal affix different from *-(e)ní/tí* attaches to a root with some aspectual prefix, it is usually the lexical one:

- (7) a. sázet ‘plant.IMPF.INF’ – na-sázet ‘PF-plant.INF’
 b. sázení ‘planting.IMPF.NOM.SG’ – na-sázení ‘PF-planting.NOM.SG’
 c. sadba ‘planting.NOM.SG’ – *ná-sadba ‘PF-planting.NOM.SG’ *but!*
 ✓ vý-sadba ‘outplanting.NOM.SG’

The whole variety of (secondary) imperfectivizing and iterativizing suffixes and perfectivizing prefixes which are possible with (verbs and) verbal *-(e)ní/tí* nouns is nicely exemplified by the flexibility of the noun ‘dělání’ (doing):

- (8) a. děl-**a**-l – děl-**áv-a**-l – děl-**áv-áv-a**-l
 do-IMPF- – -ITER-IMPF- – -ITER-ITER-IMPF-3.SG.PAST
 ‘(he) did’
 b. děl-**á-ní** – děl-**áv-á-ní** – děl-**áv-áv-á-ní**
 do-IMPF- – -ITER-IMPF- – -ITER-ITER-IMPF-NOM.SG
 ‘doing’
 c. *děl-ka – *děl-**áv-ka** – *děl-**áv-áv-ka**
 do – -ITER- – -ITER-ITER-NOM.SG
- (9) a. **do**-děl-**a**-l – **do**-děl-**áv-a**-l – **do**-děl-**áv-áv-a**-l
 PF-do-IMPF- – PF-do-2IMPF-IMPF- – PF-do-ITER-2IMPF-IMPF-3.SG.PAST
 ‘(he) finished’
 b. **do**-děl-**á-ní** – **do**-děl-**áv-á-ní** – **do**-děl-**áv-áv-á-ní**
 PF-do-IMPF- – PF-do-2IMPF-IMPF- – PF-do-ITER-2IMPF-IMPF-NOM.SG
 ‘finishing’
 c. ***do**-děl-ka – **do**-děl-**áv-ka** – ?**do**-děl-**áv-áv-ka**
 PF-do – PF-do-2IMPF- – PF-do-ITER-2IMPF-NOM.SG
 ‘finishing operation’

The extent of this work doesn’t allow me to go into details concerning various types of events (for the event-based analysis of Czech predicates see Daneš (1971)). Even though the reflection of aktionsart distinctions between lexical classes of verbs such as stative vs. dynamic, atelic vs. telic or accomplishments vs. achievements in the structure of nominals would certainly be worth-analysing, I limit myself mainly to the class of dynamic (in)transitive external (non-psych) events. I will distinguish simply between perfective and imperfective stems without reference to their internal (lexical) vs. syntactic (superlexical) derivation (for the review of differences between lexical and superlexical perfectivizing prefixes in Slavic see Součková (2004)).

3.1.3 Inflectional properties: gender, number and declension

Czech nominal inflectional system manifests morphological distinctions for three distinct grammatical genders (masculine, feminine, and neuter), two numbers (singular and plural) and seven distinct morphological cases for each number (nominative, genitive, dative, accusative, vocative, local, instrumental). Distinct morphology for gender, number and case has the form of different inflectional endings. All the three features share one ending and they are displayed on the noun as well as on modifying adjectives and possessive, demonstrative and relative pronouns. The Czech language, as many other Slavic languages, is characterized by a high degree of syncretism, whereby many different features are realized by the same form of a suffix.

On account of the nominal derivational *-í* suffix, these verbal nouns belong to the neuter, the “neutral” grammatical gender which represents kind of default gender in Czech. For example, almost all undeclinable loan nominals join this gender. On the other hand, most other deverbal event nouns have suffixes which rank them either among inanimate masculine or feminine gender nouns, where they join various declension classes.

Within the neuter gender, VNs belong to the declension class with an extremely poor inflectional paradigm. This class is mostly occupied by nouns derived from verbs. It is also a paradigm with a very high degree of syncretism: it has only two distinct forms in singular and four distinct forms in plural:

(10) VN’s inflectional system:

- *stav-en-í-∅*: NOM.SG, GEN.SG, DAT.SG, ACC.SG, LOC.SG, NOM.PL, GEN.PL, ACC.PL
- *stav-en-í-m*: INSTR.SG, DAT.PL
- *stav-en-í-ch*: LOC.PL
- *stav-en-í-mi*: INSTR.PL

VN can in principle occur in both numbers and in all morphological cases. On account of the homonymic forms for various morphological cases, the grammatical number distinction is in NOM, GEN, ACC visible only via agreement on pre-modifying adjectives and pronouns:

- (11) a. to Jan-ov-o ustavičn-é
 that John-POSS-NOM.SG constant-NOM.SG
 pokoušení se o titul
 attempting.IMPF.NOM.SG REFL at denomination.ACC.SG
 ‘that John’s constant attempting at denomination’
- b. ta Jan-ov-a ustavičn-á
 those John-POSS-NOM.PL constant-NOM.PL
 pokoušení se o titul
 attempting.IMPF.NOM.PL REFL at denomination.ACC.SG
 ‘those John’s constant attemptings at denomination’

3.2 Arguments of event nouns

Czech event nominals in *-(e)ní/tí* can be derived from all types of predicates, transitive as well as intransitive ones. There is no other group of derived nouns in Czech which would exhibit nominal parallels to verbs so systematically and to such a huge extent. It is actually difficult to find a verb from which the verbal noun form could not be derived.

3.2.1 Nouns derived from intransitive predicates

The sole argument of Czech intransitive verbs always surfaces as a DP with the structural nominative Case in a finite CP, i.e. it always becomes the subject of the clause. Within the nominal structure such an argument can occur in two possible slots, either in the postnominal genitive-case position (GenP) or in the prenominal possessive-adjective position (PossP).

While basically any type of a DP can have the form of a postnominal GenP, prenominal PossP can be filled only by *one-word animate* subjects *in singular*, as only declinable substantives of this type can have the form of a possessive adjective in Czech³:

- (12) a. zívání tatínk-a/naš-eho tatínk-a/děť-í
 yawning.NOM.SG father-GEN.SG/our-GEN.SG father-GEN.SG/child-GEN.PL
 ‘the father’s/our father’s/children’s yawning’

³For more detailed analysis of restrictions on formation of possessives in Czech see Veselovská (1998, pp. 261-268).

- b. tatínk-**ov**-o zívání
 father-POSS-NOM.SG yawning.NOM.SG
 ‘the father’s yawning’

There are two types of possessivizing suffixes in Czech, *-ův/ov-* and *-in-*. They attach to the noun denoting a possessor according to whether the possessor is of a masculine (alternatively neuter) grammatical gender or of a feminine gender:

- (13) a. tatínk-**ov**-o onemocnění
 father.MASC-POSS-NOM.SG falling-ill.NOM.SG
 ‘the father’s falling ill’
 b. mamínč-**in**-o onemocnění
 mother.FEM-POSS-NOM.SG falling-ill.NOM.SG
 ‘the mother’s falling ill’
 c. kuřátk-**ov**-o onemocnění
 animal.NEUT-POSS-NOM.SG falling-ill.NOM.SG
 ‘the chicken’s falling ill’

The final suffix of a possessive adjective is inflected for case, number and gender under the adjectival agreement with the features on the head noun. All possessives attributed to verbal nouns display the neuter gender morphology on their ending on account of the fact that all VNs belong to the neuter grammatical gender (cf. 3.1.3). These agreement features correspond to *-o* for a VN in NOM.SG and *-a* for a VN in NOM.PL⁴:

- (14) a. tatínk-**ov**-o přistání
 father-POSS-NEUT.NOM.SG landing.NEUT.NOM.SG
 ‘the father’s landing’
 b. tatínk-**ov**-a přistání
 father-POSS-NEUT.NOM.PL landing.NEUT.NOM.PL
 ‘the father’s landings’

There are no established tests distinguishing for Czech between the unaccusative and unergative type of an intransitive predicate, so it is hard to make any generalizations with respect to these classes. Still, I take the possibility of adjectival passive formation (‘target state passives’ in terms of

⁴The grammatical gender of adjectives and nouns is normally omitted in the glosses, except the following example.

Kratzer (2000)) as one of the main diagnosis of unaccusativity in Czech and I assume the existence of this distinction for Czech in my work.

- (15) Unaccusative vs. unergative predicate's behaviour:
- a. Sedátk-o prask(nu)-lo. – prasknu-t-é sedátk-o
 seat-NOM.SG crack-3.SG.PAST – crack-PASS-NOM.SG seat-NOM.SG
 'The seat cracked' vs. 'the cracked seat'
 - b. Slunc-e svíti-lo. – *svíc-en-é slunc-e
 sun-NOM.SG shine-3.SG.PAST – shine-PASS-NOM.SG sun-NOM.SG
 'The sun shined.' vs. 'the shined sun'

Event nominals derived from both unergatives and unaccusatives are perfectly possible in Czech. The slight difference regards the preference for the sole one-word argument of unergatives to occur as a preposed possessor – while there is usually no such a preference for the sole theme-like argument, i.e. in the case of unaccusatives:

- (16) a. skonání papež-e
 dying.NOM.SG pope-GEN.SG
 b. papež-ov-o skonání
 pope-POSS-NOM.SG dying.NOM.SG
 'the pope's dying'
- (17) a. ?skákání dívenk-y
 jumping.NOM.SG girl-GEN.SG
 b. dívenč-in-o skákání
 girl-POSS-NOM.SG jumping.NOM.SG
 'the girl's jumping'

3.2.2 Nouns derived from transitive predicates

Czech is a nominative-accusative language: the EA of a transitive predicate surfaces in the finite clause as the subject in the Nom while the IA fills in the object position which gets structural accusative Case. The different status of an object of a transitive clause with respect to the subject of both transitive and intransitive clause is aligned in a passive clause where the object gets the same, nominative case as the subject of an intransitive clause. We will observe the same type of "alignment" also in verbal nouns since they assign to objects of transitives the same structural positions as to subjects

of intransitives.

Transitive verbal nouns have generally three slots where structural arguments can appear: the postnominal genitive case (GenP), the postnominal instrumental case (InstrP) and the prenominal possessive adjective (PossP), the third one again only for DPs which fulfill the formal conditions on possessive-adjective formation listed in 3.2.1. In addition, there is a strict ordering of postnominal positions: InstrP can never precede GenP.

The internal argument of a transitive predicate can have either the GenP form or the PossP form, on a par with the only argument of intransitive predicates. For the external argument, the agentive InstrP is available:

- (18) a. oloupení **stařenk-y** zloděj-em
 robbery.NOM.SG grandam-GEN.SG thief-INSTR.SG
 ‘the robbery of a grandam by a thief’
 b. **stařenč-in-o** oloupení zloděj-em
 grandam-POSS-NOM.SG robbery.NOM.SG thief-INSTR.SG
 ‘the grandam’s robbery by a thief’

If the agent DP fulfills the requirements of a possessive formation, it can also have the PossP form:

- (19) **zloděj-ov-o** oloupení stařenk-y
 thief-POSS-NOM.SG robbery.NOM.SG grandam-GEN.SG
 ‘the thief’s robbery of a grandam’

Marginally, both the agentive and the thematic argument can get the form of a prenominal PossP, with the strict ordering: EA – IA – N. Although not many some speakers like this option, it is generally interpretable and non-ambiguous:

- (20) a. %Kub-ov-o matč-in-o obviňování
 Kuba-POSS-NOM.SG mother-POSS-NOM.SG blaming.NOM.SG
 ‘Kuba’s(EA) mother’s(IA) blaming’
 b. %matč-in-o Kub-ov-o obviňování
 mother-POSS-NOM.SG Kuba-POSS-NOM.SG blaming.NOM.SG
 ‘the mother’s(EA) Kuba’s(IA) blaming’

If the IA is not expressed because e.g. being understood from the context/knowledge but the EA is still present overtly, it has to leave the InstrP aside and it is allowed to fill in the GenP:

- (21) a. vyprávění pohádek **ovčí** **babičk-ou**
 telling.NOM.SG fairy-tale.GEN.PL sheepish.INSTR.SG grandma-INSTR.SG
 ‘the telling of fairy-tales by the sheepish grandma’
- b. vyprávění **ovčí** **babičk-y**
 telling.NOM.SG sheepish.GEN.SG grandma-GEN.SG
 ‘the sheepish grandma’s telling’
- c. *vyprávění **ovčí** **babičk-ou**
 telling.NOM.SG sheepish.INSTR.SG grandma-INSTR.SG
 ‘the telling by the sheepish grandma’

It should be recalled that the one-word animate agent argument then usually raises to the PossP (see also (19) where the object in GenP *was* expressed):

- (22) **babičč-in-o** vyprávění
 grandma-POSS-NOM.SG telling.NOM.SG
 ‘the grandma’s telling’

Transitive VNs complemented by a single DP in GenP/PossP can be thus ambiguous (only in case of imperfective verbal stems as will be discussed later) between the agent-like and the theme-like interpretation⁵:

- (23) a. osočování znám-ého politik-a
 criticizing.NOM.SG known-GEN.SG politician-GEN.SG
 ‘the known politician’s(EA/IA) criticizing’
- b. politik-ov-o osočování
 politician-POSS-NOM.SG criticizing.NOM.SG
 ‘the politician’s(EA/IA) criticizing’

3.2.3 Structural Case: basic pattern

The examination of intransitive and transitive predicates’ behaviour under nominalization suggests that the genitive position (GenP) licensed by the noun has the character of a structural position similar to Nom and Acc positions with verbs. It is not thematically limited since both the patient and the agent argument can occur in this position but there is a clear hierarchy in assigning the position to distinct arguments: GenP can never host the agentive argument if the thematic one is present. In other words, GenP

⁵In reality, we meet the ambiguity only rarely since the context provides sufficient information for the interpretation.

functions primarily as a deep object position, and only if the object DP is not present in the structure overtly, GenP becomes the landing site for the deep subject.

If we compare the finite verb structure to the nominal structure, the following pattern emerges:

- (24) Structural-Case assignment, nominative-accusative lgs.

	SUBJ _{INTR}	SUBJ _{TR}	OBJ
active CP	NOM	NOM	ACC
passive CP	–	INSTR	NOM
NP	GEN	INSTR	GEN

The event nominal structure is similar to a passive one in assigning the specific case-form (Instrumental) to the deep subjects of transitives. However, it differs from a passive structure in assigning the same structural position to objects of transitives and to subjects of intransitives which cannot happen in a passive clause. The Case pattern of verbal nouns thus fits better into the pattern of ergative languages: not only that they have a specific form for the subject of transitives but they also form finite structures on the basis of intransitive predicates, in which case the ergative verb assigns the same Case to the subject of intransitives as to the object of transitives; cf. Dixon (1979, 1994).

- (25) Structural-Case assignment, ergative-absolutive lgs.

	SUBJ _{INTR}	SUBJ _{TR}	OBJ
active CP	ABS	ERG	ABS
NP	GEN	INSTR	GEN

This observation is not a new one. Analyzing the agentive *by*-phrase within nominals as an ergative Case marker and the *of*-phrase as an absolutive Case marker was proposed in (Williams 1987, pgs. 366–367) and is common for many works on nominalizations, see e.g. Alexiadou (2001, pgs. 18, 119), Zucchi (1989, pg. 190).

3.2.4 Nouns derived from predicates with non-direct objects

What I call "non-direct object" corresponds to an argument which doesn't get structural object Case in the corresponding finite verbal projection but is marked for specific case in the lexicon. Such an argument has the same inherent case as it would have within the finite clause also in the nominal structure:

- (26) a. Matk-a pomáh-á uprchlík-ům.
 mother-NOM.SG help-3.SG.PRES refugee-DAT.PL
 'Mother helps to refugees.'
- b. matč-in-o pomáhání uprchlík-ům
 mother-POSS-NOM.SG helping.NOM.SG refugee-DAT.PL
 'my mother's helping to refugees'

I assume that inherent case of a lexicon-specific argument is assigned directly by verb (in contrast to structural Case valued by the functional head) but I do not elaborate this issue here. Interestingly, the structural behaviour of the second, non-lexicon-specific argument indicates the existence of the unergative versus unaccusative predicate distinction in Czech. Arguments which correspond to the surface nominative subjects of these verbs behave differently in the nominal structure according to whether they correspond to the underlying subject (agent argument) or underlying object (theme argument).

The nouns with the apparent agent character behave the same way as is predicted for EAs of normal transitive predicates: they can have the form of the InstrP (27-b) – in addition to the GenP (27-c), which is available on account of a missing direct object which would normally occupy it:

- (27) a. Starostliv-á matk-a domlouv-á syn-ovi.
 worried-NOM.SG mother-NOM.SG talk-to-3.SG.PRES son-DAT.SG
 'The worried mother is talking to her son.'
- b. domlouvání syn-ovi **starostliv-ou matk-ou**
 talking-to.NOM.SG son-DAT.SG worried-INSTR.SG mother-INSTR.SG
 'talking-to the son by his worried mother'
- c. domlouvání **starostliv-é matk-y** syn-ovi
 talking-to.NOM.SG worried-GEN.SG mother-GEN.SG son-DAT.SG
 'the worried mother's talking-to her son'

There is no difference in meaning between the two forms but the genitive form in (27-c) is more preferred. This situation is expected. Given that when the theme-DP is missing in case of prototypical transitive predicates, the agent-DP movement to the GenP is even obligatory cf. (21-b), it is actually surprising that the forms with the InstrP are still allowed with lexically specific predicates.

By contrast, surface subjects of predicates with the unaccusative character are ungrammatical as InstrPs, cf. (28-b). If they don't have the morpho-syntactic potential to form a PossP as in our example, they can become only GenPs (28-c):

- (28) a. Št'astn-ý vězeň unik-á strážník-ům.
 happy-NOM.SG prisoner.NOM.SG escape-3.SG.PRES policeman-DAT.PL
 'The happy prisoner escapes the policemen.'
- b. *unikání strážník-ům št'astn-ým vězněm
 escaping.NOM.SG policeman-DAT.PL happy-INSTR.SG prisoner-INSTR.SG
 'the escaping to the policemen by the happy prisoner'
- c. unikání št'astn-ého vězně strážník-ům
 escaping.NOM.SG happy-GEN.SG prisoner-GEN.SG policeman-DAT.PL
 'the happy prisoner's escaping to the policemen'

The comparison of (27) and (28) clearly shows that the difference between unergative and unaccusative verbs is structurally relevant for the setout of a nominal phrase even though the distinction is overridden on the level of a finite clause, obviously by the need for a nominative subject.

3.2.5 Nouns derived from ditransitive predicates

Event nouns formed from ditransitive verbs combine into one structure all already mentioned principles: theme arguments become GenPs, agent arguments become InstrPs, other arguments retain their lexicon-specific case/PP. The internal lay-out of ditransitive verbal nouns thus presents confirmation of the above mentioned hierarchy in argument licensing:

- (29) Náš otec věnova-l matc-e laptop.
 our.NOM.SG father.NOM.SG give-3.SG.PAST mother-DAT.SG laptop.ACC.SG
 'Our father gave the mother the laptop.'
- (30) věnování laptop-u matc-e naš-ím otc-em
 giving.NOM.SG laptop-GEN.SG mother-DAT.SG our-INSTR.SG father-INSTR.SG

‘the giving of the laptop to the mother by our father’

If the thematic DP can be omitted as in (32), the agentive DP can have the GenP form as well, see the contrast between the following two examples:

(31) *věnování naš-eho otc-e matc-e
 giving.NOM.SG our-GEN.SG father-GEN.SG mother-DAT.SG
 ‘our father’s giving to the mother’

(32) opakovan-é odpouštění naš-eho otc-e matc-e
 repeated-NOM.SG forgiving.NOM.SG our-GEN.SG father-GEN.SG mother-DAT.SG
 ‘our father’s repeated forgiving to the mother’

One-word animate agentive DPs can again raise to the PossP as well as in the case of transitive predicates, cf. (19) and (22):

(33) otc-ov-o věnování laptop-u matc-e
 father-POSS-NOM.SG giving.NOM.SG laptop-GEN.SG mother-DAT.SG
 ‘the father’s giving of the laptop to the mother’

3.2.6 Hierarchical order of arguments: summary

On the basis of the data examined in this section we can summarize the Case-mapping within the event nominal:

1. If IA gets [+GEN] than EA can get [+INSTR] (or [+POSS]⁶)
2. If IA gets [+POSS] than EA can get [+INSTR]
3. If IA= \emptyset ⁷ then EA can get [+GEN] (or [+POSS])

The hierarchy among the (morphologically unlimited) nominal syntactic positions with a particular thematic interpretation is therefore following:

- VN’s positions with theme interpretation: GenP
- VN’s positions with agent interpretation: GenP»InstrP

⁶PossP licensing is in brackets because always conditioned by further morphosyntactic features of a noun such as [+HUM] or [+SG], see 3.2.1.

⁷Two cases of missing IA are subsumed under the \emptyset -label: either there is no IA at all as in the unergative structure, or it is just not phonologically expressed.

- VN's positions for lexical-case marked arguments: identical with verbs

We can observe that if there is only one argument and that argument doesn't have inherent case, it must become a genitive (or a possessive adjective), regardless of whether it is an agent or a theme.

Given that there is exactly one position assigning structural Case (Genitive) within the DP and given that only agents can alternatively acquire instrumental case, the hierarchical ordering between the external and the internal argument when they attempt for the Genitive position arises: IA \gg EA.

3.3 Obligatoriness of arguments

3.3.1 The internal argument of eventive nominals

Although all the argument positions of Czech verbal nominals are claimed to be optional in contrast to the obligatory positions of verbs (Daneš *et al.* 1987, pg. 129, among others), the claim doesn't hold whenever we take into account eventive nouns derived from perfective stems. All of these nouns require overt presence of their internal argument:

- (34) a. Z-ničení *(městečk-a) trva-lo asi hodin-u.
 pf-destroying.NOM.SG town-GEN.SG last-3.SG.PAST about hour-ACC.SG
 'The "complete" destroying of the town lasted about an hour.'
- b. Ničení (městečk-a) trva-lo asi hodin-u.
 destroying.**impf**.NOM.SG town-GEN.SG last-3.SG.PAST about hour-ACC.SG
 'The destroying of the town lasted about an hour.'

In addition, irrespective of the perfectivity of a noun, the theme cannot be omitted if the agent in the postnominal *by*-phrase is retained (see also (21) and (22) in chapter 2):

- (35) rozdělování *(kořist-i) rybář-em
 splitting.**impf**.NOM.SG catch-GEN.SG fisherman-INSTR.SG
 'the splitting of the catch by the fisherman'

We have observed in the previous section that the agent argument has the postnominal GenP form if the object is not present in the nominal structure, cf. (21-b). However, this can never happen with perfective VNs since their GenP will be always interpreted as the patient:

- (36) a. z-ničení nepřítel-e
 pf-destroying.NOM.SG enemy-GEN.SG
 ‘the enemy’s(IA) destroying’
 b. ničení nepřítel-e
 destroying.**impf**.NOM.SG enemy-GEN.SG
 ‘the enemy’s(EA/IA) destroying’

The same holds for the prenominal PossP of perfective nouns. If the patient is not already expressed in the GenP, there is only one interpretation of the PossP preceding the perfective *-(e)n/tí* nominal:

- (37) a. nepřítel-ov-o z-ničení
 enemy-POSS-NOM.SG **pf**-destroying.NOM.SG
 ‘the enemy’s(IA) destroying’
 b. nepřítel-ov-o ničení
 enemy-POSS-NOM.SG destroying.**impf**.NOM.SG
 ‘the enemy’s(EA/IA) destroying’

If we compare the transitive nominal structures to corresponding perfective and imperfective finite verbal structures, we can observe the same pattern: imperfective verbs can have “dummy” objects with generic meaning while perfective verbs are ungrammatical if not complemented by their objects overtly:

- (38) a. *Nepřítel z-niči-l.
 enemy.NOM.SG **pf**-destroy-3.SG.PAST
 ‘The enemy destroyed.’
 b. Nepřítel niči-l.
 enemy.NOM.SG destroy.**impf**-3.SG.PAST
 ‘The enemy was destroying.’

The obligatoriness of the IA’s presence in the VN’s internal structure can be tested by the reflexive-possessive anaphor ‘svůj’ which is normally co-indexed with the c-commanding subject. It was observed by Karlík (2004) that the PossP of verbal nominals does not behave as a structural subject position if it is filled by the internal argument, i.e. it cannot bind the anaphoric reflexives; see the following contrast between the active and the passive clause and the

corresponding nominalized structures⁸:

- (39) a. Petr_i pozval Pavla_j do svého_i pokoje.
 ‘Peter invited Paul to his.REFL room.’
 b. Petrovo_i pozvání Pavla_j do svého_i pokoje
 ‘Peter’s inviting of Paul to his.REFL room.’
- (40) a. Pavel_i byl pozván Petrem_j do svého_i pokoje.
 ‘Paul was invited by Peter to his.REFL room.’
 b. *Pavlovo_i pozvání Petrem_j do svého_i pokoje.
 ‘Paul’s inviting by Peter to his.REFL room.’

Karlík (2004, pg. 44)

Provided that there is only one argument expressed in the nominalized structure, it will always be interpreted as an *external* argument if the anaphoric reflexive follows, cf. the difference in the interpretation of verbo-nominal construction with a reflexive possessive anaphor and with a non-reflexive possessive pronoun:

- (41) a. Petrovo_i zvaní do svého_i pokoje
 ‘Peter’s(EA) inviting.IMPF to his.REFL room’
 b. Petrovo_i zvaní do jeho_i pokoje
 ‘Peter’s(IA/EA) inviting.IMPF to his room’

However, we have claimed that if a VN is derived from the perfective verbal stem, the presence of the *overt internal argument* in its structure is obligatory. Thus the perfective VN’s need for the object should lead to the incompatibility with the anaphor’s need for the agentive subject; the fact that the perfective construction with the possessive anaphor is ungrammatical while the one with the possessive pronoun allows just one, theme-like interpretation of the PossP confirms this prediction:

- (42) a. Petrovo_i po-zvání do jeho_i pokoje
 ‘Peter’s(IA) PF-inviting to his room’
 b. *Petrovo_i po-zvání do svého_i pokoje
 ‘Peter’s PF-inviting to his.REFL room’

⁸The generalization holds only for reflexive possessives specifying some obligatory argument for which the predicate is subcategorized in the lexicon; cf. in contrast ‘Jan-ov-o_i potupení před svými_i vlastními lidmi’ (John’s_i defamation in front of his.REFL_i own people).

3.3.2 Implicit saturation of arguments

The object affected by the action can have either a concrete meaning expressed directly by some DP or a generic meaning which is deduced from real world knowledge and can indeed correspond to non-overt expression. See the difference between the following English sentences:

- (43) a. John ate the apple.
b. John ate.

(Zucchi 1989, pg. 185)

In (43-a) we know very well what “the object” of John’s eating was while (43-b) could be simply paraphrased as ‘John ate something’. The same possibility of not expressing the IA is exhibited by Czech verbs:

- (44) a. Marie zpívá písničku a Kuba hraje na saxofon.
‘Mary sings the song and Kuba plays the sax.’
b. Marie zpívá a Kuba hraje.
‘Mary sings and Kuba plays.’

In order to account for the optionality of the object DP, Dowty (1978) assumes that the object argument of a verb is implicitly quantified over by an existential quantifier. Inspired by him, Zucchi (1989) uses the same rule of implicit satisfaction in order to account for the missing *of*- and *by*-arguments of English action nominals:

- (45) a. The destruction of the city by the enemy (lasted for days).
b. The destruction of the city (lasted for days).
c. The destruction (lasted for days).

On the basis of these examples, Zucchi rejects Grimshaw’s view that the distinction between argument-taking and non-argument-taking nominals corresponds to the semantic distinction between complex-event-denoting and simple-event/result-denoting nominals. The semantic type of event nominals like ‘destruction’ in (45) is for him always:

- (46) $\langle\langle\langle 0, 1 \rangle, 1 \rangle, 1 \rangle$,
where 1 is the type of entities, 0 is the type of propositions and the most embedded argument is the event argument.

In addition, Zucchi proposes two rules: one which satisfies just the external argument position of a noun and another one which satisfies both external and internal argument at once. Within the Extended Categorical Grammar framework the latter rule might be formulated as follows:

- (47) a. If a is an expression of category $(CN/PP_{by})/PP_{of}$
 $F(a)$ is an expression of category CN, where $F(a)=a$
 b. $F(a)$ translates as $\lambda x [\exists y \exists z (a' (y)(z)(x))]$

This rule transforms transitive common noun like ‘destruction’ whose syntactic category is specified as $(CN/PP_{by})/PP_{of}$ into a Complex Noun (CN) whose argument positions have been implicitly saturated by being existentially quantified over.

A similar rule is employed to account for the alternation between (45-a) and (45-b) which applies to nouns whose IA position has been already saturated overtly. The existential quantification is therefore applicable only to the external argument (normally expressed in a *by*-phrase):

- (48) a. If a is an expression of category CN/PP_{by}
 $F(a)$ is an expression of category CN, where $F(a)=a$
 b. $F(a)$ translates as $\lambda x [\exists y (a' (y)(x))]$

(Zucchi 1989, pg. 188)

I suppose that the rule of a similar character as in (47) accounts for the optionality of the thematic GenP of Czech event nominals which behave correspondingly to the English ‘ing-of’ nominals:

- (49) a. Mariino zpívání písničky a Kubovo hraní na saxofon
 ‘Mary’s singing of the song and Kuba’s playing the sax’
 b. Mariino zpívání a Kubovo hraní
 ‘Mary’s singing and Kuba’s playing’

Notice that Zucchi’s rules in interaction with the specification of the syntactic category of a transitive noun (based on its assumed semantic type in (46)) predict the impossibility of the agentive *by*-phrase attached to a noun whose internal position has *not* been satisfied as in:

- (50) *the destruction by the enemy

What is more, according to (47), the object position corresponding to the *of*-phrase cannot be satisfied implicitly if the agentive *by*-phrase has not been satisfied implicitly as well. This is the right prediction for Czech with respect to agentive InstrPs since they can never appear with uncomplemented verbal nouns (see also (35) above):

- (51) *zpívání Marií a hraní Kubou
 ‘the singing by Mary and playing by Kuba’

The string ‘N-by DP’ seems to be ill-formed across languages. It was already mentioned that *of*- and *by*-phrase of event nouns are often treated as instantiations of absolutive and ergative Case. This leads Zucchi (1989, pg. 190) to attribute the ungrammaticality of a noun with the subcategorization frame [$_$ PP_{*by*}] to the general restriction on ergative case assignment: a phrase can bear ergative Case only in presence of a theme in the absolutive Case. According to him, this rule might also condition the rules of implicit satisfaction and choose among the possible rules only those that satisfy the ergative Case assignment condition.

Contextual drop of arguments

The implicit satisfaction of the internal argument by its existential quantification is relevant mainly for Czech eventive nominals derived from imperfective stems. However, there are often nominals whose empty object position can refer to the participant expressed in the preceding context. These nouns can be derived also from perfective verbal stems:

- (52) Partyzán za-bi-l tři voják-y a tohle
 guerrilla.NOM.SG PF-kill-3.SG.PAST three soldiers-ACC.PL and this
 partyzán-ov-o za-bití by-lo (po zásluze)
 guerrilla-POSS-NOM.SG PF-killing.NOM.SG be-3.SG.PAST worthily
 ocen-ěn-o.
 honour-PASS-NOM.SG.
 ‘The guerrilla killed three soldiers and this guerrilla’s killing was
 (worthily) honoured.’ ⇒ “the guerilla’s killing of three soldiers”

Cf. the meaning of the same nominal construction without the preceding context:

- (53) Partyzán-ov-o za-bití by-lo ocen-ěn-o.
 guerrilla-POSS-NOM.SG PF-killing.NOM.SG be-3.SG.PAST honour-PASS-NOM.SG.
 ‘The guerrilla’s killing was honoured.’ ⇒ “someone’s killing of the
 guerilla.”

The same function which was played in (52) by the context of the preceding clause can be brought in the speech by the disambiguating ‘con-situation’. Corresponding verbal structures show the same behaviour:

- (54) Partyzán za-bi-l tři voják-y a že
 guerrilla.NOM.SG PF-kill-3.SG.PAST three soldiers-ACC.PL and that
 (partyzán) za-bi-l by-lo ocen-ěn-o.
 guerrilla.NOM.SG PF-kill-3.SG.PAST be-3.SG.PAST honour-PASS-NOM.SG.
 ‘The guerrilla killed three soldiers and that he killed was honoured.’
 ⇒ “that he killed three soldiers”

Zucchi (1989) analyzes the implicit arguments in examples of this type as saturated by a contextually interpreted variable rather than as existentially quantified over⁹; for the concrete formulation of the rule see Zucchi (1989, pg. 194).

Contextually understood argument of the similar character as in eventive nouns seems to be present also for example in the structure of a nominal ‘enemy’ whose implicit logical object contrasts to the existentially quantified logical object of e.g. ‘father’:

- (55) a. John isn’t an enemy.
 b. John isn’t a father.

(Zucchi 1989, pg. 195)

While there is literally no one to whom John could be in the relationship of fatherhood, (55-a) is compatible with there being someone of whom John *is* the enemy. Thus the implicit argument of ‘enemy’ patterns with the unexpressed internal argument of eventive noun in (52) in being dependent on

⁹It should be pointed out that although the distinction as it is formulated suggests that there is a clear cut between the existential quantification and the indexically-dependant interpretation, there are some verbs, perfective as well as imperfective, which can act in both ways with respect to the implicit IA saturation. The Czech verb ‘zabít’ (kill) used above represents one such example. In the sentence ‘Karel zabil.’ (Charles killed.) with the meaning “Charles committed a murder.” the patient of killing is just implicitly existentially quantified over.

the previous context/situation rather than having vague generic meaning.

The difference between the existentially quantified and the indexically understood implicit argument was observed by Dowty (1978), among others, also on the level of finite verb structures. See the following contrast:

- (56) a. John didn't eat.
b. John didn't notice.

(Zucchi 1989, pg. 193)

While the first sentence is perfectly comprehensible, the second one is not unless it is pronounced with reference to some contextually salient entity. The same need characterizes not only corresponding Czech sentences but also corresponding event nominals: without the preceding context both (57-b) and (58-b) would be ungrammatical.

- (57) a. Jan ne-jed-l.
John.NOM.SG not-eat.IMPF-3.SG.PAST
'Jan didn't eat' ⇒ "John didn't eat anything."
b. Jan si ne-všimnu-l.
Jan.NOM.SG REFL.DAT not-notice.PF-3.SG.PAST
'John didn't notice' ⇒ "John didn't notice the particular thing."
- (58) a. Jan-ov-o ne-jezení mi
Jan-POSS-NOM.SG not-eating.IMPF.NOM.SG I.DAT
děl-á starost-i.
make-3.SG.PRES worry-NOM.PL
'John's not eating makes me worried.' ⇒ "John's not eating anything"
b. Jan-ov-o ne-všimnutí si mě
Jan-POSS-NOM.SG not-noticing.PF.NOM.SG REFL.DAT I.ACC
vyleka-lo.
alarm-3.SG.PAST
'John's not noticing alarmed me.' ⇒ "John's not noticing one particular thing (but he might have noticed another one)."

3.3.3 The internal argument of resultative nominals

It was addressed already in 2.3, in connection with Grimshaw's lexical analysis of complex event nominals, that not only event-denoting but also result-

denoting nominals can have internal arguments in Czech. However, these arguments seem to be generally optional¹⁰.

This observation might be surprising given that resultative nouns show aspectual distinctions, i.e. they are derived from both perfective and imperfective verbal stems. While eventive nominals systematically require presence of their complement if they are specified as [+Perfective] as was brought out in 3.3.1, resultatives do not demonstrate any such need, neither in case of perfectivized stem:

- (59) nov-á vý-sadb-a (zelen-ě)
 new-NOM.SG PF-planting-NOM.SG greenery-GEN.SG
 ‘the new outplanting of greenery’
- (60) právě vydan-é na-řízení (ne-vy-cháze-t)
 just released-NOM.SG PF-ordering.NOM.SG not-out-go-INF
 ‘just released order not to go out’

In terms of Zucchi (1989), resultative VNs behave as if their internal argument was always implicitly saturated by being existentially quantified over. Nevertheless, we have seen in 2.3.1 that there are also particular deverbal nouns which seem to require overt object also in case of resultative interpretation, I repeat the relevant part of example sentences here:

- (61) Na nástěnc-e vise-l popis *(cest-y).
 on wall-LOC.SG hang-3.SG.PAST description.NOM.SG journey-GEN.SG
 ‘The description of the journey hung on the wall.’
- (62) Na nástěnc-e vise-lo popsání *(cest-y).
 on wall-LOC.SG hang-3.SG.PAST describing.NOM.SG journey-GEN.SG
 ‘The describing of the journey hung on the wall.’

The behaviour of these nouns makes them close to the Zucchi’s nouns of the ‘enemy’-type whose logical object cannot be just simply quantified over. If these nouns appear without the explicit argument, their implicit argument must always refer to some contextually salient entity. It is true that if (61) and (62) would appear in the context where I already talked about the ‘description of our journey’, the *of*-complements of these nouns could be

¹⁰Although the overall optionality of internal arguments of resultatives is not limited to resultative nominals in *-(e)ní/tí* as it is obvious from the following examples I will focus mainly on *-(e)ní/tí* nouns in the discussion since my motivation is to find out what distinguishes these nouns from their eventive counterparts.

omitted. Therefore we get parallels of both ways of implicit saturation of arguments described for verbs and eventive verbal nouns also on the level of resultative verbal nouns.

In the context of resultative noun's ability to preserve the IA licensing part of the argument structure, it should be also mentioned that deverbal nouns with idiosyncratic meaning such as 'zastávka' (the bus-stop) or 'stavení' (the building) never take internal arguments (less so the external one).

3.3.4 Summary

Although the obligatoriness of the internal argument of eventive nominals is a complex phenomenon which interplays with the aspectual properties of a noun on one hand and with the possibility of the implicit saturation of arguments on the other, *-(e)ní/tí* nominals denoting events behave exactly the same way as the corresponding verbs in this respect:

1. Both verbal and verbo-nominal structures license the internal argument which can be either expressed explicitly or satisfied implicitly.
2. Both verbs and verbal nouns have to employ the first possibility in out-of-the-blue contexts in case of perfective stems.
3. A variable standing for the theme-like argument of a predicate can be in both verbs and VNs implicitly satisfied in two ways, either by existential quantification of a variable or by its contextual interpretation.

We have seen in the previous section that only the first and the third but not the second point of the generalization apply also to referential nominals. Since all of the verb – noun correspondences hold bar none for eventive verbal nouns but not for referential ones, I suppose that it is the aspectually dependent *obligatoriness of the internal argument* what really distinguishes both groups – and *not the presence of the internal argument* itself as suggested by Grimshaw (1990).

The verb – eventive VN – resultative VN affinity concerning the IA and its (contextually independent) obligatoriness can be nicely summarized by the help of examples (63) – (65):

- (63) *Komis-e oznámi-la *(výsledk-y).*
 comitee-NOM.SG announce.PF-3.SG.PAST result-ACC.PL
 ‘The committee announced results.’
- (64) *Oznámení *(výsledk-ů) proběh-lo ve chvílčc-e.*
 announcement.PF.NOM.SG result-GEN.PL pass-3.SG.PAST in while-LOC.SG
 ‘The announcement of results passed in a while.’
- (65) *Pošt-ou mi přiš-lo oznámení (výsledk-ů).*
 mail-INSTR.SG I.DAT come-3.SG.PAST announcement.PF.NOM.SG result-GEN.PL
 ‘I got the announcement of results by mail.’

Chapter 4

Differences between verbs and nominals

4.1 Optionality of arguments

We have seen that internal arguments of nominals behave in many respects on a par with the internal arguments of verbs. Once we look at the behaviour of external argument, the parallelism between the nominal and the verbal structure breaks down. Still, there are some correspondences and it is the task of the following section to determine them.

4.1.1 The external argument of eventive nominals

It was already mentioned that Czech eventive *-(e)ní/tí* nominals can be modified by agent-oriented adjectives which test for the presence of the agent argument in their participants' structure:

- (1) a. opakované záměrné překračování *(hranic)
'the repeated deliberate crossing of borders'
b. uprchlíkovo opakované překračování *(hranic)
'the refugee's repeated crossing of borders'

Given the possibility of implicit IA satisfaction which was discussed in the preceding section it is not surprising that the agent-oriented modifier can sometimes appear with a noun although its object is not overtly present, contrary to Grimshaw (1990, pg. 51):

- (2) Její úmyslné zatemňování trvalo dlouho.
‘Her intentional obfuscation lasted for a long time.’

Zucchi’s rules of implicit satisfaction, cf. (47) and (48) of chapter 3, suggest that not only the internal argument but also the external one is always implicitly present in the semantic structure of an event nominal. Moreover, it can never be present explicitly in the form of the agentive *by*-phrase if the internal one is present just implicitly. On the other hand, the internal one can never be present implicitly if the external is not present implicitly as well¹:

- (3) a. $EA_{byP} \rightarrow IA_{ofP}$
b. $IA_{Impl} \rightarrow EA_{Impl}$

The main difference between the internal and the external argument of an eventive noun is following: although there are cases when it is obligatory to express the theme (in Czech namely in case of perfective nouns without the preceding context), the agentive InstrPs of event nominals are always optional :

- (4) Vysvětlování definic-e (učitel-em)
explaining.IMPF.NOM.SG definition-GEN.SG teacher-INSTR.SG
za-bra-lo cel-ou hodin-u.
PF-take.3.SG.PAST whole-ACC.SG hour-ACC.SG
‘The explaining of the definition by the teacher took the whole hour.’

The EA optionality applies also to the agentive noun in the form of a post-nominal GenP or a morphologically limited prenominal PossP; there doesn’t seem to be any context in which the expression of the agent would be obligatory with eventive nouns:

- (5) a. Vysvětlování (naš-eho učitel-e)
explaining.IMPF.NOM.SG our-GEN.SG teacher-GEN.SG
za-bra-lo cel-ou hodin-u.
PF-take-3.SG.PAST whole-ACC.SG hour-ACC.SG
‘Our teacher’s explaining took the whole hour.’

¹Note that the first implication holds only if we take the *of*-phrase as the only possible way of the IA’s explicit presence in the structure and that the second implication holds only if we take the agentive *by*-phrase as the only possible way of the EA’s explicit presence as Zucchi does.

- b. (Učitel-ov-o) vysvětlování (definíc-e)
 teacher-POSS-NOM.SG explaining.IMP.F.NOM.SG definition-GEN.SG
 za-bra-lo cel-ou hodin-u.
 PF-take-3.SG.PAST whole-ACC.SG hour-ACC.SG
 ‘The teacher’s explaining of the definition took the whole hour.’

From the contrast between the EA’s and the IA’s obligatoriness/optionality within the eventive nominal structure and its comparison to the behaviour of arguments within the verbal structure the following asymmetry follows:

- theme-like arguments of nouns behave the same way as in the active verbal structure:
 - objects of perfectives have to be obligatorily expressed unless indexically understood
 - objects of imperfectives can be either expressed overtly or they can correspond to existentially quantified variables or indexicals
- agent-like arguments of nouns behave differently from the corresponding active verbal structure
 - if the theme is present overtly in the nominal, the agents behave as in the passive verbal structure: they can be expressed overtly in the InstrP/PossP or they are just implicitly understood
 - if the thematic argument is saturated implicitly, the agent-like arguments can have the overt postnominal GenP/prenominal PossP form or they can be implicitly satisfied as well

The last point of this generalization, enabling the agent DP to have the overt GenP form in case of the invisible thematic argument, is not captured by Zucchi’s semantic rules of implicit satisfaction presented in the previous chapter (cf. also (3-b) in this chapter) – although it is coherent with his motivating the rules by general conditions of the ergative Case assignment. The explanation itself thus seems to be a matter of syntactic rules and Czech language-specific parameters of the internal structural composition of event nominals.

4.1.2 The external argument of resultative nominals

Resultative *-(e)ní/tí* nominals, on the other hand, do not take agents and/or agentive modifiers at all as was evidenced in 2.3.1. While their internal argument can be still optionally expressed, the modification by the agentive *by*-phrase is ungrammatical (regardless of the presence vs. absence of the object):

- (6) Do hlavní-ho stan-u přicháze-la hlášení
 to main-GEN.SG tent-GEN.SG come-3.PL.PAST announcement.NOM.PL
 (výsledk-ů) *komentátor-em.
 result-GEN.PL commentator-INSTR.SG
 To the main tent, the announcements of results by the commentator
 were coming.

The agent-like PossP or GenP in the distribution of resultative nouns is interpreted in the broad possessive meaning rather than purely agentively. In the following example ‘the teacher’ can be the one who has really explained the definition, who has written the explanation of the definition which another person made, who “owns” the explanation of the definition, i.e. received it from someone else, etc.:

- (7) Učitel-ov-o vysvětlení definic-e
 teacher-POSS-NOM.SG explaining.PF.NOM.SG definition-GEN.SG
 by-lo napsán-o na tabul-i.
 be-3.SG.PAST written-NOM.SG on board-LOC.SG
 ‘The teacher’s explanation of the definition was written on the board.’

4.2 The sole argument of intransitives

The data on obligatoriness and optionality of nominal arguments were obtained primarily by examining transitive predicates. Nevertheless, the same generalizations would arise on the basis of comparing the behaviour of the only argument of eventive nouns derived from unaccusative and unergative stems.

4.2.1 Unaccusative predicates

The expression of the (presumably theme-like) argument of an unaccusative verbal noun is obligatory if the *-(e)n/tí* noun is inflected for the perfective aspect but is optional for an imperfective VN:

- (8) a. Stoupnutí *(hladin-y) způsobi-lo potíž-e.
 rising.PF.NOM.SG level-GEN.SG cause.PF-3.SG.PAST problem-ACC.PL
 ‘The rise of the level caused some problems.’
- b. Stoupání způsobova-lo potíž-e.
 rising.IMPF.NOM.SG cause.IMPF-3.SG.PAST problem-ACC.PL
 ‘The rising was causing some problems.’

These examples confirm the obligatory character of the object of perfective nouns. If there is no preceding context, the only possibility of the implicit argument saturation is its existential quantification. As we have observed, this possibility is normally employed only if imperfective stems are embedded within event nouns. That’s why we have to express the object of perfective ‘rising’ in (8-a) while in (8-b) the general interpretation corresponding to something like ‘rising of someone/something’ is available given that there is not any overt DP around which might be interpreted as the object.

What differentiates unaccusative nominal structures from transitive ones is that if we look exclusively at them we cannot check for the corresponding behaviour of finite verbal structures. In the finite clause the only argument of intransitives has to be expressed anyway on account of [EPP] and [Nom] features connected with the Spec,TP position. Because of Czech being a pro-drop language, the subject can have the form of a phonetically empty pronoun (so-called ‘little pro’) which is formally licensed and interpreted by virtue of agreement features (ϕ -features) on the finite verb/auxiliary as in the following example. This kind of “obligatoriness”, the obligatoriness of a subject position in the clause is independent of the thematic character of an argument and of the aspectual value of a predicate:

- (9) a. *(oni) Stoup-li, což způsobi-lo...
 $pro_{3.PL}$ rise.PF-3.SG.PAST which cause.PF-3.SG.PAST
 ‘They rose which caused ...’
- b. *(oni) Stoupa-li, což způsobova-lo...
 $pro_{3.PL}$ rise.IMPF-3.SG.PAST which cause.IMPF-3.SG.PAST
 ‘They were rising which caused ...’

4.2.2 Unergative predicates

The agentive character of the only argument of unergatives is confirmed again in line with predictions made for nouns derived from transitive predicates. Its position within the verbo-nominal structure is optional and it is insensitive to aspectual distinctions:

- (10) a. Nechtěn-é za-zívání způsobi-lo
 unwanted-NOM.SG PF-yawning.NOM.SG cause.PF-3.SG.PAST
 ne-mal-é potíží-e.
 no-small-ACC.PL problem-ACC.PL
 ‘The unwanted yawning caused considerable problems.’
- b. Dlouhotrvající zívání způsobova-lo
 long-lasting.NOM.SG yawning.IMPF.NOM.SG cause.IMPF-3.SG.PAST
 ne-mal-é potíží-e.
 no-small-ACC.PL problem-ACC.PL
 ‘The long-lasting yawning caused considerable problems.’

As follows from the implication (3-a) which the rules of implicit satisfaction made, if the agent of unergative VN is expressed, it should not have the agentive *by*-phrase form on account of the missing explicit IA since there is actually no IA at all:

- (11) a. *za-zívání tatínk-em
 PF-yawning.NOM.SG father-INSTR.SG
 ‘the yawning by the father’
- b. *zívání tatínk-em
 yawning.IMPF.NOM.SG father-INSTR.SG
 ‘the yawning by the father’

That the optional agent of unergative nominals has the GenP/PossP form and never the InstrP form patterns with the behaviour of agents of transitive nominals whose IA does not occupy an overt structural position, cf. (5):

- (12) a. nechtěn-é za-zívání (tatínk-a)
 unwanted-NOM.SG PF-yawning.NOM.SG father-GEN.SG
 ‘the father’s unwanted yawning’
- b. (tatínk-ov-o) dlouhotrvající zívání
 father-POSS-NOM.SG long-lasting.NOM.SG yawning.IMPF.NOM.SG
 ‘the father’s long-lasting yawning’

4.2.3 Predicates with non-direct objects

The difference between unaccusative and unergative predicates regarding the obligatoriness versus optionality of their sole arguments is confirmed by the behaviour of eventive nominals derived from “improper” transitive predicates, i.e. from those with some lexically specified argument.

In 3.2.4 it was showed that these nouns have different syntactic positions for the subject DP with respect to whether it was merged in the specifier of the higher agentive or of the lower resultative verbal phrase, i.e. whether the base verb has unergative or unaccusative character (cf. chapter 3: (27) vs. (28)).

The additional requirement on the final make-up of these nouns regards *sensitiveness of their subject-like argument to the [+Pf]* value of the aspectual category which is marked on a noun. There are cases when the expression of the argument in the structural GenP position is felt as necessary in case of perfective nominals but all these cases seem to be *limited to predicates with unaccusative character*. On the other hand, the subject licensed in a true deep-subject position is never obligatory, not even in case of a perfectivized stem:

- (13) ublížení (otrokář-e) otrok-ovi během
hurting.PF.NOM.SG slaver-GEN.SG slave-DAT.SG during
prac-e na plantáž-i
work-GEN.SG on plantation-LOC.SG
‘the slaver’s hurting the slave during the work in the plantation’
- (14) uniknutí *(vězn-ě) strážník-ovi během
escaping.PF.NOM.SG prisoner-GEN.SG policeman-DAT.SG during
pracovní dob-y
working.GEN.SG time-GEN.SG
‘the prisoner’s escaping the policeman during the working time’

Even though I was primarily concerned with the behaviour of subject-like arguments in structures with non-direct objects in order to support their sensitivity to the verb-class type I suppose that the behaviour of these structures on the whole provides very strong argument for the inclusion of some part of the extended verbal projection within VN’s derivation. The realization of the argument structure of these nouns presents the interplay of two types of principles which both have clearly verbal character:

- unergative vs. unaccusative underlying vP as a source of possible vs. impossible agentive *by*-phrase with nominals, cf. (27-b) vs. (28-b) in chapter 3
- perfective vs. imperfective value of aspectual head as a source of obligatory vs. optional movement of a thematic argument to GenP, cf. (14) above

4.3 Summary

Altogether, the behaviour of subjects of both transitive and intransitive VNs does not correspond to the behaviour of subjects of active verbs in accusative languages but is more coherent with the behaviour of the agent arguments of passives and in turn with the behaviour of subjects in ergative languages as we have already noticed in (25) in 3.2.3. In these languages, the absolutive-Case position is normally assigned to objects of transitives and to subjects of intransitives, i.e. if there is no object DP to which the absolutive Case could be assigned. The same hierarchy among arguments, i.e. IA \gg EA holds for the genitive Case assignment in the event nominal structure.

The difference between nominal structures and verbal structures of ergative languages regards the aspectually-dependant optionality of the assignment of the nominal GenP position versus the obligatoriness of the absolutive Case assignment (in an active finite clause). It relates to this fact that transitive nominals which don't have the object in GenP are treated in the same way as intransitive ones, i.e. this position becomes free for the subject.

4.4 Scope of the “passivizing” $-(e)n/t-$ suffix

4.4.1 Verbal nouns vs. verbal passives

The observation that the (optional) agent argument of $-(e)ní/tí$ nominals behaves similarly to the agent argument in a verbal passive structure might lead to its association with the Czech passivizing $-(e)n/t-$ morpheme:

- (15) a. Aut-o by-lo ukrad-**en**-o (zločinc-em).
 car-NOM.SG be-3.SG.PAST steal-PASS-NOM.SG gangster-INSTR.SG
 ‘The car was stolen by the gangster.’

- b. ukrad-**en-í** aut-a (zločinc-em)
 stealing-PASS?-NOM.SG car-GEN.SG gangster-INSTR.SG
 ‘the stealing of the car by the gangster’

However, the association of both *-(e)n/t-* suffixes, i.e. the one in the passive structure and the one in the nominal structure would be oversimplifying. It would not account for the data which show that there is a remarkable difference in terms of the structure the *-(e)n/t-* morphemes can attach to. While passive participles which are part of analytic passive forms can embed only transitive structures where both EA and IA positions are specified², verbal nominals can embed any structure, transitive as well as intransitive one, unaccusative as well as unergative one. The scope of the nominal *-(e)n/t-* suffix thus corresponds to the scope of active participles rather than to that of passive participles:

- (16) a. Otec zakašla-**l**.
 father.NOM.SG snore-3.SG.PAST
 ‘The father coughed’
 b. *Otec by-l zakašlá-**n**.
 father.NOM.SG be-3.SG.PAST cough-PASS.NOM.SG
 ‘The father was coughed.’
 c. zakašlá-**n-í** otc-e
 cough-PASS?-NOM.SG father-GEN.SG
 ‘the father’s coughing’
- (17) a. Otec zesnu-**l**.
 father.NOM.SG die-3.SG.PAST
 ‘The father died.’
 b. *Otec by-l zesnu-**t**.
 father.NOM.SG be-3.SG.PAST die-PASS.NOM.SG
 ‘The father was died.’
 c. zesnu-**t-í** otc-e
 die-PASS?-NOM.SG father-GEN.SG
 ‘the father’s dying’

I add for completeness’ sake that impersonal passives (which can be in some languages derived from unergative stems) are not possible in Czech:

²See Veselovská and Karlík (2004) for the analysis of Czech passive structures in the framework of Chomskyan generative grammar.

- (18) *(ono) By-l-o tancová-n-o.
*pro*_{3.SG.NEUT} be-3.SG.PAST-NEUT dance-PASS-NOM.SG.NEUT
 ‘It was danced.’

4.4.2 Verbal nouns vs. adjectival passives

It should be also recalled that the *-(e)n/t-* suffix can be used for the derivation of adjectival passives in which case it can attach not only to transitives but also to unaccusatives. See the contrast between the true verbal passives on one hand and the adjectival passives and verbal nouns on the other when it comes to transitive (‘destroy’) vs. intransitive (‘crackle’) verbal stems:

- (19) Vodovodní potrubí by-lo
 water.NOM.SG piping.NOM.SG be-3.SG.PAST
 *popraská-n-o/znič-en-o minul-ý měsíc.
 crackle-PASS-NOM.SG/destroy-PASS-NOM.SG last-ACC.SG month.ACC.SG
 ‘The water piping was *crackled/destroyed last month.’
- (20) Vodovodní potrubí se zd-á (bý-t)
 water.NOM.SG piping.NOM.SG seem-3.SG.PRES be-INF
 popraska-n-é/znič-en-é.
 crackle-PASS-NOM.SG/destroy-PASS-NOM.SG
 ‘The water piping seems (to be) crackled/destroyed.’
- (21) zničení/popraskání vodovodní-ho potrubí
 destroying.NOM.SG/cracking.NOM.SG water-GEN.SG piping.GEN.SG
 ‘the water piping’s destruction/cracking’

In addition, resultant adjectives derived from transitive stems allow the agentive *by*-phrase as well as their “true” passive counterparts:

- (22) To vodovodní potrubí by-lo/vypad-á
 that water.NOM.SG piping.NOM.SG be-3.SG.PAST/seem-3.SG.PRES
 znič-en-é nějak-ými hrozn-ými vandal-y.
 destroy-PASS-NOM.SG some-INSTR.PL awful-INSTR.PL vandal-INSTR.PL
 ‘That water piping was/seems destroyed by some awful vandals.’

The same holds for the adjectival passive in the attributive position:

- (23) nějak-ými hrozn-ými vandal-y znič-en-é
 some-INSTR.PL awful-INSTR.PL vandal-INSTR.PL destroy-PASS-NOM.SG
 vodovodní potrubí
 water.NOM.SG piping.NOM.SG
 ‘the by some awful vandals destroyed water piping’

Nevertheless, it is impossible to form adjectival passives from intransitives of unergative character while this is perfectly possible for verbal nouns:

- (24) a. Zívání tatínk-a mě znervózňuj-e.
 yawning.NOM.SG father-GEN.SG I.ACC make nervous-3.SG.PRES
 ‘The father’s yawning makes me nervous.’
 b. *Zíva-n-ý tatínek mě znervózňuj-e.
 yawn-ADJ.PASS-NOM.SG father.NOM.SG I.acc make nervous-3.SG.PRES
 ‘The yawned father makes me nervous.’

4.4.3 Summary

The possibility of the $-(e)n/t$ -morpheme suffixation to the stem of a particular verb class could be summarized for Czech in the following way:

(25)

	TRANS.	UNERG.	UNACC.
verbal passive	✓	–	–
adjectival passive	✓	–	✓
$-(e)n/tí$ nominal	✓	✓	✓

It comes out that the label “passivizing” does not characterize the morpheme $-(e)n/t$ properly since its general property seems to be the ability to attach to the stem of any verb class and transform it into a kind of element prefabricated for the nominal derivation. Rather than passivized structures, the $-(e)n/t$ -morpheme derives structures which seem to be underlyingly verbal but which are deprived of all tense/inflection-related features. This leads us gradually to the topic of the next section.

4.5 Missing T-features

The phenomena described in connection with the overall optionality of the external argument and the aspect-dependent optionality of the internal argument in the VN’s structure are closely tied to the lack of features associated

with the presence of ‘Tense’ or ‘Infl’ head. We have observed that in the VN’s structure the internal argument of transitives behaves on a par with the only argument of unaccusatives and the external argument has corresponding properties to those of the only argument of unergatives. This parallelism is covered over on the level of the finite clause by the need of the subject in structural Nominative associated with the Spec,TP position.

4.5.1 [EPP] and [Nom] features

The fact that *structural nominative Case* is not assigned within the nominalized structure is obvious from the plenty of examples we have gone through up to now. The evidence for the *Extended Projection Principle feature* is based on the existence of the obligatory movement of some argument to Spec,TP but mainly on the evidence provided by expletives:

- (26) a. there arrived a man
 b. *there’s arrival of a man
- (27) a. It rains.
 b. *it’s raining

Since there are no expletives in Czech I must look for another way of excluding the [EPP] feature presence in Czech nominalizing constructions. This way might not be that straightforward.

It was pointed out in connection with event nominals derived from intransitive unaccusative predicates that we cannot check the optionality versus obligatoriness of their internal argument in the verbal structure because within the finite CP the IA must be expressed anyway on account of an [EPP] feature, either in the form of a DP or of a (covert) pronoun:

- (28) a. *(oni) Stoupa-li, což způsobilo potíž-e.
 {pro{3,PL}} rise.IMPF-3.SG.PAST which cause-3.SG.PAST problem-ACC.PL
 ‘They were rising which caused problems.’
- b. Stoupání způsobilo potíž-e.
 rising.IMPF.NOM.SG cause-3.SG.PAST problem-ACC.PL
 ‘The rising caused problems.’

The same holds for the finite structures corresponding to event nouns derived from unergative predicates. We cannot check the assumed overall optionality of the external argument in finite intransitive structures since it is present

there obligatorily from independent reasons, again either in the DP form or as a pronoun:

- (29) a. *(Tatínek/(on)) dlouho spa-l.
 father.NOM.SG/*pro*_{3.sg} long sleep.IMPf-3.SG.PAST
 ‘The father/He slept for a long time.’
 b. dlouhotrvající spaní
 long-lasting.NOM.SG sleeping.IMPf.NOM.SG
 ‘the long-lasting sleeping’

The fact that in the nominal construction it is possible to leave out some overt indication of the argument completely – even though that argument is the only possible candidate for the Spec,TP position, as it is in case of all intransitive predicates – indicates that event nominals lack a feature of the EPP type.

4.5.2 Raising and ECM

In addition to expletives there are a number of constructions in English which are connected with T: raising, ECM or passivization across sentence boundaries. Raising involves movement of the argument from the lower to the higher Spec,TP. ECM constructions present, according to Alexiadou (cit. op.), overt raising of the phrase to its EPP position, namely Spec,TP of the lower clause which is different from its Case-assigning position, namely Spec,Agrop of the higher clause. It has been argued that this raising is enabled by forming a tense-chain between the tense of the embedded and matrix clause, see Alexiadou (2001, pg. 61 and references therein), which can never happen if the higher clause lacks Tense. Also the third mentioned construction, involving passivization, targets the specifier of the Tense/Infl head.

Regardless of the subtleties of various analyses of these phenomena, it is crucial that none of the “strange” constructions can nominalize, presumably because of the nominals’ lack of T itself:

- (30) a. Mary appears to have left
 b. *Mary’s appearance to have left
 (31) a. I believe him to be a genius.
 b. *my belief of him to be a genius

- (32) a. The baby is estimated to weigh 8 kilos by the doctor.
 b. *the baby's estimation to weigh 8 kilos by the doctor
 (Alexiadou 2001, pg. 60)

None of these constructions has an exact parallel in the Czech language since all infinitival small clauses are replaced by finite CPs in Czech:

- (33) a. Zd-á se, že Mari-e odeš-la.
 seem-3.SG.PRES that Mary-NOM.SG leave-3.SG.PAST
 'It seems that Mary left.'
 b. *zdání se, že Mari-e odeš-la
 seeming.NOM.SG that Mary-NOM.SG leave-3.SG.PAST
 '(its) seeming that Mary left.'
- (34) a. Věří-m (o něm), že je génius.
 believe-1.SG.PRES about he.LOC that be.3.SG.PRES genius.NOM.SG
 'I believe him to be a genius.'
 b. *moje věření (o něm), že je génius
 my.NOM.SG believing.NOM.SG about he.LOC that be.3.SG.PRES genius.NOM.SG
 'my believing him to be a genius'

Still, it seems that none of the corresponding Czech constructions can nominalize (although it is possible to have verbal nouns complemented by finite CPs in Czech and *-(e)ní/tí* nouns derived from ECM verbs are attested – in contrast to non-attested nominalizations of raising verbs). I leave the structural implementation of these data for future research.

The ECM construction where the infinitival complement *is* allowed in Czech (as an alternative to a CP-complement) are e.g. constructions with verbs of perception as matrix verbs. As predicted, their nominalizations are ungrammatical:

- (35) a. Otec u-zře-l Karl-a přicháze-t.
 father.NOM.SG PF-see-3.SG.PAST Charles-ACC.SG come-INF
 'The father saw Charles to come.'
 b. *otc-ov-o u-zření Karl-a přicháze-t
 father-POSS-NOM.SG PF-seeing-NOM.SG Charles-GEN.SG come-INF
 'The father saw Charles to come.'

Compare the grammaticality of corresponding event nominals with bare DP complements:

- (36) a. Otec u-zře-l Karl-a.
 father.NOM.SG PF-see-3.SG.PAST Charles-ACC.SG
 ‘The father saw Charles.’
- b. otc-ov-o u-zření Karl-a
 father-POSS-NOM.SG PF-seeing-NOM.SG Charles-GEN.SG
 ‘The father saw Charles.’

4.6 D-related functional categories

It was said in 3.1.3 that Czech VNs inflect for case, number and gender. The most straightforward way to capture these facts would be to assume the presence of three separate functional projections AgrP, NumP and GenderP in the VN’s derivational structure.

It is not my task in this work to resolve the question of a nominal part of event nouns’ functional architecture, let alone to examine its possible specificities with respect to other “simple” nouns. The following investigation of numerals and adjectives attributed to verbal nouns should serve just as an argument that in addition to presupposed verbal functional layers there *are* also typical nominal projections within the VNs’ structure. The existence of such projections is compatible with the overall nominal external distribution of verbal nouns.

4.6.1 Numerals with verbal nouns

Four basic types of numerals can be distinguished in Czech:

1. cardinal: ‘tři děti’ (three children)
2. ordinal: ‘třetí dítě’ (third children)
3. multiple: ‘troje děti’ (three sets of children); ‘trojité okno’ (triple window)
4. generic: ‘trojí děti’ (three types of children)

Verbal nouns can be modified by all basic types of numerals in Czech (although cardinal numerals sound a bit unnatural with event denoting nominals):

- (37) a. ?moje dvě dobrovolná vyzvednutí dětí ze školy
 ‘my two voluntary takings children out of school’
 b. moje druhé dobrovolné vyzvednutí dětí ze školy
 ‘my second voluntary taking children out of school’
 c. moje dvoje dobrovolné vyzvednutí dětí ze školy
 ‘my double voluntary taking children out of school’
 d. moje dvojí dobrovolné vyzvednutí dětí ze školy
 ‘my two types of voluntary taking children out of school’

In contrast to simple countable nouns, there is no difference in meaning between a cardinal numeral used with the eventive noun in (37-a) and a multiple numeral in (37-c). The simple counting of actions is expressed in both cases. Generic numeral in (37-d) refers to the amount of various types of an action rather than to the simple repeating of an action (although even this numeral is often used just for simple counting).

The difference regards the form: using the cardinal numeral implies the plural grammatical number but multiple and generic numerals are used with an eventive noun in singular. This contrasts to the simple count-nouns which do have to have the plural form even with multiple and generic numerals:

- (38) a. tři opakovan-á za-řinčení skl-a
 three repeated-NOM.PL PF-crashing.NOM.PL glass-GEN.SG
 ‘three repeated crashings of glass’
 b. troje opakovan-é za-řinčení skl-a
 triple repeated-NOM.SG PF-crashing.NOM.SG glass-GEN.SG
 ‘triple repeated crashing of glass’
 c. trojí opakovan-é za-řinčení skl-a
 triple PF-repeated-NOM.SG PF-crashing.NOM.SG glass-GEN.SG
 ‘three types of repeated crashing of glass’
- (39) a. tři knih-y
 three book-NOM.PL
 ‘three books’
 b. troje knih-y
 triple book-NOM.PL
 ‘three sets of books’
 c. trojí knih-y
 triple book-NOM.PL
 ‘three types of books’

It is assumed (Alexiadou 2001, and references therein) that mass/count distinction in the domain of individuals corresponds to process/state vs. accomplishment/achievement distinction in the event domain (Alexiadou 2001, pg. 54). Telic eventive nominals should be then countable and should disallow repetition modification in their singular forms, e.g. ‘frequent’, ‘regular’, etc.

The fact that the pluralization and numeral modification is allowed in Czech also with atelic nominals, cf. (11-b) in 3.1.3, while telic nominals can still appear with repetitive modifiers in singular, cf. (38-b), suggests that all eventive nouns behave as mass nouns in Czech.

Mass nouns are modified by multiple and generic numerals in combination with a singular form. Their combination with multiple numerals is used for simple “counting of masses” while generic numerals denote different types of a mass. Still, mass nouns in Czech allow also a plural form in combination with cardinal numerals which corresponds to the delimitation of a certain amount of mass:

- (40)
- a. *tři piv-a*
three beer-NOM.PL
‘three servings of beer’
 - b. *troje piv-o*
triple beer-NOM.SG
‘three sets of beer, e.g. the one in the red butt, in the blue butt and in the green but’
 - c. *trojí piv-o*
triple beer-NOM.SG
‘three types of beer, e.g. Pilsner Urquell, Budvar and Platan’

The behaviour of VNs when combined with numerals thus points not only to that there exists a numeral functional projection (e.g. NumP) above the nominal head of a verbal noun, as it is presupposed to exist between every N and D head (see Alexiadou 2001, pg. 29), but also that this NumP is independent of aspectual properties of a noun in Czech.

On the other hand, the fact that eventive nominals behave as mass nouns but don’t allow the delimitation of “a certain piece of event” in the distribution of cardinal numerals exemplified for mass nouns in (40-a) shows that the numeral behaviour of these nouns is in a way specific. Since they are not coercible into typical count nouns, one is tempted to say that they are more “mass-like” than mass-nouns themselves – which in turns suggests that

there must be something specific in the structural/featural characterization of these nouns which doesn't allow them to enter the prototypical nominal functional projection. Although I do not provide any syntactic implementation of these data in my thesis, I suppose the behaviour of numerals with Czech VNs to be more than worth analyzing.

4.6.2 Adjectival versus adverbial modification

Even though *-(e)ní/tí* nouns primarily denote events, various aspects of these events are almost always expressed by adjectives rather than by adverbs:

- (41) a. rychl-é psaní dopis-u
 quick-NOM.SG writing.NOM.SG letter-GEN.SG
 'the quick writing of the letter'
 b. ??psaní dopis-u rychle
 writing.NOM.SG letter-GEN.SG quickly
 'the writing of the letter quickly'

Coordinated and modified adverbs are more acceptable with event nominals, however, corresponding adjectives are still strongly preferred above them:

- (42) a. rychl-é a horliv-é psaní dopis-u
 quick-NOM.SG and zealous-NOM.SG writing.NOM.SG letter-GEN.SG
 'the quick and zealous writing of the letter'
 b. ?psaní dopis-u rychle a horlivě
 writing.NOM.SG letter-GEN.SG quickly and zealously
 'the writing of the letter quickly and zealously'
- (43) a. opravdu precizní nakreslení návrh-u
 really precise.NOM.SG drawing.NOM.SG design-GEN.SG
 'the really precise drawing of the design'
 b. ?nakreslení návrh-u opravdu precizně
 drawing.NOM.SG design-GEN.SG really precisely
 'the drawing of the design really precisely'

The adjectival modification provides further evidence for the presence of a nominal functional structure in the verbal noun. At the same time, the possibility of the alternative adverbial modification, although limited only to heavy AdvPs, provides support for the inclusion of some part of a verbal functional structure within the verbal nominal. See the contrast between the

-(e)ní/tí vs. non-(e)ní/tí eventive noun:

- (44) a. ?nakreslení návrh-u opravdu precizně
drawing.NOM.SG design-GEN.SG really precisely
‘the drawing of the design really precisely’
b. *kresb-a návrh-u opravdu precizně
drawing.NOM.SG design-GEN.SG really precisely
‘the drawing of the design really precisely’

However, not all types of adverbs can appear with Czech verbal nouns. While manner (*quickly, precisely*), temporal (*this year, the day ago*) and aspectual (*monthly, for/in an hour*) adverbs can be occasionally used to modify them, modal (*probably, possibly, certainly*) and speaker-oriented (*fortunately*) adverbs never have the VN’s distribution. This fact is coherent with the observations presented in the section on missing T/I-features. The fact that only lower VP adverbs and not sentential or IP-adverbs are permitted in VNs argues that it is specifically the VP which is present and not Tense/Inflection or other higher functional projections:

- (45) a. oznámení výsledk-ů (teprve) předečím
announcement.NOM.SG result-GEN.PL not until the day before yesterday
‘the announcement of results (not until) the day before yesterday’
b. předčerejší oznámení výsledk-ů
the day before yesterday’s.NOM.SG announcement.NOM.SG result-GEN.PL
‘the day before yesterday’s announcement of results’
- (46) a. spláčení půjčk-y měsíčně / po dva rok-y
paying.NOM.SG loan-GEN.SG monthly / for two year-ACC.PL
‘the paying of a loan monthly/for two years’
b. dvoulet-é / měsíční spláčení půjčk-y
two-year-NOM.SG / month.NOM.SG paying.NOM.SG loan-GEN.SG
‘the two-year/month’s paying of a loan’
- (47) a. přistání letadl-a *možná
landing.NOM.SG plane-GEN.SG possibly
‘the landing of the plane possibly’
b. možn-é přistání letadl-a
possible-NOM.SG landing.NOM.SG plane-GEN.SG
‘the possible landing of the plane’

4.7 Summary

While in the chapter 3 we had to state that verbs and verbal nominals behave correspondingly, this chapter has showed that nominal structure has also many specificities which make it different from the verbal structure:

- the optional character of the external argument of transitives and of the sole argument of unergatives
- the absence of Tense-related features [Nom] and [EPP]
- the possibility of numeral and adjectival modification
- the active-like scope of the “passivizing” *-(e)n/t-* suffix: passive participles embed only transitive structures but Czech verbal nominals can be derived from transitives, unaccusatives and unergatives.

However, there are still many characteristics related to the above mentioned points which separate VNs from the rest of nominals and group them again back with verbs:

- the ergative character of the VN’s Case-marking pattern when the external argument of intransitives is treated in the same way as the internal argument of transitives
- the possibility of adverbial modification related to the lower part of the verbal structure and to aspect
- the fact that verbal nouns keep singular form also in the distribution of multiple and generic numerals although normal count nouns have to be in plural

What I expect from a successful analysis is to account for all these generalizations, for- as well as against-verbal-like. Although many of my findings might hold for eventive nominals which are not derived by the *-(e)ní/tí* suffix, I focus exclusively on the analysis of *-(e)ní/tí* nouns in the next chapter.

Chapter 5

Analysis of the nominalizing structure

The main goal of the following chapter is to arrive at a satisfactory explanation of how verbal nouns with argument structure are derived in Czech. The association of arguments of a predicate to syntactic positions is a part of a broader theory of syntax-lexicon interface and is referred to as a question of ‘linking’, see Pesetsky (1995) and Levin and Rappaport-Hovav (1995) for overview and related issues. Here, I am concerned mainly with the licensing of the sole argument of unergative and unaccusative predicates and of the internal and external argument of simple transitive predicates in the nominal syntactic structure.

As was anticipated in 1.4, my analysis presupposes a lexicon where roots are stored, and where syntax is the means of grammatical-category determination. I employ the Distributional Morphology mechanism according to which morphological derivations are intertwined with syntactic rules. My view is thus similar to that presented in van Hout and Roeper (1998) in arguing that it is the feature checking defined on event-related projections which captures the morphological structure of nominalizations.

The existence of connections between semantic, syntactic and morphological features on the one hand, and phonological features on the other is recognized by all theories of morphosyntax. In DM the Vocabulary Item is a bearer of these features, including the connection between them. Terminal nodes which are organized into the familiar hierarchical structures by syntactic principles and operations are complexes of semantic and syntactic features (Halle and Marantz 1994, pg. 275-276). On the basis of identifica-

tion between syntactic, semantic and morphological features of Vocabulary Items and those of terminal nodes, the Items are inserted into the nodes, supplying them with appropriate phonological features. What the following lines present is stepwise account of *verb-like properties of eventive VNs* which were described in the previous two chapters (IA licensing, EA licensing, aspectual properties and their interplay with the IA obligatoriness, IA \gg EA priority) *in terms of the involved functional projections and morphosyntactic features* associated with them.

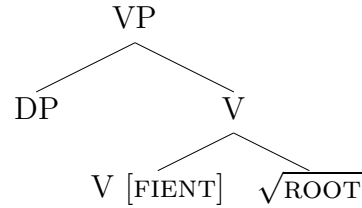
5.1 IA licensing

We have made the important observation in 3.2.2 that VNs preserve not only lexical-case marked arguments but also the argument which gets the structural object Case (manifested in the finite clause by accusative morphological case). This internal argument of the verbal functional structure changes its form to structural Genitive in the nominal structure but fulfills the same requirements that internal arguments of verbs have to fulfill as we have seen in 3.3.1.

We have also seen that the presence of the internal argument is independent of the eventive versus resultative meaning of a noun – so that in principle *all types of event nominals should be capable of licensing arguments*. What differentiates nouns denoting objects and nouns referring to events is the licensing of the obligatory presence of internal arguments which will be discussed in 5.3.

Implementing the analysis of Hale and Keyser (1993a, 1998) I conceive the IA of event nominals as being introduced by the *v* of the “become” type (I use the capital ‘V’ notation for this type of verbal head in phrase marking diagrams). In the DM framework this head attaches to the uncategorized root regardless of whether the predicate denoted by the root has the causative or the inchoative semantic character. Embick (2004a) marks the BECOME-operator which denotes a transition event that moves towards a state with the [FIENT] feature, for ‘fientive’, in order to avoid the unwanted association of the traditionally used [BECOME] feature with telic events:

- (1) Resultative VP (introducing IA)

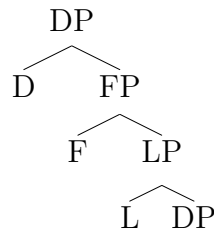


5.1.1 IA of eventive vs. resultative nominals

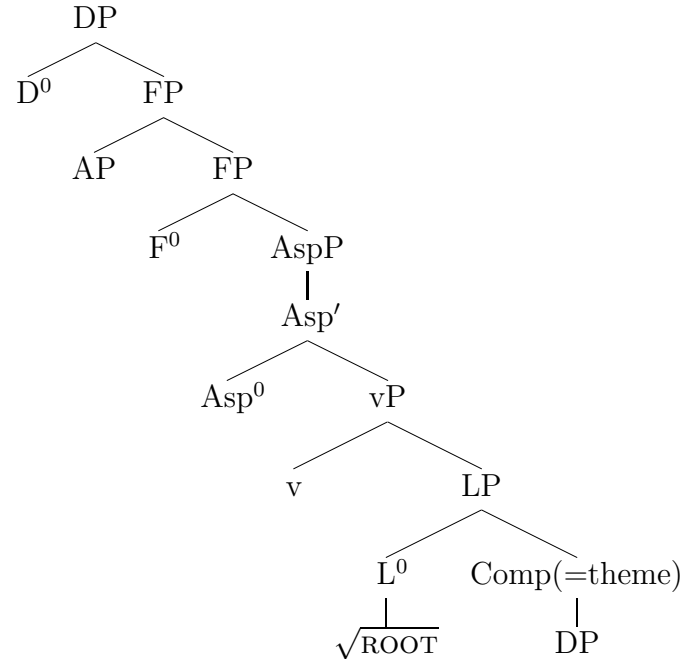
The fact that resultative nominals are also capable of licensing the IA is unexpected not only for Grimshaw's 1990 account based on the argument-structure changing operations on lexical entries, which are associated with complex-event denotation, but also for Borer's 1999 account based on the inclusion of various aspectual heads which are responsible for the interpretation of arguments projected directly in their specifiers. Since these aspectual heads at the same time enrich the derivation with eventive semantics, the presence of arguments in the structure of referential nominals is rather surprising.

To capture the fact that in Czech both event-denoting and result-denoting nominals have the internal argument, I propose that the resultative part of a functional structure must be present within both types of nominals. An alternative solution to the shared theme argument is presented in Alexiadou (2001) where the root itself bears the resultative semantics so that the presence of a functional category that brings resultative interpretation is not needed. According to Alexiadou, unspecified roots themselves can take internal arguments or complements which accounts for the fact that both nominal types share the theme. What differentiates resultative nominals from eventive ones is that no Asp and v are included:

- (2) Resultative noun
-
- (Alexiadou 2001, pg. 57)



(3) Eventive noun



Based on Alexiadou (2001, pgs. 19, 57).

Although I agree with the analysis which attributes the event/result difference to the presence versus absence of higher verbal functional categories I suppose that Alexiadou's solution mixes the notion of syntactically licensed arguments and complements present in the lexical conceptual structure of individual predicates ('lcs complements' in Grimshaw (1990)). There is a close relation between both notions and it is one of the tasks of theory of 'linking' to provide a satisfactory answer to this issue but the terms are not interchangeable.

In the structural account presented here, I assume that roots enter the derivation as bare two-place or one-place predicates, i.e. they can be subcategorized for a deep object/subject position or for both, but it is the matter of the syntactic structure itself to satisfy these slots, i.e. to provide the predicate with syntactic arguments. That's why not only the external but also the internal argument must be licensed by the structure itself. On the other hand, arguments with so-called inherent case must be specified for concrete roots.

I find support for this approach in the fact that the lower, resultative verbal head is the one associated with verbalizing suffixes (see Embick 2004a, pg.

366). Because these suffixes are present in Czech not only in verbs and eventive verbal nominals but also in resultative VNs, I understand the resultative head as being present in all above mentioned constructions. Concretely, I suppose the resultative V is the place where some of the Czech thematic affixes (including “zero” one) would attach; presumably those which are preserved also with adjectival passives denoting target state which don’t project higher (agentive/eventive) levels of a decomposed vP.

The term ‘target state’ (contrasting to ‘resultant state’) is used in Kratzer (2000) (following Parsons (1990)) for the type of adjectival passives which describe states that are in principle reversible, hence can be transitory which is compatible with the modifier ‘still’, e.g. ‘The children are still hidden’. The ‘resultant state’ passives, on the other hand, refer to the contextually salient event which is over by the time of reference/topic. The state they express is irreversible – once an event is over, it is over forever, hence the ‘still’-modifier has no sense, cf. ‘*The theorem is still proven’.

The following pairs of examples show that identical morphemes appear in themes of active verbal participles and verbal nouns. The example (5) is used to demonstrate that the same morphemes are used in the derivation of adjectival passives with target state interpretation too.

(4) Thematic suffixes in verbs and verbal nouns:

- | | | | |
|----|----------------------------------|---|------------------------------------|
| a. | přikry- l | – | přikry- l -t- í |
| | cover- <i>theme</i> -3.SG.PAST | | cover- <i>theme</i> -PASS-NOM.SG |
| | ‘(he) covered’ | | ‘covering’ |
| b. | poprask- a -l | – | poprask- á -n- í |
| | crackle- <i>theme</i> -3.SG.PAST | | crackle- <i>theme</i> -PASS-NOM.SG |
| | ‘(it) crackled’ | | ‘crackling’ |
| c. | nap- nu -l | – | nap- nu -t- í |
| | tighten- <i>theme</i> -3.SG.PAST | | tighten- <i>theme</i> -PASS-NOM.SG |
| | ‘(he) tightened’ | | ‘tightening’ |

(5) Target state passives derived from corresponding verbal stems:

- | | | | | |
|----|--------------------------------------|--------------|-------|------------------------------------|
| a. | Dír-a | je | stále | přikry- l -t- á . |
| | hole-NOM.SG | be.3.SG.PRES | still | cover- <i>theme</i> -PASS-NOM.SG |
| | ‘The hole is still covered.’ | | | |
| b. | Potrubí | je | stále | poprask- a -n- é . |
| | piping.NOM.SG | be.3.SG.PRES | still | crackle- <i>theme</i> -PASS-NOM.SG |
| | ‘The water piping is still cracked.’ | | | |

- c. Lan-o je stále nap-**nu**-t-é.
 rope-NOM.SG be.3.SG.PRES still tight-*theme*-PASS-NOM.SG
 ‘The rope is still tightened.’

I admit this is just speculation which would need detailed research to become substantiated. However, it is not my task to provide the analysis of Czech verbalizing affixes here or to identify the syntactic structures involved in their formation. Still, I have to take into account that these affixes are preserved also in verbal nominals as was shown for the whole system of Czech verbal classes in (5) in chapter 3. In short, I associate the presence of these suffixes with heads of a “v-type” which I presuppose to be shared by both verbs and *-(e)ní/tí* nominals.

The inventory of Czech verbalizing morphemes includes also one which never appears with the distribution of *-(e)ní/tí* nominalizing suffix. It is the theme suffix *-i-* which often introduces causative semantics:

- (6) pros-**i**-l – proš-en-í
 beg-*theme*-3.SG.PAST beg-PASS-NOM.SG
 ‘(he) begged’ ‘begging’

Although I do not provide any analysis for the licensing of this type of a theme vowel in the verbal structure, it is crucial for the analysis presented here that the set of embeddable verbalizing affixes is identical for both groups of nominals since *-i-* is present neither in resultative nor in eventive nominals.

5.2 EA licensing

On the basis of examples like (21) and (22) in 2.3.1 or (1) and (2) in 4.1.1, which evince the presence of the agentive argument in the structure of eventive verbal nouns and its dependence on the (explicit or contextually understood) presence of the IA, I argue for the presence of a functional head which introduces external argument in VNs.

Following Marantz (1984) and Kratzer (1996) I am assuming a separate Voice head as a non-overt head introducing the agent. It is the consequence of this theory that EA is not a true argument of the verb anymore, rather it is the “internal argument of Agent” (Kratzer 1996, pg. 131). See the following exemplification of all three different types of arguments of a predicate:

- (7) We bought your slippers in Marakesh.
 $\exists e$ [bought(your slippers)(e)₁ & Agent(we)(e)₂ & in(Marakesh)(e)₃],

where (e) is the Event Argument;
 (your slippers), (Marakesh) are internal arguments of ‘bought’ and ‘in’;
 (we) is the internal argument of Agent, informally external argument of ‘bought’.

(Kratzer 1996, *ibid.*)

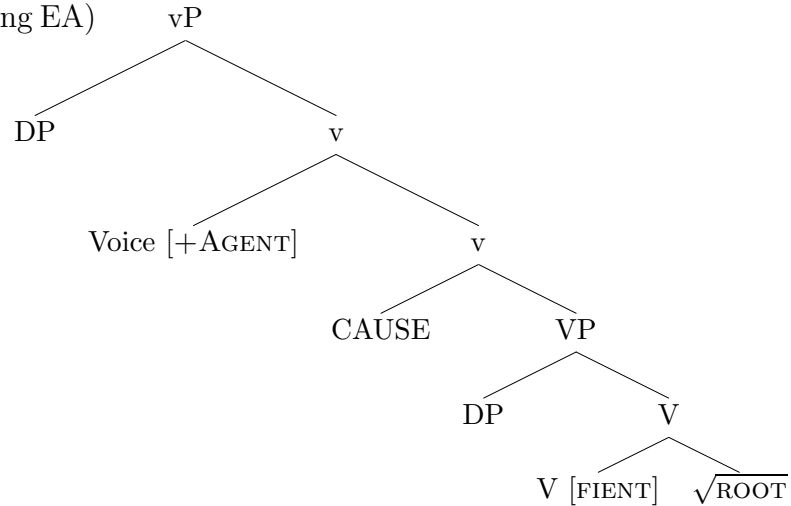
In contrast to the “true” internal argument, the “internal argument of Agent” is added via the operation of Event Identification, combining it with the right type of the Event Argument of a predicate, such as action, state, event proper (Kratzer uses the term *Aktionsarten* for these restrictions to the Event type).

The presence or absence of a category of Voice is assumed to be the determining factor for the classification of unergative and unaccusative predicates. It is a basic property of unaccusative structures that their single argument is the underlying object and a separate head introducing the agent argument is not projected (see Embick (2004b) and Alexiadou and Anagnostopoulou (2004) for the discussion of this assumption). The structure in (1) thus represents for unaccusatives already the full vP¹. Transitive structures, by contrast, combine the resultative VP with a higher VoiceP (vP in Chomsky’s (1995) terms) of the event type which introduces the external argument and licenses the causative semantics of a verb.

The causative character of the higher, eventive v is actually analyzed as a bundling of two separate functional heads, CAUSE and Voice. They can form a single morpheme in a particular language (Pylkkänen 2002, pg. 90) so that the the causative and external argument relation are sometimes grouped together. (In the following tree I use the non-Voice-bundling notation, in subsequent phrase markers I will group Voice and CAUSE under the label of a little ‘v’ for the sake of space.)

¹An alternative way of syntactical encoding of the unergative – unaccusative distinction is presented in Borer (1994) for whom the presence of two types of aspectual heads and the way arguments move through them results in the existence of the verb classes, cf. 5.3.2.

- (8) Causative vP
(introducing EA)



CAUSE introduces a causative relation between the *target state* denoted by the lower VP (called also ‘resultative VP’ here) and a *causing event* which is the implicit argument of CAUSE. As Alexiadou *et al.* (2005), following Ramchand (2005), point out, the postulation of a BECOME-operator (or [FIENT] feature) in the structural representation of causatives and anticausatives then becomes superfluous. The causative semantics does not have to be directly associated with any verbal head but results from the combination of a higher eventive (activity) *v* and its lower stative complement.

5.2.1 EA optionality

It is a consequence of Kratzer’s system that we do not need to presuppose the suppression of EA which we would have to stipulate if agents were true arguments of verbs as e.g. in Grimshaw (1990). Under certain conditions, they can be present just in a “hidden”, non-overt form but we can have also fully developed VPs where the EA-introducing head is not present at all. This distinction is relevant also for Czech verbal nominals. While the former case is the case of eventive *-(e)ní/tí* nominals with the implicit agent, I assume that VoiceP is simply missing in case of unaccusative *-(e)ní/tí* nominals.

The implicit agent argument in the structure of transitive eventive VNs (which I express as [+Agent] feature on the little *v*) can be accessed by modification in the form of agent-oriented adjectival modifiers or of an agentive *by*-phrase. The same implicit agent licensed by the Voice head which is

specified as [+Agentive] is obviously present also in verbal passive structures (cf. Alexiadou *et al.* (2005, pg. 13)) where it can be modified by the same agentive *by*-phrase and/or by agent-oriented adverbials:

- (9) opakovan-é (úmysln-é) překračování
 repeated-NOM.SG intentional-NOM.SG crossing.NOM.SG
 hranic (pašerák-em drog)
 border.GEN.PL pusher-INSTR.SG drug.GEN.PL
 ‘the repeated intentional crossing of borders by the drug-pusher’
- (10) Hranic-e by-ly opakovaně (úmyslně)
 border-NOM.PL be-3.PL.PAST repeatedly intentionally
 překračován-y (pašerák-em drog).
 crossed-NOM.PL pusher-INSTR.SG drug.GEN.PL
 ‘The borders were repeatedly intentionally crossed by the drug-pusher.’

The adjunctive character of the agentive *by*-phrase (which has the instrumental morphological-case form in Czech) conforms to the *overall optionality of agent-expressing* which was showed in 4.1.1. Also this fact is common for *by*-phrases of both VNs and verbal passives.

All our findings for the optional agentive *by*-phrase of Czech eventive nominals thus correspond to the agent-regarding criterion for the passive syntactic derivation formulated by Dixon (1994, pg. 146) which is supposed to hold crosslinguistically:

The underlying subject NP goes into a peripheral function, being marked by a non-core case, preposition etc.; this NP can be omitted although there is always the option of including it.

Although always optional, the presence of the agentive *by*-phrase is conditioned by the presence of the internal argument. This fact is apparent in case of finite verbal-passive structures derived from transitives where the NP corresponding to the deep object position has to be always present in the structural subject position in order to satisfy [+Nom] and [EPP] features of Tense/Infl head. However, we have seen that the same restriction on the agentive *by*-phrase occurrence holds also within *-(e)ní/tí* nominals although they don't include any head associated with the features mentioned above (as demonstrated in 4.5):

- (11) Vysvětlení *(definic-e) učitel-em
 explaining.PF.NOM.SG definition-GEN.SG teacher-INSTR.SG
 za-bra-lo cel-ou hodin-u.
 PF-take-3.SG.PAST whole-ACC.SG hour-ACC.SG
 ‘The explaining of the definition by the teacher took the whole hour.’

I suppose that the behaviour of the agentive InstrP in Czech follows directly from the structural composition of the nominal phrase as argued for in this thesis. If the only (morphosyntactically unrestricted) nominal Case-assigning position of postnominal Genitive is already filled by the patient argument, the second merged DP with an EA interpretation must adjoin to the structure in the form of some modifying phrase. This phrase gets an agentive interpretation on account of the fact that it has some specific lexicalized form (InstrP in Czech, *by*-phrase in English) and that it adjoins to the vP which is specified for both argument-introducing positions: thematic Spec,VP as well as agentive Spec,VoiceP. The specific character of the agentive *by*-phrase is captured in Marantz (1984, pg. 130) by the following words: “The preposition *by* performs a special task in English. It assigns to its logical object the semantic role assigned by the predicate that the modifier that it produces modifies.” Grimshaw (1990) captures the same specific character of the *by*-adjunct which nevertheless gets an external argument interpretation by the notion of so-called ‘argumental adjunct’ or ‘a-adjunct’.

If the possibility of an overt realization of agent in the *by*-phrase is not utilized, Kratzer’s “hidden” external argument comes into play. Supported by Zucchi’s analysis of the implicit satisfaction of arguments which was discussed in detail in 3.3.2, I assume that in this case, the agent role is simply assigned to a variable which is existentially quantified over within a vP.

Lexical versus syntactic approach

This treatment is reminiscent of the one assumed for verbal passive’s formation in Horvath and Siloni (2005). They define the derivation of verbal passives as an exclusively syntactic operation. Passives are inserted as two place predicates but “their external argument is not mapped to syntactic structure and must undergo *saturation (existential closure) at the semantics*”. This is what might account for the overall optionality of external arguments with verbal passives as well as with verbal nouns.

However, we have seen that if the agentive argument is expressed overtly,

the agentive *by*-phrase does not behave as a simple adjunct which can be optionally adjoined anytime and anywhere we want. There are clear hierarchical rules of the assignment of a certain syntactic position to the agentive DP, namely it becomes a *by*-phrase only if there is a syntactically realized patient but it becomes an *of*-phrase if there is no overt patient position in the nominal structure. The only “optional” agentive position is the prenominal PossP in the sense that it can specify eventive nominals regardless of whether the object in GenP is present or not; however, this position is limited morphosyntactically. Furthermore, we have the clear evidence of a constant implicit presence of the agentive argument in the eventive-nominal structure from the possibility of agent-oriented modification, contrasting to the impossibility of this type of modification in case of resultative nominals.

In order to account for these obviously structural relations between arguments I assume, contra Horvath and Siloni, that the *external argument of eventive VNs is always mapped also to syntactic structure*. The subject-like DP either obtains its agent interpretation in the Spec,VoiceP position from where it moves to the structural Genitive or prenominal possessive phrase (if they are not already filled by object-like DP or its trace, see 5.3.1) or it adjoins to the structure in the form of an agentive InstrP modifying the implicit agent licensed by the Voice head. The third possibility which is employed if there is no phonologically realized constituent which would bear the external semantic role is that the agent/logical-subject role is merely assigned to the Spec of VoiceP. The bearer of that role is then interpreted as being an indefinite someone or something, cf. Marantz (1984, pg. 128). Together with Alexiadou *et al.* (2005) I remain agnostic with respect to whether this implicit external argument is realized in the structure as a general covert pronoun (PRO) or whether it is present just in terms of a [+Agent] feature on Voice.

Eventive versus resultative nominals

Although eventive and resultative nominals behave correspondingly as far as the IA licensing is concerned there is a strong contrast between them regarding the EA licensing. I have put forward in 4.1.2 that if a noun in *-(e)ní/tí* refers to an object and not to an event, it does not seem to allow the adjunction of the agentive *by*-phrase:

- (12) Vysvětlení definic-e *učitel-em
 explaining.PF.NOM.SG definition-GEN.SG teacher-INSTR.SG
 by-lo napsán-o na tabul-i.
 be-3.SG.PAST written-NOM.SG on board-LOC.SG
 ‘The explanation of the definition by the teacher was written on the board.’

Moreover, the *of*-phrase or the possessive premodifier of these nouns never has the non-ambiguous agentive interpretation observed in case of eventive nominals. Rather, the agent-meaning is just one of many possible interpretations of these phrases, see comments on example (7) in 4.1.2.

For these reasons, I assume that resultative verbal nominals do not contain the VoiceP layer introducing the agent but they merge their nominal suffix directly to the (aspectualized) verbal stem. This analysis of eventives in contrast to resultatives is consistent with the fact that the higher *v* is often treated not only as the locus of agentivity, i.e. of features relevant to licensing and interpretation of external arguments, but also as the locus of features related to eventivity (cf. Alexiadou and Anagnostopoulou (2004, pg.119)).

5.3 Asp category and IA obligatoriness

The main observation driving this analysis is not just the fact that there occur arguments or their cognates in the VN construction but that they occur in a particular order, obeying particular rules of realization.

It was shown in 3.3.1 that the obligatoriness/optionality of the overt IA of eventive nominals depends on [\pm Perfective] feature of the aspectual head:

- (13) a. Z-ničení *(městečk-a) trva-lo asi
 pf-destroying.NOM.SG town-GEN.SG last-3.SG.PAST about
 hodin-u.
 hour-ACC.SG
 ‘The “complete” destroying of the town lasted about an hour.’
- b. Ničení (městečk-a) trva-lo asi
 destroying.impf.NOM.SG town-GEN.SG last-3.SG.PAST about
 hodin-u.
 hour-ACC.SG
 ‘The destroying of the town lasted about an hour.’

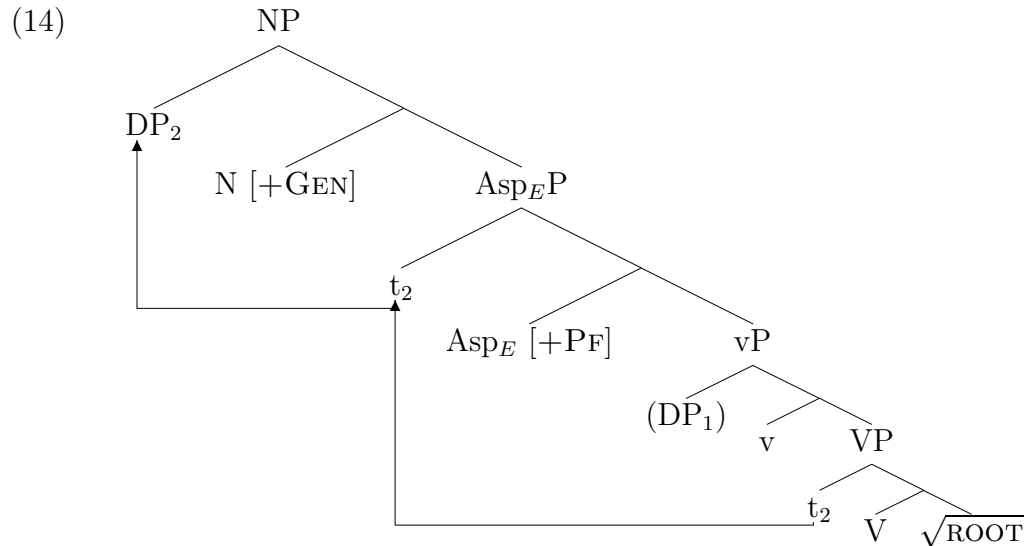
It was also shown (in 3.1.2) that Czech eventive VNs are fully compatible with aspectual morphology, in addition to their sensitivity to other indicators of the category of Aspect such as PPs of ‘for/in an hour’ type and other aspectual modifiers. Therefore it is not just the full vP-shell that is necessary to the derivation of an eventive VN, but functional aspectual structure as well.

I assume that all patient DPs of verbs move through a position corresponding to Borer’s Spec,Asp_E and that such a movement is in Czech obligatory in case of [+Pf] value of aspectual head. Note, however, that for Borer the Asp_E is responsible not only for “measuring the event” by checking for N/D features but also for the theme-like interpretation of the moved DP itself, cf. (47) in 2.4.2. In the present analysis, it is the *resultative VP* that *licenses the theme*. (This allows us to explain the fact that both eventive and resultative nouns can have complements which is unexpected under Borer’s approach where arguments are introduced by higher eventive categories).

Although the event is always interpreted as measured at LF, Czech imperfective verbs allow also a “dummy” theme which corresponds to a covert general indefinite pronoun. We have analyzed this type of implicit internal arguments in 3.3.2 as existentially closed over within the vP. This captures the fact that in the absence of [+Pf] aspectual feature the DP movement from the resultative vP to Spec,Asp_EP is optional so that the imperfective verbs can but do not have to appear complemented by their objects.

The above described mechanism accounts for the *aspectual behaviour of Czech verbs*. But if we acknowledge the existence of the head of Asp_E type within the VN structure too, we can explain the fact that nominal GenP (or PossP) must be obligatorily filled by the internal argument only in case of *perfective verbal nominals* as in (13-a).

The obligatory movement of IA triggered by the perfective value of aspectual category is represented in (14):



When it comes to the *nominals derived from imperfectives*, the Spec,Asp_{EP} position can remain empty because the IA licensed by the transitive or unaccusative vP is not forced to “become overt”, i.e. to move from VP via Spec,Asp_{EP} to the Case-assigning position (postnominal Genitive of Czech nominals). Thus, the agentive DP₁ can undergo movement to this Case-assigning position instead. This explains the ambiguous meaning of the imperfective structure in (15-b): in the case of a patient-like interpretation of ‘the tribe’ IA movement to Spec,Asp_{EP} has proceeded; in the case of an agent-like interpretation, the IA remained existentially closed over within the vP and the EA has taken its place in GenP. On the other hand, the interpretation of the perfective VN in (15-a) is non-ambiguous:

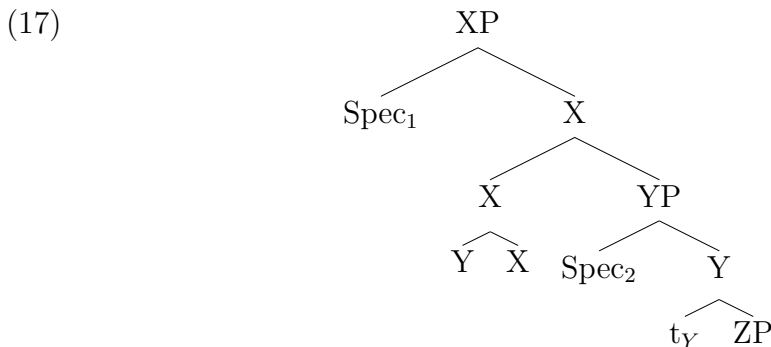
- (15) a. z-ničení nepřátelsk-ého kmen-e
 pf-destroying.NOM.SG enemy-GEN.SG tribe-GEN.SG
 ‘the enemy tribe’s(*EA/IA) destruction’
 b. ničení nepřátelsk-ého kmen-e
 destroying.**impf**.NOM.SG enemy-GEN.SG tribe-GEN.SG
 ‘the enemy tribe’s(EA/IA) destruction’

5.3.1 IA≫EA ordering

The question which arises on the basis of the above proposed mechanism is what ensures that it is just the lower, internal argument and not the higher, external one which moves to the Spec,Asp_E (and then higher in the structure to Case-checking positions) and crosses on its way up the deep-subject position of Spec,vP . A solution to this case of superraising, an apparent Relativized Minimality violation, was proposed in Chomsky (1995). He uses the equidistance proviso based on the notion of a minimal domain (see Chomsky 1995, pg. 178 et seq.) in order to maintain the “Shortest Movement”/“Attract Closest” condition:

- (16) If α and β are in the same minimal domain, they are equidistant from γ . (Chomsky 1995, pg. 184)

The abstract case illustrating the proviso is provided in (17). Y adjoins to X, forming the chain (Y, t) with the minimal domain $\{\text{Spec}_1, \text{Spec}_2, \text{ZP}\}$. Spec_1 and Spec_2 are then equidistant from ZP, so that raising of ZP can cross Spec_2 to Spec_1 :



In a concrete case, our thematic DP which is the specifier of the resultative VP can raise to Spec,Asp_E crossing the DP in the specifier of VoiceP (or its trace) without violating the economy condition.

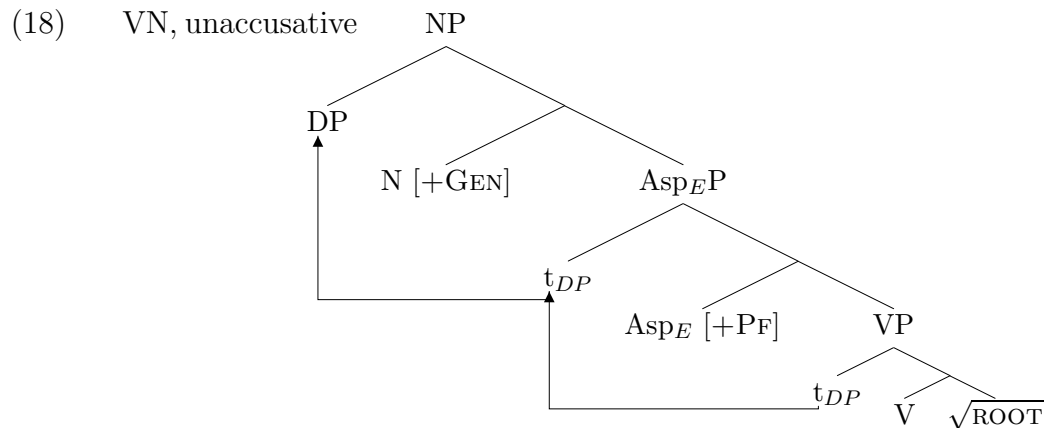
Other well-known employment of a sharpened “Shortest Movement” notion is the explanation of why we find crossing rather than nesting in the Case theory where the deep subject raises to Spec,Agr_S and deep object to Spec,Agr_O , crossing the trace of the subject. Recall that there is the structural parallelism between Asp_E and Agr_O as was mentioned in 2.4.2. Although the movement of a patient DP to the specifier of aspectual functional

head has different motivation (Event-measurement instead of Case-checking), the movement itself is in principle identical.

Contrariwise, Borer (1994, pg. 30, fn. 7) renders Chomsky's stipulation unnecessary for IA movement to the Spec,Asp_E and the "crossing" EA movement to a higher specifier (Spec,TP or Spec,Asp_P). According to her, it is not before passing through these nodes that the unordered arguments associated with the predicate get assigned their internal vs. external interpretation. Before this operation, the arguments might be perceived as linked to the head "in the roster of syntactic properties listed for individual items in the lexicon" (Hale and Keyser 1998, pg. 73) which means that they can move to either position freely; the nonsensical configurations of the type 'The apple ate Kim.' will be ruled out by world knowledge, rather than by syntax (cf. also 1.4).

5.3.2 Category of Aspect and the intransitives' argument

In connection with the obligatoriness of the sole argument of intransitives it was mentioned that *VNs derived from inchoative predicates* obey the same rules as causative predicates with respect to the obligatoriness of their internal argument. Thus a similar structure to the one in (14) would account for the perfective-aspect behaviour of unaccusative nominals, with the only difference that the agent-introducing layer would not be projected:

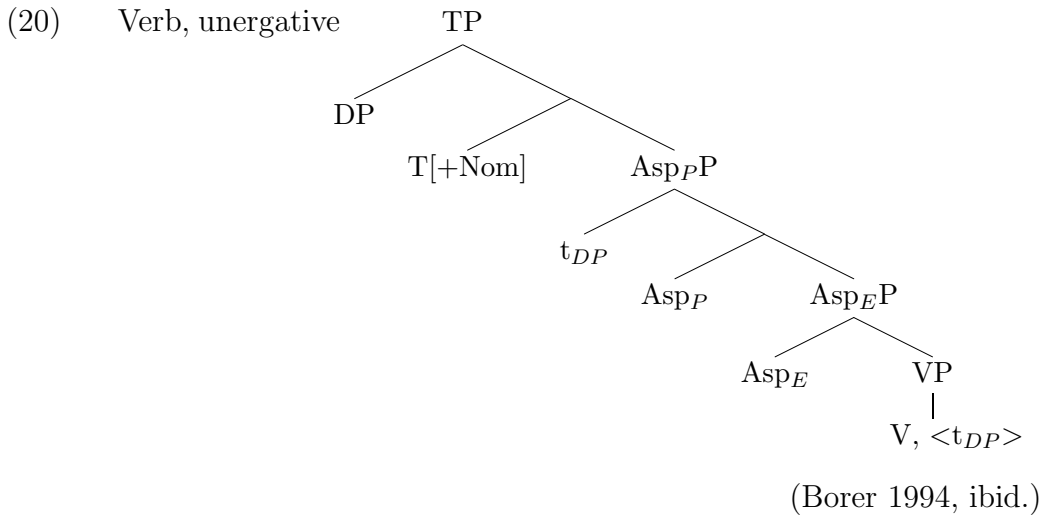


Unergative predicates, on the other hand, never require an overt DP with the measure interpretation, neither in case of imperfective nor in case of

perfective stems. For convenience, I repeat the relevant example (19) from the fourth chapter here:

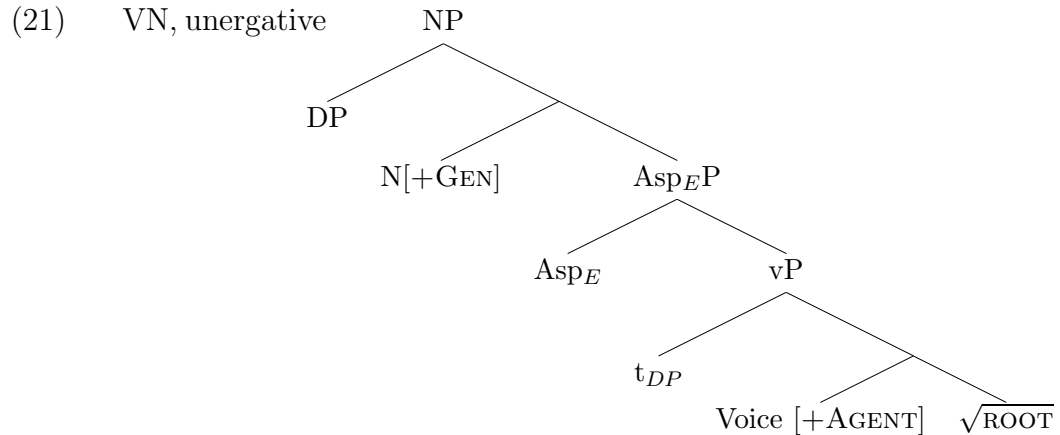
- (19) a. Nechtěn-é za-zívání způsobi-lo
 unwanted-NOM.SG PF-yawning.NOM.SG cause.PF-3.SG.PAST
 ne-mal-é potíž-e.
 no-small-ACC.PL problem-ACC.PL
 ‘The unwanted yawning caused considerable problems.’
- b. Dlouhotrvající zívání způsobova-lo
 long-lasting.NOM.SG yawning.IMPF.NOM.SG cause.IMPF-3.SG.PAST
 ne-mal-é potíž-e.
 no-small-ACC.PL problem-ACC.PL
 ‘The long-lasting yawning caused considerable problems.’

This behaviour fits into the picture of a missing Spec,Asp_E suggested by Borer for unergatives. She also presupposes that if Asp_E remains unspecified, the verbal structure must have fully specified higher Asp_P node (which is otherwise optional) since every proposition must have at least one fully specified aspectual node (Borer 1994, pg. 35). This higher aspectual head is also responsible for the agentive interpretation of the argument:



Within the framework presented here, a DP obtains EA semantics if it is merged in Spec,vP (or adjoined to it in the form of a *by*-phrase). Since unergative eventive nominals do not require presence of *any* DP in their

structure at all and transitive eventive VNs do not require presence of an agentive DP in their structure as discussed in 4.1, again independently of perfectivity, there is no motivation for the presence of some higher aspectual head similar to that of Borer's Asp_P in the structure of nominals. As a consequence, the external argument moves directly to the position where it receives Case (GenP or PossP) without leaving the trace in the specifier of some aspectual head:



5.4 **-(E)N/T-** morpheme of nominals

The functional layers proposed up to now for the eventive-nominal structure, i.e. VP, VoiceP, Asp_EP would appear within the verb derived from the corresponding stem as well. The next natural question is what makes the derivation of verbal nominals specific and what makes it different from their corresponding verbal constructions.

5.4.1 **-(E)N/T-** morpheme of verbal passives

It was showed in 4.4.1 that VNs embed the same kind of morpheme as verbal passives but they differ in the amount of verb classes this morpheme can attach to. While only transitive verbs can passivize by attaching the $-(e)n/t$ -suffix in Czech, if the same morpheme is embedded under the nominal $-í$ suffix it can attach to all types of verb classes.

On the basis of Burzio's (1986) generalization which interrelates Case-marking of object and the projection of the agent argument, van Hout and

Roeper (1999, pg. 187) describe the effect of a passive verb in three consequent steps:

1. Case absorption which forces movement of deep object (theme) to surface subject (Nominative) position
2. structural subject position's loss of the agent projection, which creates a landing site for the object
3. agent's freedom to re-appear in an adjunct PP-projection

Regardless of the technical details of the passivization mechanism it is obvious that this sort of operation is limited to transitive predicates, cf. Marantz (1984) who explains this limitation by ban on vacuous operation on an argument structure. If there is no external argument from the beginning as in case of unaccusatives, there is no DP to be demoted from its canonical subject position; if there is no internal argument as in case of unergatives, there is nothing to be promoted to the emptied landing site in Spec,TP.

Nevertheless, the two “bans on vacuous operation” don't seem to be equivalent, i.e. there is a difference between (1) and (2) with respect to their obligatoriness in the passivization process. Many languages allow the vacuous application of the first step, but all languages insist on the second one: while there are cases of passivization of unergatives, see below the examples of impersonal passive constructions in Norwegian and German, there are no attested examples of verbal passives derived from unaccusatives.

- (22) a. Det ble grått mye.
 ‘It was cried a lot.’
 b. Es wurde getanzt.
 ‘It was danced.’

It was stated in 4.4.1 that Czech verbal passives derived by the *-(e)n/t-* suffix (so-called analytic passives) behave according to the general pattern described by van Hout and Roeper above so that they can be derived *only from transitive verbal stems*. On the other hand, verbal nouns with *-(e)n/t-* can be formed *also from all types of intransitive stems*, in which case the agentive *by*-phrase is not licensed at all and the sole argument of an intransitive predicate appears in the postnominal GenP or prenominal PossP (see examples (16) and (17) in 4.4.1).

What is more, the agentive argument of transitive VNs also differs from that of verbal passives: it is not limited to the adjoined *by*-phrase position or to bare implicit saturation but it can appear in the structural genitive-Case form as well (under the conditions described in 5.2.1). In terms of van Hout and Roeper’s passivization effects, the deep object of *-(e)ní/tí* nominals is not always forced to move to the surface subject position assigning structural Case and thus the deep subject can appear in this position instead.

This “limitlessness” makes Czech verbal nominals closer to active participle rather than to passive ones. If the observation is on the right track, then the Czech *-(e)n/t-* suffix in nominals would present a parallel to the *-ed* suffix in English (and similar type of suffix evidenced in many Romance and German languages) which is used to form passive as well as active participles². However, if Czech participles appear in the active *clause* structure, they embed the morpheme *-l* (on account of which active participles are also called *-l* participles). It seems that the nominalizing structure with the *-(e)ní/tí* suffix has bigger scope than the Czech passivizing *-(e)n/t-*, but smaller scope than the *-l* of active verbal forms.

The upper-border limitation of VNs’ scope is related to the overall absence of T-features connected with the suffix *-(e)n/t-*. Notably, *-l* participle itself seems to be capable of licensing T-related features such as [Nom] and [EPP] which can never happen with *-(e)n/t-* as was shown in 4.5.1. See the contrast between the first/second person which require the auxiliary ‘be’ in combination with active (past) participle in order to express the category of person and number and the “dummy” auxiliary of the the third person:

- (23) a. (já) Milova-l jsem Mari-i.
*pro*_{1.SG} love-SG.PAST be.1.SG.PRES Mary-ACC.SG
 ‘I loved Mary.’
- b. (ty) Milova-l jsi Mari-i.
*pro*_{2.SG} love-SG.PAST be.2.SG.PRES Mary-ACC.SG
 ‘You loved Mary.’
- c. (on) Milova-l Mari-i.
*pro*_{3.SG} love-3.SG.PAST Mary-ACC.SG
 ‘He loved Mary.’

At this point I leave the determination of a precise part of functional structure which is not shared by VNs and active participles for future research.

²This observation is due to Tarald Taraldsen, p.c.

5.4.2 **-(E)N/T-** morpheme of unaccusative adjectival passives

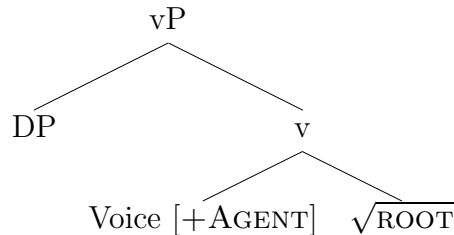
It was also noted in 4.4.2 that in the adjectival passive contexts, *-(e)n/t-* morpheme can actually attach also to unaccusative stems while they can be never formed from unergatives.

I attribute this impossibility to the Passive Adjective Condition formulated by Emonds (2002, pg. 19) on the basis of the generalization that the subject of (always intransitive) adjectival passives relates semantically to the verb root like the direct object of corresponding transitive verbs.

- (24) **Passive adjective condition (PAC).** The subject of an adjectival passive receives the theta role that its verb root assigns to a deep direct object in an active VP. Adjectival passives must otherwise respect the subcategorization of the verb root.

The functional hierarchy of unergatives begins presumably with the vP which introduces deep (logical) subject:

- (25) Unergative vP



If there is no deep direct object for which the root would be subcategorized, there is no DP which could become the surface subject of the adjective, i.e. the adjectival passive has nothing to be attributed to/predicated about. Unergative roots are thus ruled out from adjectival passives' structures on the basis of their innermost characteristics: not projecting the lowermost resultative VP layer which licenses the theme/logical object role (in other words they miss the structure represented in (1)).

5.5 V to N categorial change

Even though there are so many remarkable similarities between verbs and *-(e)ni/ti* nominals due to that both of them share eventive semantics and

both are capable of licensing arguments, each of these constructions belongs to a different lexical category which poses its own restrictions regarding the overt realization of arguments linked to the head.

The alternative solution to all the structural properties of VNs which we went through step by step in chapter 3 would be to assume that there exists a very specific type of nominal derivation which includes heads with markedly similar function to that of verbal functional categories, namely internal and external argument introducing heads and the aspectual head. However, this approach would not account for the generalizations which emerge on the basis of a unified structural approach to both verbs and verbal nominals. It was showed in previous sections of this chapter that if we treat both verbs and *-(e)ní/tí* nouns as sharing a certain piece of the fully projected VP we can satisfactorily account for all argument-structure related specificities of these nouns. Given how strikingly many categories of the “verbal” type would have to be superimposed above the nominal head in the former case, I assume that the nominalizing categorial head merges *after* the projection of these verbal categories.

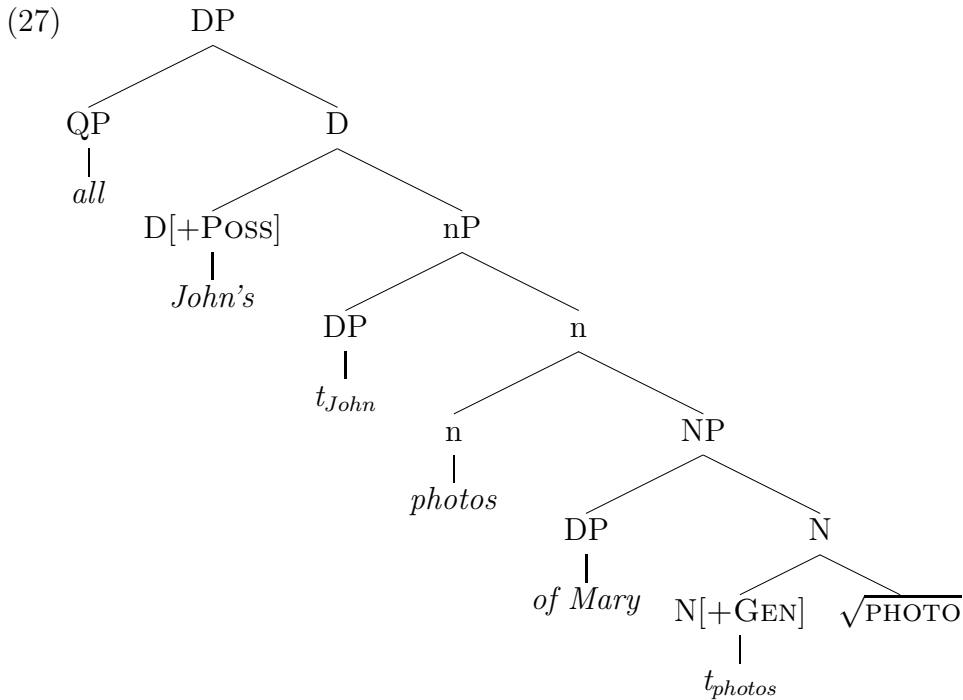
I find support for this treatment in the fact that VNs rank among nominals on account of the nominal *-í* suffix (see 3.1.3) which can attach also to bare roots. In this case, simple non-event-denoting nominals are derived:

- (26) a. ná-měst-í-∅
 on-town-*í*-NOM.SG
 ‘a town square’
 b. malin-í-∅
 raspberry-*í*-NOM.SG
 ‘raspberry canes’
 c. pří-slov-í-∅
 by-word-*í*-NOM.SG
 ‘a proverb’

It seems that specific argument-licensing properties of verbal nouns are related to the fact that their *-í* suffix doesn’t attach to the bare root but right behind the *-(e)n/t-* suffix which closes off the verbal projection.

At the same time, it is true that there are also many *non-deverbal nouns* in Czech which *can contain arguments* as well. Many theories solve this “surprising fact” by assuming that the internal nP structure mirrors the structure of a vP in two related aspects: Spec,NP becomes the syntactic

position for the patient argument and Spec,nP creates the position for the agent (cf. Adger 2003, chap. 9):



The nouns which are not directly derived from verbs but still seem to have argument structure usually denote results of some activity: ‘obraz’ (picture), ‘fotka’ (photo), ‘socha’ (sculpture). If their theme-like and agent-like arguments are both expressed, they obey similar hierarchical rules as discussed above for $-(e)n\acute{i}/t\acute{i}$ nominals. The theme appears in the postnominal GenP and the agent has the prenominal PossP form³. Nevertheless, in contrast to $-(e)n\acute{i}/t\acute{i}$ nominals, these nouns don’t allow the agentive InstrP and their arguments are always optional:

- (28) a. (Jan-ov-a) fotk-a (Mari-e)
 John-POSS-NOM.SG photo-NOM.SG Mary-GEN.SG
 ‘John’s photo of Mary’
 b. fotk-a Mari-e *Jan-em
 phot-NOM.SG Mary-GEN.SG John-INSTR.SG
 ‘the photo of Mary by John’

³The analysis of this type of nouns was proposed for Czech by Veselovská (1998).

In addition, the *agentive interpretation* of the subject-like argument of these nominals, e.g. ‘Jan-ov-a’ in the example above, is only one from the whole range of possible interpretations which could be all brought together by the “possessive meaning” in its broadest sense. This is not the case of eventive $-(e)n\acute{i}/t\acute{i}$ nominals (see 4.1.2 for the similar difference between the interpretation of PossP/GenP of eventive versus resultative $-(e)n\acute{i}/t\acute{i}$ nominals).

On the basis of these arguments I suppose that the approach based on a purely nominal derivation cannot be right for eventive nouns. It wouldn’t be able to account for the fundamental properties of their internal structure: the systematic availability of the agentive *by*-phrase with eventive VNs and the aspect sensitive obligatoriness of their patient argument. Crucially, both these properties are expected if we presuppose that a certain part of the verbal functional structure is included before the lexical categorial status of the structure is changed.

If the argument structure of event nominals was arbitrarily determined by the set of features independent from that of corresponding verbs, we would expect that the appearance of agents, themes or other arguments in the nominal form would also vary independently of the appearance of arguments in the structural positions of verbs, see Harley and Noyer (1998, pg. 128). In sections 5.1 through 5.3.2 the evidence was provided that nouns in $-(e)n\acute{i}/t\acute{i}$ behave surprisingly systematically. Their internal and external argument are interrelated and related to aspect in exactly the same way as arguments of verbs: verbs (in accusative languages) require the overt presence of their objects if the aspectual head bears the perfective feature; verbs (in ergative languages) have the specific *by*-phrase form for the agentive argument which can be used only in presence of an overt thematic argument. While the nominal derivation of event nouns would have to introduce additional rules parallel to those holding for verbs, the attachment of the nominalizing morpheme to the fully projected verbal structure accounts for all above mentioned principles in much more economical way.

5.6 Nominal structural positions

5.6.1 Postnominal genitive and instrumental

Once the category of a verbal derivational string is determined by merging the categorially marked morpheme $-i$, $V \rightarrow N$ mapping proceeds. The ar-

guments licensed within a vP are provided with the nominal structural slot in the Spec,NP where they become realized, satisfying [+D] feature of a nominal head. Postnominal genitive morphological case associated with nouns provides such a structural position in Czech. The [+D] feature on N which it satisfies is generally optional but it becomes obligatory if percolated from some lower head by a head-movement (carried along with the head under movement) as in case of perfective VNs. That's why this position can be treated as structurally equivalent to the accusative-Case position associated with verbs.

Analyzing Czech postnominal genitive as a structural Case conforms to Pit'ha's (1992, pp. 62-80) findings for Czech. He describes genitive case of a nominal phrase as semantically most unspecific case which creates the relationship between two nouns in the broadest sense. Its semantic function could be subdivided into three main groups: object, author/subject and appurtenance, out of which object and author/subject are those that occur with deverbatives (Pit'ha 1992, pg. 142).

It was mentioned a few times in this work that the case-marking pattern of Czech *-(e)ní/tí* nominals is remarkably similar to that of ergative verbs. In ergative languages, either the theme or the agent can be marked by absolutive Case, but not both in the same structure. If the theme is already marked by Absolutive, the agent gets the Ergative.

The rule of the agentive *by*-phrase assignment corresponding to the ergative-Case assignment has been proposed for English event nominals (and for ergative Case-marking generally) in Williams (1987, pgs. 368, 371). He assumes that the argument structure is always present in the nominalization implicitly but its overt realization is governed by a special ergative-*by* rule:

- (29) The agent is assigned to a *by*-phrase if there is an active internal theme; otherwise it is assigned to an *of*-phrase.

Williams (1987, pg. 375) further points out that there is really no reason to assume a distinction between the accusative Case and the absolutive Case since both are simply cases assigned to internal themes. Nominative is then the Case assigned by Infl and Ergative is the Case assigned to an (internal) agent when there is an internal theme.

We have seen in 3.2.2 that Czech postnominal instrumental morphological case can be assigned to the agentive argument also only if the theme in GenP (or theme in PossP) is present. Moreover, the IA \gg EA hierarchy in

attempting for the postnominal GenP holds for Czech event nominals too.

5.6.2 Prenominal possessive phrase

Czech DP structure provides one more position which hosts the argument interpretation in the case of event nominals, the prenominal possessive-adjective (see 3.2.1). Veselovská (1998) analyses the Czech PossP as a specifier of a D head (this head is always zero in Czech, however, there are some indications for its existence). Given that there is no overt N-to-D movement in Czech, Veselovská proposes that both the positions are associated on the basis of a syntactic coindexation which is overtly signalled by adjectival agreement in morphological case, number and gender on prenominal possessives and adjectival modifiers.

The coindexation ensures the transfer of a subcategorizational [+D] feature between N and D heads. Moreover, if the noun specifying the lower head N has the character of a bare NP with unmarked number and gender features (i.e. [+Sg] and Fem/Masc for [+Hum]), its movement to the PossP is according to Veselovská necessitated on the basis of the Unlike Feature Condition. For the detailed account of how the mechanism works see Veselovská (1998, pg. 289-295), I have sketched just the general idea behind it. Since the possessive movement holds generally within all Czech DPs I will not go any deeper into the details of its motivation here.

I assume that the same kind of mechanism which would account for the possessive movement in other nominal constructions would account for the same movement within *-(e)ní/tí* nominals. Since the eventive nominal structure can have two argumental positions as a source of a DP-movement to GenP, also two different interpretations of a PossP are possible; see the relevant examples from 3.2.2:

- (30) a. stařenč-in-o oloupení zloděj-em
 grandam-POSS-NOM.SG robbery.NOM.SG thief-INSTR.SG
 ‘the grandam’s robbery by a thief’
 b. zloděj-ov-o oloupení stařenk-y
 thief-POSS-NOM.SG robbery.NOM.SG grandam-GEN.SG
 ‘the thief’s robbery of a grandam’

In (30-a) the PossP was the target of movement of a thematic DP, in (30-b) the agentive DP was promoted to this position.

For the analysis proposed here it is crucial that the interpretation of a possessive DP varies in accordance with whether it is attached to a noun denoting an object (concrete or abstract) or an event. Basically, three distinct instances are possible:

1. In case of object-denoting nouns for which the complementation by the verb-like arguments would make no sense, the PossP has a meaning of appurtenance. It denotes the owner in the true although broad sense of this word:

(31) otc-ov-a statečnost
 father-POSS-NOM.SG braveness.NOM.SG
 ‘my father’s(Appurt) braveness’

2. Alternatively, we can observe the ambiguity between appurtenance-like and argument-like interpretation of a PossP, usually in case of nouns denoting results of human’s activity, see also (28-a):

(32) otc-ův obraz
 father-POSS.NOM.SG picture.NOM.SG
 ‘my father’s(Appurt/Ag/Pat) picture’

3. By contrast, VNs denoting events never allow the “true possessive”, owner-like interpretation of the PossP:

(33) otc-ov-o opakovan-é malování
 father-POSS-NOM.SG repeated-NOM.SG painting.NOM.SG
 ‘my father’s(*Appurt/Ag/Pat) repeated painting’

In order to account for this asymmetry I analyze the possessive DP of eventive *-(e)ní/tí* nouns as raising from the Spec, VoiceP or Spec, VP positions where the non-ambiguous argumental interpretation of a noun is obtained.

Since I have proposed that *-(e)ní/tí* nouns denoting results do *not* contain the category of Voice introducing DP with an exclusive agent interpretation, it is expected that this type of VNs should actually allow all three possible interpretations of a PossP, including the true owner-like one. This expectation is confirmed:

- (34) Otc-ov-o předvolání (k soudu) leže-lo na stol-e.
 father-POSS-NOM.SG monition.NOM.SG lie-3.SG.PAST on table-LOC.SG
 ‘My father’s (Appurt/Ag/Pat) monition lay on the table.’

The resultative noun ‘předvolání’ can denote either the monition which is owned by father because he might got it from someone else, or which was aimed at father, or which was actually made by father so that he is in the relation of authorship to it.

5.7 Derivational phrase-marking

In chapters 3 and 4 the motivation for the syntactic derivation of $-(e)ní/tí$ nominals was provided by identifying their syntactic properties. In this chapter have tried to identify the features and structures involved in the formation of these nominals. To sum up, the following projections were evidenced in the structure of eventive VNs:

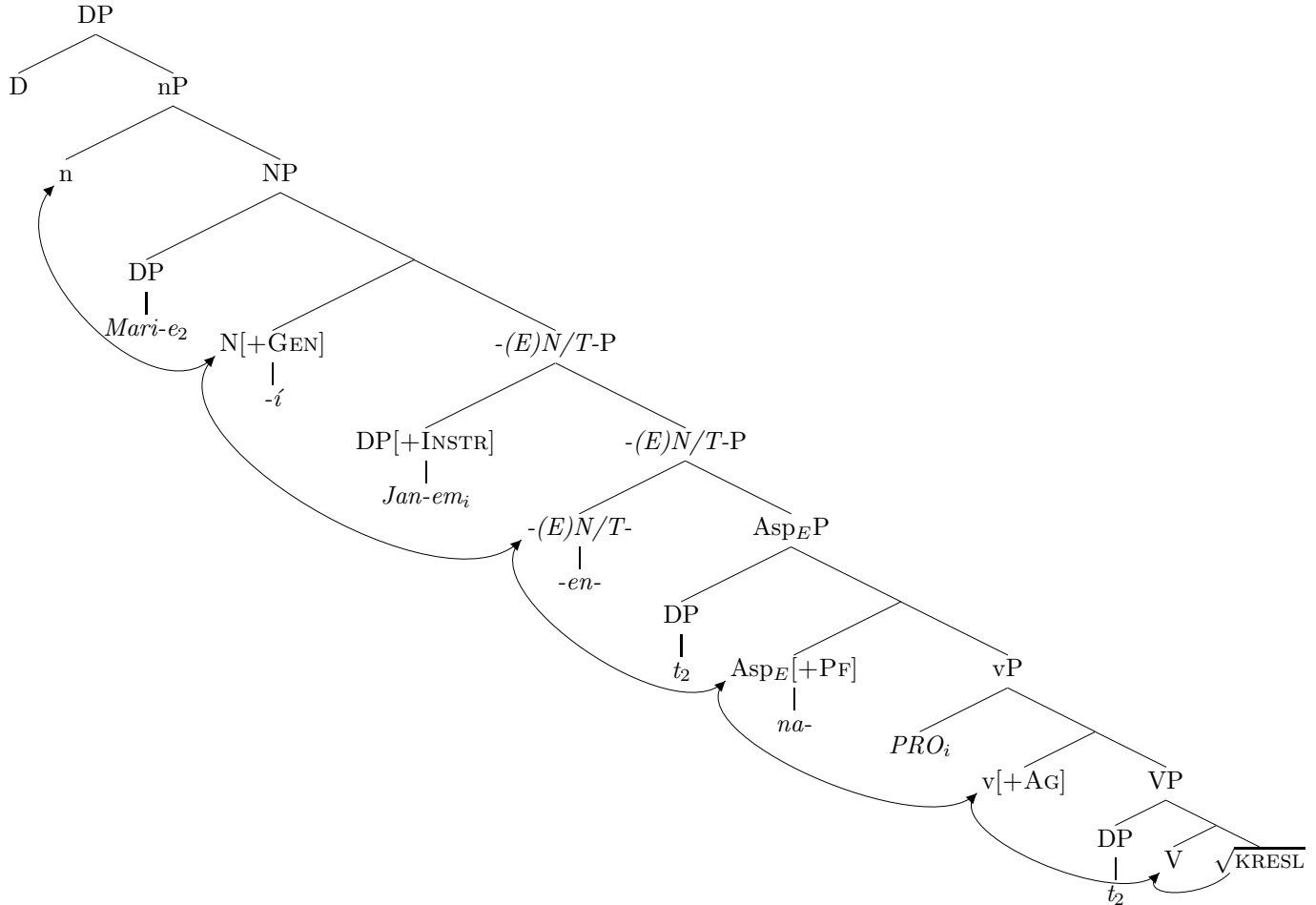
1. full projection of verbal phrase (resultative VP as well as agentive/causative vP) up to the aspectual functional category (Asp_E)
2. truncation of the extended VP by the $-(e)n/t-$ head
3. embedding of aspectually marked stem within the projection of the nominal $-í$ head

5.7.1 Eventive nouns: passive-like structures

What I call “passive-like structures” are the nominal structures where the external argument is implicitly present and it can be modified by the instrumental ‘*by*-phrase’ or by agent-oriented modifiers but it does not get Case. The *by*-phrase gets the EA interpretation on account of the fact that it adjoins to the verbal structure after the Voice category capable of agent licensing is merged so that it can bind the variable which is associated with the projection of agentive/eventive VoiceP (denoted simply as ‘ $v[+Ag]$ ’ in the following tree-diagrams).

The complete phrase marker of an eventive noun derived from a transitive predicate would look as in (35) where the perfective transitive stem has been chosen for the exemplification of a deep object movement to the $Spec, Asp_E$:

- (35) na-kreslení Mari-e Jan-em
 PF-painting.NOM.SG Mary-GEN.SG John-INSTR.SG
 ‘the painting of Mary by John’



The arrow in the tree-diagram in (35) represents the raising of a verb all the way up to the nominal n head. This head movement conforms to the **Mirror Principle** which predicts that the steps of syntactic derivation should be directly reflected by morphological derivation (Baker 1985, pg. 375). The Mirror Principle can be predicted only within a framework with left adjunction (cf. Kayne (1994)); its application to eventive nominals has the effect of stacking up the individual functional heads which are evidenced in their derivational structure in the mirror order to the order in which affixes attach

to the root⁴.

The parallel layering of functional heads and morphophonological material captured by Mirror Principle, which is confirmed by the tree-diagram (35) as well as by all other event-nominals' phrase markers in this section, provides substantial evidence for the DM framework where syntax and morphology are directly related to the same processes (see 1.4). The principle itself falls within the general syntactic requirement on the adjacency of head movement, known as Head Movement Constraint (HMC) which was originally proposed in Travis (1984, pg. 131):

(36) **Head Movement Constraint (HMC)**

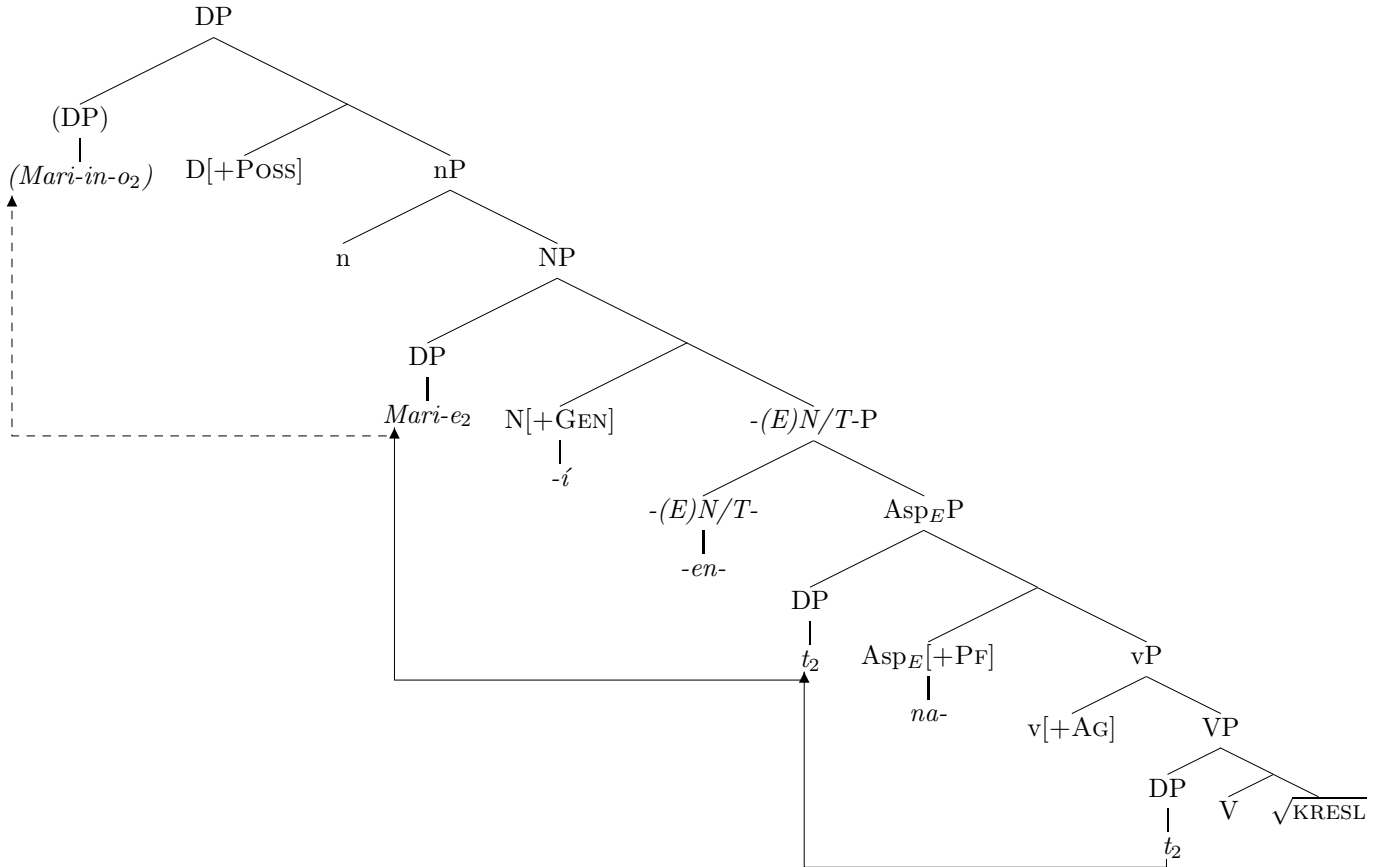
An X^0 may only move into the Y^0 which properly governs it.

This constraint disallowing skipping the intervening governing-head position was related in Baker (1988) to a requirement on proper government of the trace and it has been argued that HMC can be derived from more general principles, such as the Empty Category Principle.

Phrasal movement, on the other hand, does not obey the similar adjacency requirements. The first merged DP (here the one with the index '2') moves from the deep-object position of a specifier of the lower VP via Spec,Asp_E (for "event-measurement" reasons, see 5.3) to Spec,NP where it obtains Case. If this DP fulfills the prerequisites for the possessive-adjective formation, it usually raises from Genitive-assigning Spec,NP to Spec,DP. This is what the dashed line represents in the following example (in which the agent argument is just implicitly quantified over):

⁴What seems to be problematic for Mirror Principle is the account of (one or more) perfectivizing prefixes' attachment to the verbal stem. I do not pursue this issue here because its scope goes far beyond the topic of this thesis.

- (37) a. na-kreslení Mari-e
 PF-painting.NOM.SG Mary-GEN.SG
 ‘the painting of Mary(IA)’
 b. Mari-in-o na-kreslení
 Mary-POSS-NOM.SG PF-painting.NOM.SG
 ‘Mary’s(IA) painting’



Notice that the DP movement satisfying D-features on the aspectual head is obligatory only in case of perfectives. If the movement does not proceed as it is allowed by imperfective stems, the Genitive-assigning Spec,NP would remain empty. As a consequence, it could get filled by the EA, see (40-a).

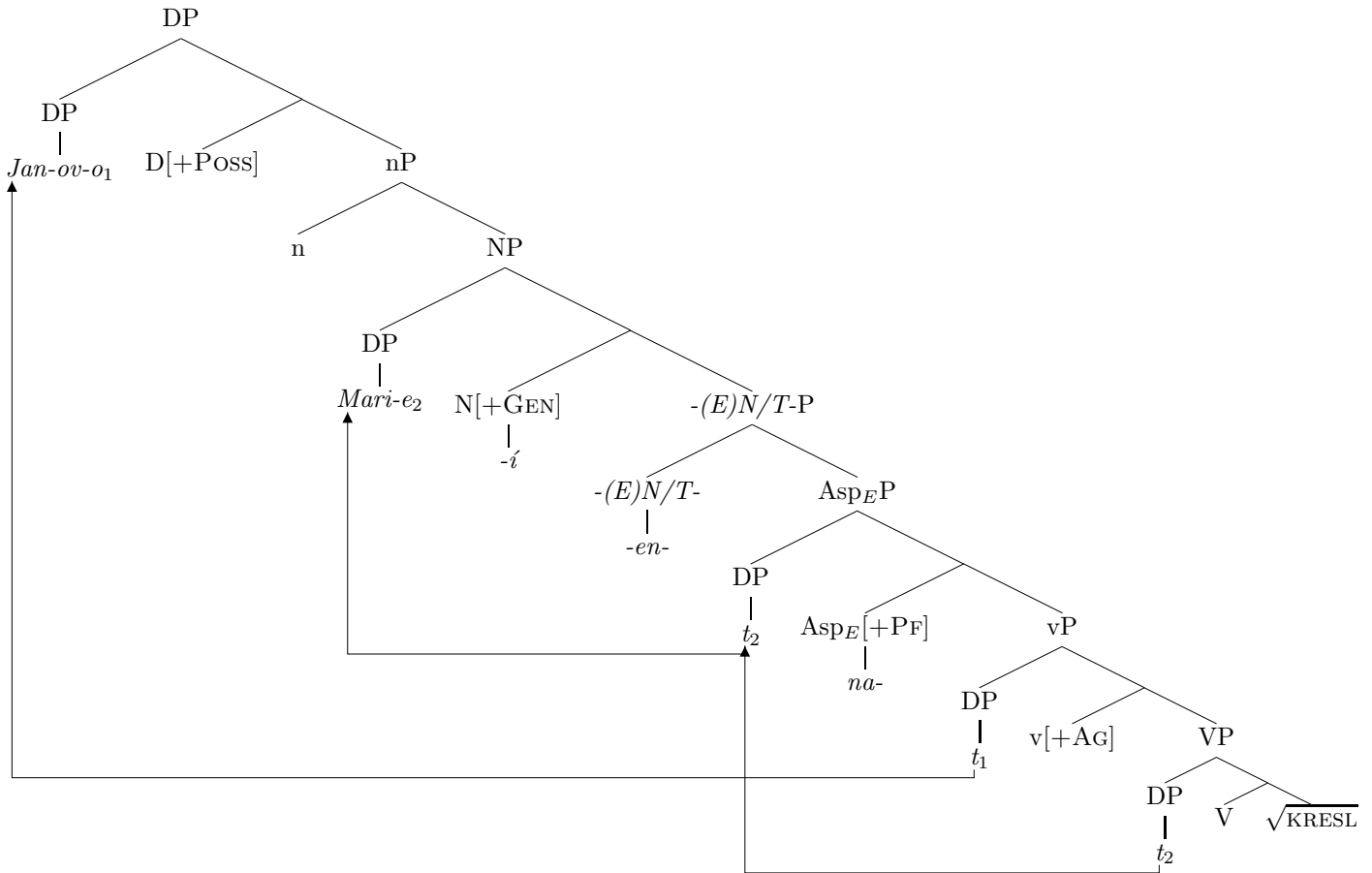
5.7.2 Eventive nouns: active-like structures

We have concluded that the $-(e)n/t-$ morpheme of eventive nominals conforms to active structures in that it can attach without limitations to transitive as well as to intransitive stems. In 5.3.2 we have analyzed the derivational structure of unaccusative and unergative nominals and we have seen that the aspect-related behaviour of these nouns is predicted correctly, if we assume that the nominal affix attaches to the fully projected verbal phrase of unaccusative/unergative type. The complete derivational phrase-marker of unergative and unaccusative verbal nominals is provided in (38):

- (38) a. $[_{DP} D [_{NP} DP N [_{AspP} Asp [_{vP} t_{DP} [v/Voice \sqrt{ROOT}]]]]]]$
 b. $[_{DP} D [_{NP} DP N [_{AspP} t_{DP} Asp [_{VP} t_{DP} [V \sqrt{ROOT}]]]]]$

Nevertheless, it was shown that transitive VNs also allow the $-(e)n/t-$ attachment to the active-like transitive vP structure, i.e. to the structure where the external argument is not limited to the implicit satisfaction and *by*-phrase modification, but can be present in the form of an overt DP. (On the other hand, the structure is never “active” to the extent that the overt presence of the agentive DP would be obligatory as it is in active verbal clauses. We have attributed this difference between verbs and nominals to the absence of [+Nom] and [EPP] features associated with Tense/Infl, see 4.5.1.) The tree under the following example represents the “active” eventive-noun structure where both external and internal argument are expressed:

- (39) Jan-*ov-o* na-kreslení Mari-*e*
 John-POSS-NOM.SG PF-painting.NOM.SG Mary-GEN.SG
 ‘John’s painting of Mary’



Since the nominal structure disposes just of one structural Case (Gen assigned in Spec,NP) and this position is in (39) already filled by the patient DP (on account of the [+Pf] feature of the aspectual head, cf. 5.3 for the motivation of the movement), the agent DP must undergo the possessive movement, i.e. move to the Spec,DP to obtain the overt form.

In 5.5 it was noted that Spec,nP position was suggested as a nominal counterpart to the agent licensing Spec,vP and that subject-like DPs actually raise to the PossP from this position, cf. tree-diagram in (27). Even though I admit that Spec,nP might be the position where the subject-like arguments of Czech result-denoting nouns are generated I have argued that this cannot be

true of eventive *-(e)ní/tí* nouns whose EA must be generated within the vP. My main argument was based on the exclusively argumental interpretation of a PossP of eventive nominals.

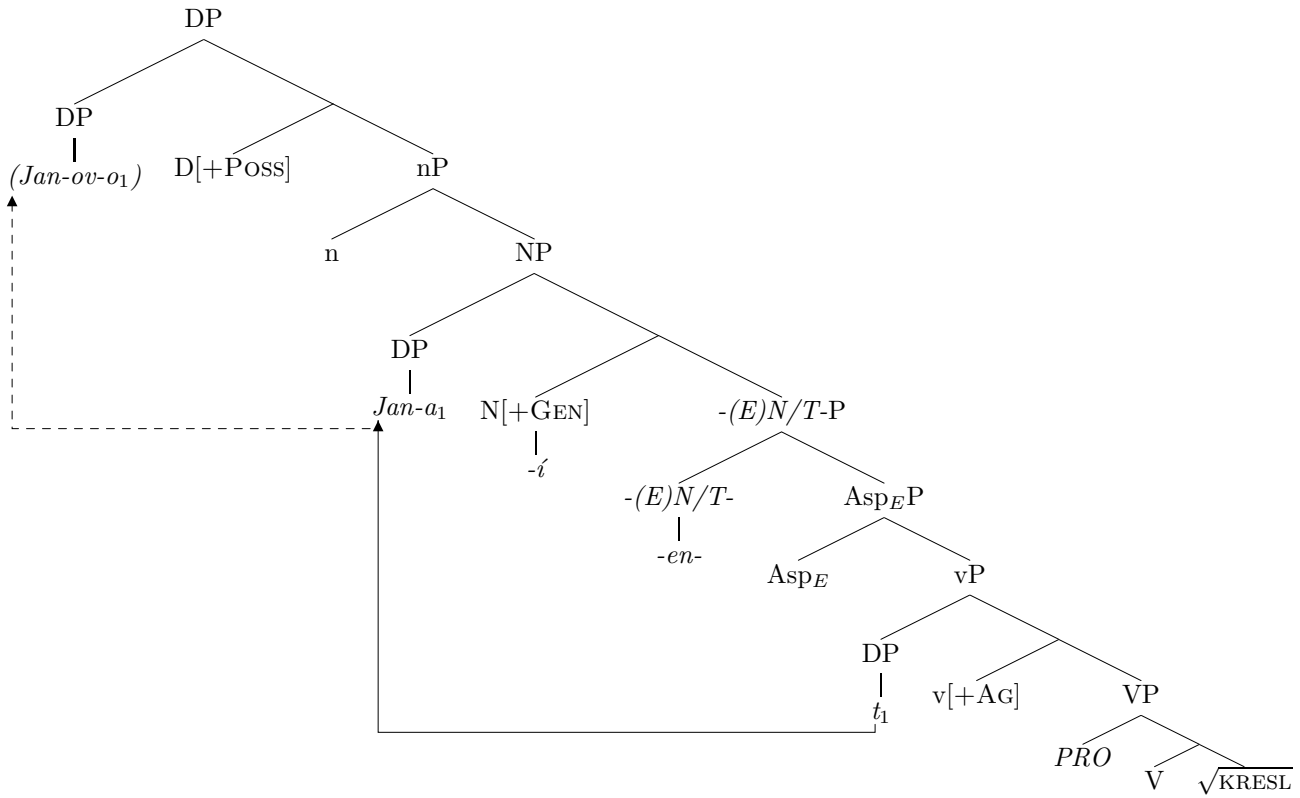
In order to account for the fact that not all agent DPs can occur in the prenominal possessive position, I must assume that only a certain class of Czech nominals delimited by their morphosyntactic and/or semantic features can undergo the possessive movement depicted in (39). It is obvious from the diagram for (37-b) that the same possessive movement, obeying the identical morphosyntactic restrictions, can apply also to the patient DP.

The tree-diagram under (37-b) also predicts that if the possessive movement applies to the object it leaves its trace in the Genitive-assigning Spec,NP. Thus the logical subject is excluded from the possibility of Case-assignment in the same position and in fact it *must* remain just implicitly present within the vP-shell, with the alternative possibility of the agentive *by*-phrase modification.

In order to complete the range of structural patterns which were detected for Czech eventive nominals, the possibility of IA implicit saturation (discussed in 3.3.2) has to be taken into account. It is a consequence of this possibility that the aspectual head remains unspecified because there is no noun which could “measure the event”, in terms of Borer (1994), and therefore also the nominal GenP normally attracting the content of Spec,Asp_EP remains empty cf. 5.3.

The sequencing of functional heads of the VN’s structure as it has been proposed up to this point predicts that in this case the nominal structural position can be filled by the second merged DP, i.e. the one which obtained the agentive feature within the vP shell. The data in (40-a) confirm this prediction. The agentive DP is then not prevented from further raising to the PossP in Spec,DP which represented the only possible agentive position in the previous case with the overt object.

- (40) a. kreslení Jan-a
 painting.IMP.F.NOM.SG John-GEN.SG
 ‘the painting of John(EA)’
 b. Jan-ov-o kreslení
 John-POSS-NOM.SG painting.IMP.F.NOM.SG
 ‘John’s(EA) painting’



5.7.3 Resultative nouns

If the $-(e)ni'/ti$ noun has a referential meaning, the derivation must account for the fact that it does not license the argument structure in the sense defended above for eventive $-(e)ni'/ti$ nouns but is still derived with a morphologically identical shape including the inflectional realization of aspectual category and is still capable of licensing the internal argument, see 5.1.1.

I assume that while in (35) to (40) the morphological structure is a result of head-to-head movement involving all verbal functional heads “on the way up”, the morphological structure of resultative nominals is associated just with the lower VP to which the nominal suffix is merged. The nominalizing head will force the existence of an NP and will allow the projection of nominalizing functional structure such as NumP, DP, etc., but not the projection of verbalizing functional structure.

In order to account for the existence of (im)perfectivizing suffixes in the structure of resultative nominals I assume that before the $-(e)n/t-$ morpheme truncates the verbal projection, the unspecified aspectual head merges to the resultative VP. This head is still capable of introducing aspectual morphology but it clearly doesn't have the event-measure properties of Asp_E evidenced in eventive nominals because its [+Pf] feature never triggers the obligatory movement of patient DP to its Specifier (see 3.3.3 and examples therein).

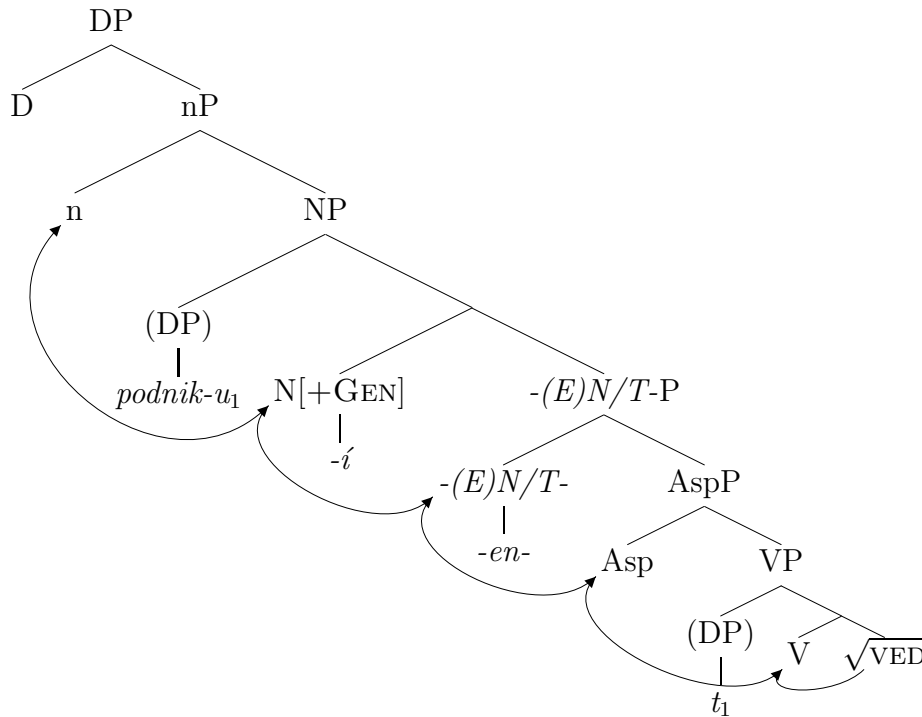
In 5.3.2 I have argued for the presence of a similar impoverished aspectual phrase in unergative nominals, however, with distinct predictions for the final make-up of a construction. The difference arises from the fact that the unspecified Asp_E head of unergatives merges to the *higher* vP introducing the *eventive* semantics (and licensing EA) rather than to the *lower, resultative* one (I will denote the unspecified aspectual head of resultative nominals simply as ‘Asp’ in order to distinguish it from event-measuring ‘ Asp_E ’).

To give a concrete example, see below the derivational structure of the noun ‘vedení’ when it denotes the management of a company in sense of a group of people who run it (and not the action of managing the company itself). It follows from the diagram for (41) that the presence versus absence of VoiceP and $Asp_E P$ stacking to it is what disambiguates the eventive structures from resultative ones.

The consequence of the missing specifier of aspectual head which attaches to the lower VP is straightforward – although the internal argument can be licensed within the VP, there is no environment in which its movement to the Case-assigning Spec,NP would be obligatory. Therefore the IA can

always remain just existentially quantified over in terms of Zucchi (1989) which accounts for its overall optionality. The fact that the adjoined *by*-phrase with the EA interpretation is not available with these nouns at all (see 4.1.2), i.e. the presence of the agentive *by*-phrase implicates the eventive reading, is related to the second missing verbal functional head, associated here with the labels VoiceP or vP.

- (41) vedení (podnik-u)
 leading.NOM.SG company-GEN.SG
 ‘the management of a company’



I am aware that I have just touched upon the issue of the proper account of resultative VNs in terms of the functional structure they involve. However, it should be stressed that *-(e)ní/tí* nominals denoting *events*, and not those denoting *results*, stood in the centre of my attention in this section and in my thesis in general. Rather than being the independent topic of my analysis, resultative nominals in *-(e)ní/tí* served first of all as the necessary comparative basis for the analysis of their eventive counterparts.

Chapter 6

Summary and conclusions

The analysis of argument structure presented in the previous chapter draws a parallel between the projection of arguments in the verbal clause and in the nominal phrase. It argues that *nouns in -(e)ní/tí with the event interpretation* must involve VP plus several functional projections above it, namely VoiceP and Asp_EP. VoiceP (or vP) is needed for agent-licensing and it introduces the eventive reading of these nominals; Asp_EP is needed in order to account for the obligatory movement of object DP checking nominal features on aspectual head specified as perfective, i.e. it is responsible for event-measuring. Verb-class based types of eventive nominals arise from the possible ways of VP and VoiceP combination in the vP-shell: unergative structures don't include the former, resultative verbal layer, unaccusative structures don't include the latter, agentive one, transitive structures include both.

Various surface patterns of eventive nominal constructions are explained as interplay of feature-specification of verbal functional heads with two basic ways of licensing the arguments: they can be present just in the form of existentially quantified/contextually saturated variables (with the further possibility of being bound by various modifiers), or they can be present as overt DPs in the postnominal genitive and prenominal possessive positions.

The exhaustive list of all surface patterns of $-(e)n\acute{i}/t\acute{i}$ nominal constructions which can be derived this way is summarized in the following table ('N' stands for the bare nominal, 'IA/EA' stand for its arguments, the linear ordering reflects the word-order within the construction):

<i>VN's verb-class type:</i>	TRANS.	UNERG.	UNACC.
N	✓	✓	✓
N-IA[+GEN]	✓	–	✓
IA[+Poss]-N	✓	–	✓
N-EA[+GEN]	✓	✓	–
EA[+Poss]-N	✓	✓	–
EA[+Poss]-N-IA[+GEN]	✓	–	–
N-IA[+GEN]-EA[+INSTR]	✓	–	–
IA[+Poss]-N-EA[+INSTR]	✓	–	–

The overview of derivable patterns corresponds to the modes of argument structure realization which are in reality attested for eventive $-(e)n\acute{i}/t\acute{i}$ nominals in Czech.

On the other hand, $-(e)n\acute{i}/t\acute{i}$ nouns with the result interpretation are impaired with respect to the involved verbal structure. Although the resultative nouns contain (as well as their eventive counterparts) the lowermost part of the vP-shell which introduces the internal arguments, they do not have neither the event-introducing Voice projection nor the event-measuring Asp_E projection. That the category of Voice is simply missing in these nominals is connected with their inability to license the external argument and/or the agent modifying phrases. I assume that the attachment of the Asp head of these nominals to the bare resultative VP (instead to the event-introducing vP) results in its impoverishment, i.e. in the inability to check for N/D features in its Specifier.

This thesis certainly does not exhaust the topic of the argument structure of Czech event nominals, rather it evokes many new issues and questions – some of them were marginally mentioned already in this work, some of them are tacitly implied. But I hope that the proposed analysis of the functional architecture of $-(e)n\acute{i}/t\acute{i}$ nominals throws at least some light on the argument-licensing properties of these nominals and it can serve as a solid basis for further research within the field of Czech nominalization.

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