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**Constructions and constructs:  
mapping a shift between predication and attribution**  
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**1. Introduction\***

The basic premise of this study is the hypothesis that change in grammatical organization can be adequately articulated only as a gradual conventionalization of patterns of *understanding*, in which morphosemantic structure, syntactic function, communicative function, and lexical meaning form an integrated whole. At the same time, it has been shown for various grammatical phenomena that the gradualness of change consists in discrete partial changes that involve specific features or aspects of a larger pattern before they affect the full pattern completely (Timberlake 1977; Andersen 1987, 2001; Traugott 2003; Harris 2003). Reconciling these two characterizations of linguistic change – the holistic hypothesis with the internal mechanics of production and uptake that eventually result in the new conventionalization – presupposes a model of language in which individual linguistic patterns can be treated as complex signs that are formed by clusters of various properties (formal, functional, semantic) which either individually or collectively participate in a given diachronic process.

A constructional approach to language seems like a natural candidate for providing such a model. Indeed, the relevance of a construction-based analysis has been argued for and in recent years increasingly accepted as crucial in explaining various diachronic processes in syntax. It has been found particularly useful in that strand of grammaticalization studies which link the shifts in grammatical structure to the communicative and interactional principles that govern language use (e.g. Bybee, Perkins & Pagliuca 1994, Bisang 1998, Hopper 1998, Traugott 2003 and this volume, Harris 2003, Wiemer & Bisang 2004). However, in diachronic studies, the notion ‘construction’ is usually invoked as the generally understood grammatical environment that delimits the domain of a specific morphosyntactic change; constructions in this sense thus mean nothing more than the traditional notion of ‘syntagmatic strings’ and as such do not carry much explanatory potential.

In Construction Grammar, on the other hand, constructions are accorded theoretical status of basic analytic objects, which endows them with the ability to capture systematic associations between form and meaning and to express generalizations about grammatical patterning, while also leaving room for the necessary detail in capturing the internal structure of linguistic signs. However, it remains an open question to what extent and in what way Construction Grammar, which has been designed for synchronic purposes and, to my knowledge, has not been used on diachronic data, can help us be more precise about articulating the *emergence* of grammatical structure, instead of just comparing discrete

synchronic stages. A close examination of the gradience of grammatical change is the main theoretical concern of the present work. It is intended as a test of the conceptual and representational potential of Construction Grammar in articulating *diachronic* relationships across constructions, thereby capturing the essence of grammatical change with its gradient nature, layering, and the richness of detail: syntactic, semantic, morphological, pragmatic.

### 1.1 From fluid categoriality to a conventionalized syntactic function

The Slavic and Baltic languages (with some parallels in German) are known for the emergence of the so-called ‘long’ participles and I will focus on one of them: the long present active participle as it was used in Old Czech (OCz). For reasons that will become clear in the analysis, I will call this form a ‘participial adjective’ (PA). The PAs blur, by their very nature, the grammar/lexicon distinction, as they straddle the boundary between inflection and derivation. They also raise the question of categorial and functional status, which will be the analytic focus of this study. The examples in (1) are a preliminary illustration of the OCz PA’s functional range: as modifiers (1a), as predicates heading non-finite adverbial clauses (1b), and as actor nouns (1c). The PAs are boldfaced and in (1), their English equivalents are underlined; when minimal surrounding context is needed, it will be enclosed in curly brackets {}. <sup>1</sup> Because of space limitations, I will discuss only the adnominal uses shown in (1a-b); some of the issues concerning OCz PAs as actor nouns have been addressed elsewhere (Fried 2005, to appear).

- (1) a. *a za smrtelneho muže **neumierajicieho** krále zyščeš*  
 and for mortal.ADJ.ACC man.ACC NEG.die.PA.ACC king.ACC find.PRES.2SG<sup>2</sup>  
 ‘and instead of a mortal husband, you will find an immortal king’  
 [spiritual poetry; mid 1300s; LegKat 59a]
- b. *když opět s kerchova jdieše, uzřel opět*  
 when again from graveyard.GEN go.IMPF.3SG see.PPL.SG.M again  
*d’ábla s sebú **chodieceho***  
 devil.ACC.SG with self.INS walk.PA.ACC.SG  
 ‘as he was again leaving the graveyard, he saw the devil again walk along with him’ [moralist narrative; late 1300s/early 1400s; PovOl 250a]
- c. *na vuoli **věřicieho** jest {diel od jednoho spolurukojmí vzieti}*  
 on will.LOC.SG.F believe.PA.GEN.SG AUX.3SG  
 ‘it is [left] to the discretion of the/a creditor {to take a down payment from one of the guarantors} [manual for legal writing; late 1400s; ProkArs 168]

<sup>1</sup> In identifying the manuscripts, I follow the standard established by the Old Czech Dictionary (*Staročeský slovník* 1968).

<sup>2</sup> Glosses: NOM ‘nominative’, GEN ‘genitive’, DAT ‘dative’, ACC ‘accusative’, LOC ‘locative’, INS ‘instrumental’, SG/PL ‘singular/plural’, M/F/N ‘masculine/feminine/neuter’, ADJ ‘adjective’, PART ‘short *NT*- participle, NEG ‘negative’, PRES ‘present’, PST ‘past’, IMPF ‘imperfect’, PASS ‘passive participle’, INF ‘infinitive’, AUX ‘auxiliary’, REFL ‘reflexive’.

While the attributive, adjective-like usage (1a) in a range of meanings is the most frequent in my corpus, we will see that the PA's function can often be determined only from the specific context in which the form occurs, and sometimes even the context leaves us without an unambiguous analysis. This functional indeterminacy raises the question of the relationship between the PA's morphosemantic structure and its contextual distribution, both of which are crucial to our understanding of *how* and *why* the PA developed the functional range it did in OCz.

My goal is thus two-fold: (i) to examine how the known functional shifts between predication and attribution were actualized in OCz (i.e., what partial transitions can be identified and what factors played a crucial role in them) and (ii) to motivate the fact that those transitions never amounted to a full categorial change, leaving the Czech PA as a truly transitional category. I will argue that the resistance has to do with resolving the conflict between the PA's morphosemantic structure and the syntagmatic context in which it was used. Put in constructional terms, at issue will be the interaction between the internal properties of a morphological construction (a complex word-form) and the syntactic constructions it occurred in. This will allow me to isolate "cluster-points" (Hopper & Traugott 2003<sup>2</sup>: 6) that fix the PA in a particular function, which may go against its unambiguously adjectival inflection. I will show that the PA on its own did not provide enough clues as to its grammatical status. Instead, it was the syntagmatic and pragmatic context that shaped the PA's functional and categorial status.

The analysis is based on the assumption that the relevant functions are best understood as functional prototypes, in the sense of Croft's (2001: 87) classification in terms of relationality, transitoriness, gradability, and stativity. Thus predication is defined as a relational, transitory, ungradable process (prototypically expressed by verbs), while modification is a relational, permanent, and gradable state (prototypically expressed by adjectives). This is also consistent with Hopper & Thompson's (1984) prototype-based understanding of transitivity as a gradient notion, which will prove useful to the present analysis as well.

The material comes from an extensive corpus of authentic data excerpted manually from OCz texts that offer a representative sample of genres (historical, biblical, administrative, expository, and didactic texts, legal documents, spiritual and secular poetry, popular entertainment, correspondence, drama, instruction manuals, etc.) and provenance (original compositions, translations, or loose adaptations of foreign material). The corpus covers the full OCz period, from the first PA attestations well before 1300 until the early 1500s. Many manuscripts can be dated quite precisely, but many others can only be placed within an estimated time period (a decade or more); I include this information with each example, using the dating practice established by the Old Czech Dictionary (*Staročeský slovník* 1968). I excerpted about 74 different texts of various lengths in their entirety (ranging from poems of several lines to texts consisting of hundreds of folia), which has yielded more than 55% of the PA tokens in the corpus. The remaining 45% come from about 120 additional texts (about one quarter of them biblical) and were collected from the OCz archive at ÚJČ in Prague. The corpus contains more than 1200 tokens of PAs, which represent over 240 different roots.

## 1.2 Construction Grammar and diachronic processes

The approach tested in this study reflects a particular variant of constructional analysis, the one most closely associated with Fillmore's original conception of Construction Grammar (e.g. Fillmore 1988, 1989; Fillmore, Kay & O'Connor 1988; Fried & Östman 2004; Lambrecht 2004) and further enriched and expanded by the insights of Croft's (2001) Radical Construction Grammar.<sup>3</sup>

One of the defining features of Construction Grammar (CxG) is its assumption that grammar consists of networks of partially overlapping patterns organized around shared features (formal, semantic, pragmatic, prosodic, etc.); properties of such networks have been explored in dealing with various synchronic issues of constructional representations, either from a typological perspective or in specific languages. In this study, I explore the possibility of enlisting this network-based view of grammar in accounting for layering effects in grammatical change. I will analyze syntactic, semantic, and communicative factors involved in the development of a specific morphological construction (the categorially underdetermined PA) and its relationship to an independently existing syntactic template (Modification construction). The theoretical focus thus will be two-fold: (i) on the inner workings of the diachronic process within a particular construction and (ii) on the status of emerging constructional patterns in grammatical change.

With respect to CxG as a way of capturing the details of grammatical change, the investigation will revolve around several specific issues relevant to the theme of this volume:

- ◆ factors in resolving the conflict between maintaining a transparent internal structure of a linguistic form and developing new functional associations that give rise to unpredictable form-function pairings;
- ◆ the role of constructions and constructs in grammatical change;
- ◆ the clustering of features that appear to be instrumental in the partial transitions a given change consists of;
- ◆ finally, touching on the issue of representing the structure of grammar, I will propose a functional/constructional map, rather than a rigid inheritance hierarchy, as a plausible picture of grammatical change.

All of this together should lead to a clearer understanding of what it means that constructions are the locus of change, as it has been invoked in the grammaticalization literature.

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<sup>3</sup> There are of course other constructional approaches, whether aligned more closely with the understanding of constructions within Cognitive Grammar (Langacker 2005), which emphasizes the conceptual underpinnings of linguistic structure, or with a more formal treatment within HPSG (Pollard & Sag 1994), which assumes a computational view of grammar. CxG shares parts of its unification-based formalism with HPSG but at the same time shares with Cognitive Grammar its cognitive and usage-based orientation. It is not my goal to compare these different theories, especially since none of them has been used for articulating the *dynamic* aspect of grammatical organization in the way it is attempted in this study. CxG simply suggests itself as a particularly convenient framework for incorporating – both analytically and representationally – all the relevant dimensions (structural, semantic, and contextual) and their gradient nature.

### 1.3 Constructions as multidimensional grammatical objects

Constructions in CxG are cognitive objects that represent generalizations about speakers' linguistic knowledge. By definition, they allow for both the holistic view of linguistic patterning (unlike formal theories of language) and for keeping track of the internal properties of larger patterns (like any other grammatical theory). CxG thus makes a systematic distinction between what conventionally identifies a construction as a whole vs. what is characteristic of its constituents; the former is referred to as the *external* properties (a set of constraints on how a given expression fits in larger grammatical patterns), while the latter represents the *internal* make-up of a construction. This distinction is crucial in that it gives a theoretical status to the observation that a construction is not just the sum of its parts but may have its own idiosyncratic properties, unpredictable from the properties of its constituents.<sup>4</sup> The effects of an external/internal mismatch are also at the heart of the analysis developed in this study.

The external/internal contrast is directly related to an issue that often causes misunderstanding about what properly constitutes a construction: it is the question of whether constructions have 'meaning' and if so, is it by definition non-compositional. The answer can be easily gleaned from one of the first definitions in published sources, which explicates constructions as objects of syntactic representation that "are assigned one or more conventional functions...together with whatever is conventionalized about its contribution to the meaning or the use of structure containing it" (Fillmore 1988: 36). A similar understanding is then echoed in Croft's (2001:18) formulation that constructions are "pairings of form and meaning that are at least partially arbitrary". None of this implies that constructions necessarily have a meaning in the sense of specific semantic content. Some do, to be sure, as is also addressed by Petré & Cuyckens, this volume. However, describing syntactic patterns such as the Modification construction discussed in this paper clearly does not involve meaning in that same sense. The relevant question thus is this: does a particular string of words, or morphemes, reveal a construction in the technical, theoretical sense if the meaning of the string is actually a sum of the meanings of its parts? The existing definitions do provide an answer that is sufficient for our present purposes: non-compositionality in this narrowly semantic sense is not a necessary condition for constructional status.

Constructions also constitute an integral part of Frame Semantics, which forms the semantic component of CxG. Linguistically relevant semantic information is organized and structured in "interpretive" frames (Fillmore 1982), which represent the complete background scene associated with a given linguistic expression: the scene's participants, settings, and any other unique semantic features that are necessary for speakers' native understanding of what the lexical item means and how it can be used in context. Frames also contain information

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<sup>4</sup> It must be emphasized that this distinction is not meant in the sense of 'internal vs. external change'. I only wish to differentiate between that which is contributed by a particular item and that which is contributed by the syntagmatic context in which the item is used. For further explication of this distinction within CxG, the interested reader is referred to Fried & Östman 2004.

about the conventional expression of the event participants as they manifest themselves in the syntactic organization of sentences.

Finally, it is important to stress that CxG makes a distinction between constructions and constructs, the former being abstract generalizations over the latter. Constructions are pieces of grammar, while constructs are actual physical realizations of constructions, i.e. utterance-tokens that instantiate constructions in discourse. This distinction is also crucial to tracing diachronic changes: the end result of a series of actualizations may be a new construction or a reorganization of an existing one, but the changes themselves necessarily originate in language use, which is to say, in constructs.

The paper is organized as follows. After introducing the PA form in section 2 and a brief review of existing approaches to hybrid morphology, section 3 focuses on the PA's verbal potential, as it is encoded in its morphosemantic structure. Section 4 analyzes the shift toward attributiveness in particular contexts and identifies the features that were instrumental in supporting the shift toward a generalized modification function. In section 5 I elaborate on the constructional representation of the diachronic processes that are discussed in section 4. Section 6 summarizes the potential of Construction Grammar for modeling the incremental nature of grammatical change.

## 2. Participial adjectives in Old Czech

The PA contrasts with, and is derived from, the so-called 'short' form, a true participle (here labeled *part*), illustrated in (2a). The label PA reflects the categorial mismatch between its external and internal morphology: morphologically adjectival CASE/NUMBER/GENDER suffix is attached to a verbal (*NT*-participial) stem. This is illustrated in (2b) with an example based on the root *chod-* 'walk'; the *-NT-* label is the traditional way of classifying this participle, based on the morphology of its Latin cognate.

- (2) a.  $[[V_{\text{root}} - \text{Pres. stem}] - \text{NT}]_{\text{part}}$  '[while/when/if...] V-ing'  
 b.  $[[[V_{\text{root}} - \text{Pres. stem}] - \text{NT}]_{\text{part}} - \text{C/N/G}]_{\text{PA}}$  '(the one) V-ing'  
 $[[[\textit{chod} - \textit{ie}] - \textit{c}]_{\text{part}} - \textit{í}]_{\text{PA}}$  '(the one) walking'

Roughly speaking, the OCz PA resembles present active participles in other conservative I-E languages, but there are also some important differences.<sup>5</sup> In particular, we have to keep in mind the contrast between the PA (2b) and the true article (2a). The short form has always been used only as a non-finite predicate, typically expressing a circumstance of the main event, in (3) illustrated by the concessive meaning.

<sup>5</sup> For example, the PA's polyfunctionality is partially reminiscent of the functional history of the English *-ende* and *-ing* forms (e.g. Kastovsky 1985, Brinton & Traugott 2005), but the PA can by no means be simply equated with the English development, as will be apparent from the analysis.

(3) *páni*                      *berúc*      *lichvu*                      *nechtie*                      *slúti*  
 master.NOM.PL.M    take.PART    usury.ACC.SG.F    NEG.Want.PRES.3PL    be.called.INF  
*lichevníci*  
 usurer.NOM.PL.M  
 ‘[the] masters, while they practice usury, do not want to be known as usurers’  
 [expository religious prose; 1450; ŠtítMuz 91 (Gebauer 1958)]

It follows from the predicative function of the short form that it could be substituted for the PA in the clause-like usage in (1b), but not in (1a) and (1c); indeed, PA/short form alternations are sometimes found in different manuscripts of the same text, always in the predicative function. But this relationship is not necessarily symmetrical, as will become clear in the analysis; for now we note that replacing the short form *berúc* in (3) with a PA would result in losing the concessive meaning.

The genesis of the PA is straightforward: it arose in Common Slavic from the fusion of the present active (-*NT*-) participle and a postposed pronoun, following a general pattern of forming ‘long’ adjectives (*mlad-ý* ‘the young one’) out of ‘short’ ones (*mlád* ‘young’). What exactly the pronoun marked is a matter of some dispute, but for the purposes of determining the PA’s function in OCz, Kurz’s (1958) well-argued analysis of the adjectives seems to provide the best starting point. On the basis of word order patterns vis-à-vis information structure of adjective-modified NPs, Kurz concludes that the postposed pronoun was a demonstrative and its original function had to do with expressing contrastiveness: the long form was used to draw attention to the meaning of the adjective in contrast to some other adjective (previously mentioned or presupposed) associated with a given noun. This pragmatic function was gradually lost, as the pronoun grammaticalized into an adjectival *CNG* suffix. The PA is formed by that same suffix, giving rise to the opposition shown in (2), but the PA’s development is considerably less direct and conclusive than with true adjectives, due to its mixed-category nature.

Like all participles, the PA involves a tension between verbal and adjectival properties. It is part of the inflectional verbal paradigm by various criteria, such as productivity, generality, and compositional meaning (cf. Bybee 1985, Haspelmath 1996), although it is not a typical inflectional form, since it is defective in expressing certain verbal categories. Existing analyses of participial forms tend to concentrate on the loss of verbal properties and treat the categorial conflict and its resolution in purely morphological terms, as a shift from a verbal stem to an adjective, both synchronically and diachronically; this view is common particularly in the Slavic tradition, e.g. Lamprecht et al. 1986, Gebauer 1958. In a syntax-centered explanation, Haspelmath (1996) correlates the morphologically marked loss of verbal status with the (potential) loss of transparent internal syntax, while accepting the traditional view that the participles are simply adjectives. Following Tesnière (1959), Haspelmath suggests for these forms a two-layer representation, each layer having consequences for a different set of the word-form’s syntactic properties. The category of the lexeme is relevant for the form’s “internal syntax” (i.e., the extent to which the form’s complementation structure resembles finite verbs) and the category of the word-form determines the

syntactic function of the form as a whole (the “external syntax” of adjectives). Thus the example in (2b) would be represented as in (4) in terms of its two-tiered categorial status.

(4) [ [ *chodiec* ]<sub>V</sub> (“lexeme part of speech”) – *í* ]<sub>A</sub> (“word-form part of speech”)

It has been observed, though, that present active participles “do not so easily become attributes”, especially when the meaning of their verbal root is close to expressing an “instantaneous action” (Hopper & Thompson 1984: 729), or what Bolinger (1967: 9) calls “fleeting”, “temporary states”. Hopper & Thompson thus offer a wider list of criteria for such categorial transitions: in addition to low transitivity, which is compatible with Haspelmath’s loss of internal syntax, they argue that significant contributors to the loss of verbal status are the meaning of the verb root (stative, non-punctual, atelic) and the back-grounding function of the form as a whole.

The Czech PA is also known to resist a full categorial shift, even more so in the modern language than in OCz. Moreover, we must also keep in mind the striking functional indeterminacy noted in 1.1: the OCz PA’s three-way ambiguity invites three possible interpretations (reference, modification, or predication). This means that in determining the PA’s external function, we cannot go on the assumption that underlies the traditionally accepted morphology-based analysis, namely, that an *a priori* given lexical category determines external syntax. Instead, the criteria for evaluating the functional range of the OCz PAs can be arranged into two poles that characterize the two functional domains, predicative and attributive, in their prototypical form; a preliminary summary is given in Diagram 1 (the significance of the italicized items will become clear in section 5). These properties will prove crucial in tracing the relative loss of the PA’s predicative potential and the strengthening of its attributive function.

	<i>Prototypical predicative</i>	←—————→	<i>Prototypical attributive</i>
<b>Syntax</b>	<ul style="list-style-type: none"> <li>- non-subject complements</li> <li>- verbal government</li> <li>- active voice</li> <li>- <i>Subj &lt;compl. PA&gt;</i></li> </ul>		<ul style="list-style-type: none"> <li>- voice neutralized</li> <li>- <i>&lt;PA -- NP&gt;</i></li> </ul>
<b>Semantics</b>	<ul style="list-style-type: none"> <li>- Vs of action/process</li> <li>- tense (contemporaneousness)</li> <li>- <i>animate subject</i></li> </ul>		<ul style="list-style-type: none"> <li>- any verb</li> <li>- atemporal</li> <li>- <i>any NP</i></li> </ul>

**Diagram 1.** Prototypical predicative and attributive PAs

### 3. Verbal potential of participial adjectives in an adnominal position

The stem marks explicitly several verbal categories: tense (through the present-tense stem, in a paradigmatic contrast to a past-tense stem), aspect (inherent in the root or marked in an aspectual stem), voice (the *-NT-* suffix), and verbal valence,



contributed by the root. All of this represents the verbal potential of the PA, predisposing it, at least in principle, toward uses expressing predication, comparable to the short participle in (1a). Such usage is shown in (1b) and (6); the PA's subject is always a constituent of the main clause and the PA predicates something about that constituent, agreeing with it in case, number, and gender. For easier orientation, the PA with its non-subject arguments is enclosed in brackets  $\langle \rangle$  and the PA's subject is underlined:

- (6) a. *uslyšel* *žáčka*  $\langle$  *dřeveřečený* *verš* *zpívajícího*  $\rangle$   
 he.heard youth.ACC.SG.M aforementioned song.ACC.SG.M sing.PA.ACC.SG.M  
 ‘{and when he again secretly entered the church on Friday,} he heard a  
 youth sing that aforementioned song’  
 [popular entertainment; late 1300s/early 1400s; PovOl 255]
- b. *strach* *člověka*  $\langle$  *před vás* *papeže* *předstupujícího*  $\rangle$   
 fear.NOM man.ACC.SG.M before 2PL.ACC pope.ACC come.up.to.PA.ACC.SG.M  
*naplňuje*  
 fill.PRES.3SG  
 ‘fear fills a person when coming face-to-face with you, the Pope’  
 [diplomatic message; 1462; KorPosA 93a]

These examples display prototypical properties that preserve the PA's participial origin (the predicative pole in Diagram 1). In terms of syntax, the PA is accompanied by its non-subject arguments, which show verbal, not nominal, government, and the voice is active. Semantically, the PA is typically based on verbs of action, which is presented as contemporaneous with the main event, and the PA's subject is animate. In this usage, the PA can be described as morphosemantically transparent, with a fully compositional meaning that can be glossed as ‘[who] Vs at the time of the main event’; each of the morphemes that make up the PA contributes exactly the meaning we would expect. This usage is most frequent in the earliest examples, but it shows persistence throughout the OCz period, is by no means marginal, and never disappears completely.

The PA is attested even in absolute constructions, such as the genitive absolute in (7), where it expresses a temporal or possibly causal circumstance of the main event. Admittedly, the absolute uses were rare, limited to translations from Latin, and relatively short-lived; nevertheless, they confirm the general observation that the PA could serve the function of a non-finite predicate.

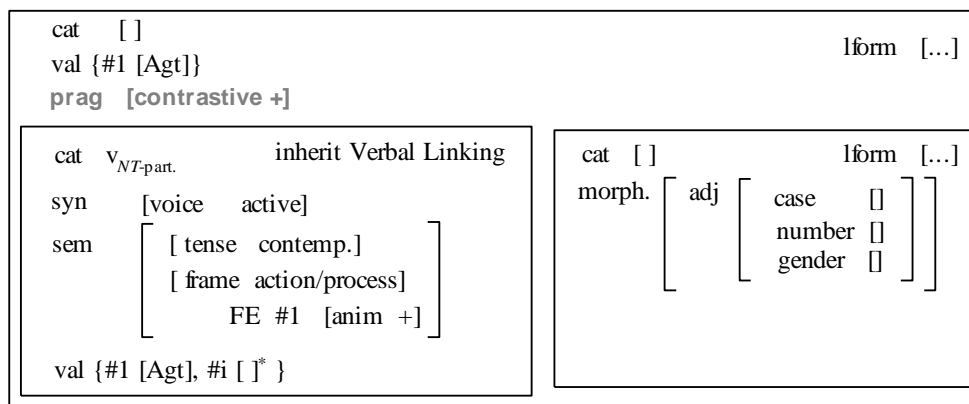
- (7) a  $\langle$  *ješče* *jich* *nevěřících*  $\rangle$  ... *vece* *jim*  
 and still 3PL.GEN NEG.believe.PA.GEN.PL say.PRES.3SG 3PL.DAT  
 ‘and as/because they [=disciples] still don't believe [him=Jesus]..., he says to  
 them’ [biblical; late 1300s; EvZimm L 24,41]

The constellation of the properties that result in the predicative function can be constructionally represented as in Diagram 2. Understanding the details of the diagrams in this paper requires a brief digression into the CxG formalism, here substantially simplified. The nested boxes always reflect the hierarchical structure

of constituents. The properties of each constituent are expressed by clusters of attribute-value pairs. Most of the abbreviations used here are self-explanatory, such as *cat(egory)*, *sem(antics)*, *prag(matics)*, *val(ence)*, *frame*. The ‘values’ can be binary or come from a list of possibilities, or they can be left unspecified, which is indicated by empty brackets [].

Diagram 2 can be read as follows. It is a template for forming the PA and it is a (morphological) construction in the CxG sense by virtue of providing a ‘recipe’ for combining a stem of a certain type (*NT-part*, in the left box) with a particular suffix (the right daughter constituent), the result of which is a specific inflectional word-form (the outside box). Its external function, however, remains open, as indicated by keeping the external *cat(egory)* unspecified (*cat* []). This representation says that whatever function the form will serve in a larger pattern, it will have to be motivated by the internal (in this case, verbal) category, since that is the only categorial requirement that is explicitly part of this word-form. The only external property that must be stated directly is the fact that the root’s valence expects its agent argument to be supplied by some larger pattern in which the PA can appear; this property, shared with all non-finite verb forms, is indicated by the PA’s *val(ence)* requirement, at the top of the outside box.

The stem is of the *-NT-* verbal category, marking tense as contemporaneous with the main event, and voice as active. The root brings along a frame that contains the knowledge structure associated with the verb’s lexical meaning; the *-NT-* stem only specifies that the verb is prototypically expected to express an action or process and must contain minimally one participant (labeled *FE* ‘frame element’) that will prototypically have an animate referent. The root’s valence indicates that this particular event participant plays the agent role; the notation *#i* [*]*\* simply says if the root brings along any other arguments (and there may be none), they are unconstrained with respect to their semantic role. However, the *inherit* statement at the top of the stem box says that if such additional arguments are present, they will receive the same coding as they would in finite clauses (i.e., ‘verbal government’). The representation of the *CNG* suffix (the right box) is explicit only about the agreement features; its category is left open. The *lform* attribute stands for ‘lexical form’ and indicates that the construction is a word-form of a particular type that of course cannot be spelled out as part of the general template but will always have a specific value (i.e., the actual form, such as *zpievající*, *chodící*, etc.; the dots are to be read as a shorthand for this fact).



**Diagram 2.** Constructional representation of the categorially undetermined PA.

There are a few things to note about this construction. (i) The PA's predicative use is no different from the way the short participle functions; the stem *is* the short participle. The only difference between the two is that the PA adds the nominal agreement categories, which the OCz short form provided only in minimal and inconsistent vestiges in the nominative case. (ii) The external category cannot be determined without any context, as the suffix itself is categorially underspecified. (iii) The pragmatic contribution of the PA suffix and hence the whole form is also unclear at this stage. Synchronically, it was still showing its original contrastive function, but only marginally so (Kurz 1958). For example, neither of the examples in (6) can be construed as contrastive: (6a) describes an event that repeated itself for several days in a row (the protagonist hearing a mysterious song being sung each day) and in (6b) the noun that instantiates the PA subject is mentioned for the first time. Hence the impossibility of interpreting the PAs as expressing any kind of contrast with a previously mentioned property of those subjects. The fading salience of the contrastive function is indicated by the gray color in Diagram 2, as a typographical approximation of the general observation that old functions of grammatical items often linger on, and as an attempt to capture this diachronic relationship between old patterns and newly emerging ones. Finally, (iv), the PA still needs a constituent that satisfies the agent requirement of its root.

#### 4. Erosion of PA's verbal status

Not all attestations are as clear as what we have in (1, 6, 7). The following set shows cases in which the interpretation of the PA and its syntactic function is much less clear:

- (8) a. {*mějte mysl k bohu, v dobrotě... hledajte jeho,*}  
       *nebo v duši <žadající zlého >*  
       for into soul.ACC.SG.F desire.PA.ACC.SG.F evil.GEN.SG.N  
       {*nevende duch milosti*}

- (i) ‘{turn your mind toward God, seek him through good life..., for the spirit of mercy will not enter} into the soul; if/when it<sub>i</sub> desires evil things’  
 (ii) ‘...into an evil-minded soul’ (lit. ‘habitually desirous of evil things’) [homily, end of 14<sup>th</sup> cent.; MatHom 42a]
- b. *nerodil si prestať a k < tepúciemu >*  
 NEG.WANT.PST.SG.M AUX.2SG STOP.INF and toward hit.PA.DAT.SG.M  
*súdcu se obrátiť {ale vechým hriechom...množíš škody}*  
 judge.DAT.SG.M REFL turn.INF {...}  
 (i) ‘you didn’t want to stop {committing sins} and turn toward a judge for punishment {and instead you keep piling up damage through more sins}  
 (ii) ‘you didn’t want to ... turn toward a punishment-giving judge ... [social satire; early 1400s; Budyš 9a]

In (8a), it is entirely plausible to understand the PA as expressing an eventuality that holds ‘here and now’ or presents a condition that applies in a particular instance: this would yield the interpretation in (i), along the lines of ‘in the moment of committing a bad deed you are not in God’s good graces’. But given the broader context of this utterance (a homily) it is equally possible to understand the PA as a general admonition to be good (ii), not just in an individual instance but always. A similar uncertainty arises in (8b). It is not readily apparent whether the speaker presents the judge as someone whose customary job it is to mete out punishment, which would be the interpretation in (ii), or as someone who will punish the protagonist on this particular occasion (i). The latter is the one favored by the general context, but the former is not out of the question. There are various reasons for these ambiguities, having to do with clusters of conflicting features associated with the PA in a given context. I will discuss those conflicts in 4.2.2.

A clearer departure from the predicative usage toward an atemporal (or at least habitual) interpretation are presented in (1b) or (9a-c).

- (9) a. *počeli obětovati každý zlatý peniez*  
 start.PST.PL offer.INF everyone.NOM.SG gold.ADJ.ACC.SG.M coin.ACC.SG.M  
 < *mající na sobě obraz anjelský* >  
 have.PA.ACC.SG on self.LOC picture.ACC angelic.ACC  
 ‘everyone started offering a gold coin, which had on it a picture of an angel’ [moralist narrative; late 1300s/early 1400s; PovOl 276b]
- b. *pro spletenie žilek a svazkóv < svazujících to miesto >*  
 for network.ACC veins.GEN.PL and ligaments.GEN.PL bind.PA.GEN.PL that spot.ACC  
 ‘because of the network of veins and ligaments holding that place together’ [medical text; early 1400s; LékSalM 505]
- c. {*voly zajímal u Helfenburka... i hnali na Vitmberg*}  
*a prodali Matlovi < tu sedícímu >*  
 andsell.PST.3PL Matl.DAT.SG.M here sit.PA.DAT.SG.M  
 ‘{he caught the oxen at Helfenburg... and then they headed for Vitmberg}

and sold [them] to Matl, who was residing there'  
[executioner's records; 1429; PoprRožmb 46b]

Such cases often have non-subject complements, just like (6), and they maintain the active orientation of the *-NT-* stem. Yet, in contrast to (6), these PAs clearly express states of affairs that hold independently of the main event: the presence of the picture of an angel on the coin in (9a) is a permanent feature of the coin, not delimited by the event of offering it, and similarly for the function of the ligaments in (9b) or the presence of one Matl at the Vitmberg homestead in (9c). For now we note that the departure from the pattern represented in Diagram 2 seems to involve two semantic features: an inanimate PA subject or a stative verb.

These features seem to correlate with the modifier-like interpretation of the PA, but it also must be pointed out that the PAs in (9) still express a kind of background information related to their subjects, in a participle-like fashion (cf. Fox 1983, Thompson 1983; for Czech specifically Lamprecht et al. 1986: 367, Gebauer 1958: 625, Hrabě 1957: 385), rather than serving to restrict the class of subject referents, as truly attributively used modifiers would. The PA is semantically in a coordination relation to the main clause, rather than an adjective-like modifier of the PA subject. For example, (9a) says that everybody was offering a coin and the coin possessed certain properties; the context in which this sentence is used does not allow the interpretation that only coins with an angel on it were offered, in contrast to other kinds of coins. Similarly the description of the veins and ligaments in (9b): the relevant passage describes the difficulties of getting to a spot in a joint because it is surrounded by a thick network of veins and ligaments. Finally, the proper noun in (9c) makes it clear that the PA only adds some background detail about its subject, reminiscent of non-restrictive relative clauses.

The shift toward functioning as a modifier of sorts is thus evident; at this stage it is perhaps best understood as a predicative modifier. The question is what features specifically contributed to the shift and how exactly the morphological construction re-organized itself as a result. Let us start with the PA-internal properties: transitivity, internal syntax, verb meaning, tense, and aspect.

#### *4.1 Internal, verb-related factors*

##### *4.1.1 Syntactic criteria: complementation and transitivity*

Examples such as (9) show that the presence of non-subject arguments does not preclude a modification function. It is true that the PA's diminished verbal status often correlates with low informativeness of its complements (Fried 2005, 2007), as would be expected, but indefiniteness or pragmatic predictability per se is not a precondition for such a reading to arise. For example, the picture of an angel in (9a) is new information, albeit part of a backgrounded sub-event. There are also cases in which complementation is not an issue to begin with since the PA is formed from an intransitive verb, and by the syntactic argument, such examples should be prime candidates for losing their verbal character. Yet, it is not difficult to find cases of intransitive PAs that express a predication dependent on the main event, such as we see in (10).

- (10) a. *skřek člověka < volajícího > má býti slyšen*  
 shriek.NOM man.GEN.SG call.PA.GEN.SG have.PRES.3SG be.INF hear.PASS.SG  
 ‘the shriek of a man, when he’s calling out, ought to be heard’  
 [allegorical dispute; early 1400s; TkadlS 2a]
- b. {*každému svú ruku na jich prsy vzkládaje...*}  
*Kterěz on všechny < spící > našel*  
 which.ACC.PL 3SG.M.NOM all.ACC.PL sleep.PA.ACC.PL find.PST.SG.M  
 ‘{he [=the king] felt their chests with his hand...} and he found them all  
 asleep {except for the one who’d just come from his tryst with the queen}  
 [popular entertainment; late 1400s; HynRozpr 140a]

In fact, it is interesting to compare the frequency distribution of these syntactic criteria – complementation and transitivity. Admittedly, it is somewhat tricky to use and interpret quantitative information when working with an incompletely attested language and hence a potentially skewed corpus. Nevertheless, if we apply the necessary caveats about drawing any absolute conclusions from the numbers, they certainly provide discernable patterns. Table 1 summarizes the relative frequencies of transitive vs. intransitive *roots* among the adnominal PAs in my corpus, distributed over three functional possibilities: predication, modification, and the cases of functional ambiguity, such as we saw in (8). Table 2 provides the *token* counts of PAs with non-subject complements (left columns) out of the total count (numbers in parentheses) across the different functions, again relative to transitivity.

	<b>Predication</b>		<b>Modification</b>		<b>Ambiguous cases</b>	
<b>Intransitive</b> roots	50	71 %	45	54 %	27	71 %
<b>Transitive</b> roots	20	29 %	38	46 %	11	29 %
<b>Total</b>	70	100 %	83	100 %	38	100 %

**Table 1.** Relative frequency of transitive and intransitive roots.

Tokens with compl.:	<b>Predication</b>		<b>Modification</b>		<b>Ambiguous cases</b>	
<b>Intransitive</b>	39	43 % (88)	23	16 % (144)	29	66 % (44)
<b>Transitive</b>	21	90 % (28)	23	29 % (78)	7	54 % (13)
<b>Total</b>	60	53 % (116)	46	21 % (220)	36	63 % (57)

**Table 2.** Relative frequency of PAs expressing their non-subject complements.

Table 1 brings out the point that intransitivity is not a strong predictor of the PA’s diminished verbal status (contrary to Thompson 1983): intransitive roots are not only more common across the board, but the transitive ones also appear to be less frequent in the predicative function than in modification. Table 2 confirms the expectation that the predicative uses should be more likely than the modification function to preserve the internal syntax of the stem, but given that overall only about half of the predicative attestations contain an internal

complement and that the presence of those complements also plays a major role in creating functionally ambiguous expressions, complementation per se is not a strong predictor of anything either. The most reliable conclusion we can draw from Table 2 is the fact that transitive predicates with complements are least likely to present the hearer with a functional ambiguity between predication and modification; such examples indeed occur only rarely.

#### 4.1.2 *Semantic criteria: temporal grounding and verb meaning*

We can again follow Hopper & Thompson's semantic criteria for identifying the potential factors in fixing the PA's function toward attribution: the non-active verb meaning, aspect, and temporal grounding. For Czech, we can essentially discount the aspectual dimension as relevant. While unbounded and durative event structures generally correlate with diminished verbal status in the sense of not reporting actions with specific conceptual boundaries (cf. also Hopper & Thompson 1983: 57, 61 or Thompson & Hopper 2001: 35), this potential cannot be used as an explanation for the PA's functional development since the *-NT-* stem is inherently compatible only with imperfective verbs, in contrast to the passive participles ('short' or 'long'), which are primarily derived from perfective stems.

Granted, the imperfective aspect is naturally compatible with developing a habitual reading, going from 'X is V-ing' to 'X has the general habit/property of V-ing', but this can obviously be only one feature among several that jointly invite the attributive reading, since we have seen in (1b, 6) that the reinterpretation does not obliterate the 'X is V-ing' meaning altogether. It is for this same reason that we cannot assign the source of the change to the tense category either. The complete absence of temporal grounding (i.e., the "fleeting", "event-reporting" meaning in Hopper & Thompson's 1984 terms), such as in (1a, 9), is the consequence of establishing a habitual interpretation in specific contexts, but could not have originated spontaneously in the form itself because then we would expect the same effect in all instances of PA use.

This leaves us with the lexical meaning of the root as a potential motivating factor. While I will show that its effect on the PA development is limited in specific ways, it at least provides an explanation for the futility of using transitivity as a criterion. One of the reasons that the PAs display such a high incidence of 'intransitive' roots in the corpus and that such a high percentage of these intransitives is accompanied by non-subject complements is due to the fact that lots of the PAs are based on verbs of motion or location, e.g. *předstupující* 'coming before sb.' (6b); *sedící* 'sitting/residing' (9c). Those verbs often either require or at least prefer to specify a spatial relation or a manner of motion, which makes them syntactically elaborate, although not transitive in the usual sense, whether semantically or syntactically. There are also non-motion verbs with similar properties (*plačícím na* 'crying over sb.<sub>ACC</sub>'; *čekající na* 'waiting for st.<sub>ACC</sub>', *bojící se* 'fearing<sub>reflexive</sub> of st.<sub>GEN</sub>', *slušející k* 'belonging to st.<sub>DAT</sub>', etc.). The distribution in Tables 1 and 2 is based on the usual understanding of transitivity (semantically transitive event, formally encoded as nominative-accusative or, in a few cases, nominative-dative).

Somewhat more important than transitivity is the semantic distinction active/stative. We see this in Table 3, which shows the overall distribution of the two semantic classes of roots.

	<b>Predication</b>		<b>Modification</b>		<b>Ambiguous cases</b>	
<b>Active</b> roots	46	66 %	52	63 %	19	50 %
<b>Stative (&amp;Psych)</b> roots	24	34 %	31	37 %	19	50 %
<b>Total</b>	70	100 %	83	100 %	38	100 %

**Table 3.** Distribution of active and non-active roots.

The likelihood of finding a stative predicate in the modification function is slightly higher than in the predicative function, as expected. However, the difference is not dramatic and when we consider the proportion of active vs. non-active roots across the functional categories, the difference is even less significant. Moreover, the meaning of the root seems to have no effect on creating a functionally ambiguous usage. Yet, it is also clear from all the raw numbers that the modification usage is the most frequent in the corpus. We thus must look for an explanation of this fact outside the form itself, in the syntagmatic and semantic context in which the PA occurs.

## 4.2 Factors external to the PA form

### 4.2.1 Subject animacy

One striking feature is the semantics of the PA's subject. We noted earlier that the compositional meaning specifies an animate agent, exemplified in (6). This is consistent with the prototypical meaning of the PA's participial stem: actions are typically carried out by animate entities. Notice, however, that in the examples which functionally depart from the participial template, as in (9), some of the nouns denote inanimate entities (*peniez* 'coin', *svazky* 'ligaments'), i.e., not very good agents. In fact, inanimate subjects dominate in the modification function throughout the corpus, as summarized in Table 4. Not only is there a clear difference in animacy between the two functions, but inanimate NPs are also a significant contributing factor in the sentences that are functionally unclear.

	<b>Predication</b>		<b>Modification</b>		<b>Ambiguous cases</b>	
<b>Animate</b> subjects	72	62 %	73	33 %	24	43 %
<b>Inanimate</b> subjects	44	38 %	147	67 %	32	57 %
<b>Total</b>	116	100 %	220	100 %	56	100 %

**Table 4.** Animacy of PA subjects.

Relaxing the animacy restriction on the PA's subject is semantically and pragmatically consistent with noun modification: properties can be attributed to any referent, regardless of animacy, degree of specificity or individuation, or any other semantic feature. As a result, even PAs of action, such as *svazující* 'binding'



in (9b), can be interpreted as stative, i.e., as expressing a durative property rather than an action, if the NP referent is inanimate.

#### 4.2.2 Word order

The PA occurred predominantly in three different linear patterns that are summarized in (11); in the patterns A (11a) and B (11b) the PA follows its NP, while in C (11c) it precedes. (The brackets <> enclose the PA with its non-subject complements, labeled ‘xp’.)

- (11) A. NP<sub>PA-subject</sub> <xp<sup>+</sup> PA>                      C. <xp\* PA> NP<sub>PA-subject</sub>  
 B. NP<sub>PA-subject</sub> <PA xp\* >

All three orders occur throughout the OCz period, but they are not in free variation. Order A necessarily applies to PAs that are accompanied by their non-subject complements; this is indicated by the ‘[Kleene] +’ symbol, to be read as ‘one or more complements (xp) must be present’. This order is most commonly associated with the predicative interpretation (1b, 6), although we see in (9c) that an attributive reading is not excluded altogether under favorable semantic conditions (subject animacy and/or stative roots).

Order B is the most frequent overall, and occurs both with the PA’s internal complements present, as in (8a, 9a-b) and in a bare form (10); this is indicated by the ‘[Kleene] \*’ in (11), which means ‘zero or more xp’. This linear pattern cannot be easily associated with a particular syntactic function, except that relative to A, it is considerably more common in the attributive interpretations, regardless of presence or absence of internal complements; statistically speaking, the B pattern is about as likely to express an event contemporaneous with the main verb as it is to express an atemporal property of the PA’s subject. Finally, order C, which differs from A and B in the relative position of the PA and the NP, involves almost exclusively bare PAs, such as we have in (1a, 8b, 12), and occurs predominantly in the modification function, as we will see in a moment. The pattern occurs with transitive (12a) and intransitive (12b) roots alike:

- (12) a. *žádajúcímu*                      *lidu*, {*ješto minulé bídy a strasti pamatuje*,  
 demand.PA.DAT.SG.M people.DAT.SG.M {...}  
*bezpečensvie a pokoj zdali by optala*}  
 ‘{in order for our royal mind to provide security and peace} for the  
 anxious nation {with its memories of past hardships}  
 [legal code, end of 14<sup>th</sup> cent.; MajCar 72]
- b. *at’*    *patříme*                      *na tvój*                      *kající*                      *život*  
 so.that look.PRES.1PL    on your.ACC.SG.M repent.PA.ACC.SG    life.ACC.SG.M  
 {*a následujeme tebe*}  
 ‘so that we look at your life full of repentance {and follow your example}’  
 [expository religious prose, early 1400s; VýklŠal 122a]

Of interest is particularly the comparison between B and C, since in both of them the PA and its subject are immediately next to each other and the

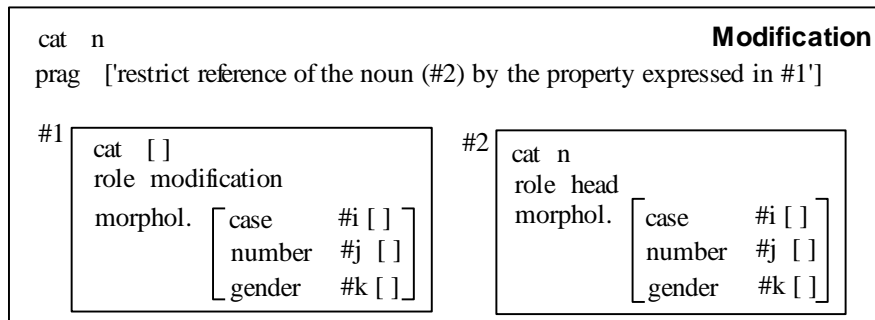
adjacency is a strong motivation for interpreting the PA as a modifier of the neighboring NP. At a minimum, the proximity creates an opportunity for perceiving the two elements as a conceptual unit that identifies the referent of the NP as being of a particular kind. But it cannot be just the adjacency that is responsible for the shift toward an atemporal reading and hence functional reinterpretation of the PA, since there are also many instances of the B order that unambiguously express a temporally grounded relation (predication). The crucial factor is the relative order, as captured in Table 5, which summarizes the interaction between linear adjacency and the presence/absence of complementation. It is clear from the modification-to-predication ratios that the pattern C correlates very strongly with interpreting the PA as a modifier. This is true regardless of complementation although the absence of complements only strengthens this functional status, unsurprisingly. The latter is also true for the B order, but otherwise B appears to be more sensitive to the presence vs. absence of complementation. (The double checkmark in Table 5 indicates very high incidence, parentheses indicate extremely sporadic incidence.)

<i>PA &amp; Subj are adjacent</i>				
	with complements--	<b>modif : pred</b>	bare PA--	<b>modif : pred</b>
order C: <i>PA - Subj</i>	(√)	3 : 1	√	8 : 1
order B: <i>Subj - PA</i>	√√	1 : 1	√√	3 : 1

**Table 5.** Word order, complementation, and syntactic functions

It thus makes sense to ask at this point if there was an established or at least preferred linear order in the language for expressing a modification relation. OCz word order was quite flexible and the flexibility extended even to the NP level, much more so than is the case in ModCz. However, the order within an NP was not free. This is argued and amply documented in Vondrák's (1908) study, which compares the word order preferences of adjectives in contrast to adnominal genitives. On the basis of comparative evidence from the earliest original Czech texts of any length and late Old Church Slavonic texts, in which no Greek or Latin influence can be expected, Vondrák concludes that OCz overwhelmingly preferred the Mod-NP order, inherited from Common Slavic. This means that there was an abstract syntactic pattern (a construction in the CxG sense) that speakers understood as a conventional expression of a modification function, even though the pattern was evidently in some competition with a few other variants (related, but distinct constructions). One such variant was the pattern which reversed the order, NP-Mod. As argued by Kurz (1958), this pattern was originally associated with a specific pragmatic function (contrastiveness), but it is further worth noting that it became particularly common in biblical and religious texts and remained in those genres long after the pragmatic function had been completely lost and the old Mod-NP pattern became grammaticized as the only neutral order for NPs. This genre-based effect is clearly documented also with the PA, but the space of this paper does not permit further discussion of this aspect.

The Modification construction is represented in Diagram 3. It consists of two syntactic daughters whose mutual relationship (the information that uniquely identifies this syntactic combination as a conventional pattern) is represented by the attribute *role*, with the corresponding values in each constituent. The only other information that needs to be specified as an otherwise unpredictable property is the case, number, and gender agreement and the relative order: the modifier precedes the head. Categorially, the construction is a NP, expressed as [*cat n*], carried over from its head. Notice, however, that the category of the modifier remains unspecified; this notation indicates that this construction licensed constructs that contained all kinds of modifying words, such as demonstratives, possessive pronouns, adjectives, certain numerals, etc.



**Diagram 3.** OCz Modification construction

How does the PA fit in, or what does it have to ‘give up’ in order to be compatible with the slot of the modifier? The construction forces an attributive interpretation, favoring the expression of durable, characteristic, de-individuated properties, independent of any specific temporal frame concerning an individual instance, and manifests itself by certain formal and semantic features: particular word order; adjacency of the constituents; attributive semantics of the left daughter; no semantic restrictions on the head noun. And indeed, these are the characteristics we can identify in different clusters across the three word orders found with the PAs, with the C pattern matching this construction most closely.

We can now revisit the distribution of all the PA-related features, internal and external, formal and semantic, in relation not only to the functional status but also across the three word orders. The summary is in Table 6. The columns represent the three functional possibilities and the distribution of the orders A, B, and C within each domain. The rows summarize the relative frequency of the three criteria that seem to show the greatest potential for affecting the verbal character of the PA: the semantics of the root (active/non-active), the animacy of the PA’s subject, and the preservation of internal syntax (complementation). The roots are counted only as distinct roots, the other two criteria are based on the number of all PA tokens (excluding the absolute constructions, as word order is not an issue there). The numbers in gray indicate the actual counts on which the percentages are based; the items in bold will be commented on below.

	Predication			Modification			Ambiguity		
	A	B	C	A	B	C	A	B	C
active root	62 % 18 (29)	69 % 20 (29)	37 % 3 (8)	39 % 7 (18)	<b>64 %</b> 39 (61)	43 % 10 (23)	47 % 8 (17)	<b>58 %</b> 11 (19)	<b>86 %</b> 6 (7)
animate SUB	62 % 20 (32)	56 % 27 (48)	50 % 6 (12)	48 % 10 (21)	31 % 36 (116)	33 % 27 (83)	45 % 9 (20)	37 % 10 (27)	<b>56 %</b> 5 (9)
complements	100 % 32 (32)	31 % 15 (48)	17 % 2 (12)	100 % 21 (21)	<b>16 %</b> 19 (116)	7 % 6 (83)	100 % 20 (20)	<b>59 %</b> 16 (27)	11 % 1 (9)

**Table 6.** Distributional patterns in different word orders

We can draw several conclusions from the patterning in Table 6. (i) The transparent, compositional interpretation of the PA (i.e., as a predicate expressing a temporally grounded situation) is clustered in the A and B orders, both also showing a high concentration of active roots and animate subjects, as expected. Note, however, that syntactic complementation is not a major criterion in the B order and that the semantic features appear to be sufficient to uphold the verbal potential of the form. In contrast, to the extent that the C order is found in a predicative function at all, it seems that the crucial criterion is the animacy of the PA's subject, not the PA-internal features, whether semantic or syntactic. (ii) In modification, the B order also shows a very high (in fact, the highest across the board) proportion of inanimate subjects (69%). With respect to the PA-internal features, we still find a high proportion of active roots (64%) but considerably fewer complements (16%). It appears that for the B order to facilitate the modification interpretation the PA must be used bare. (iii) Finally, these distributions seem to be confirmed by the cases that are functionally ambiguous.

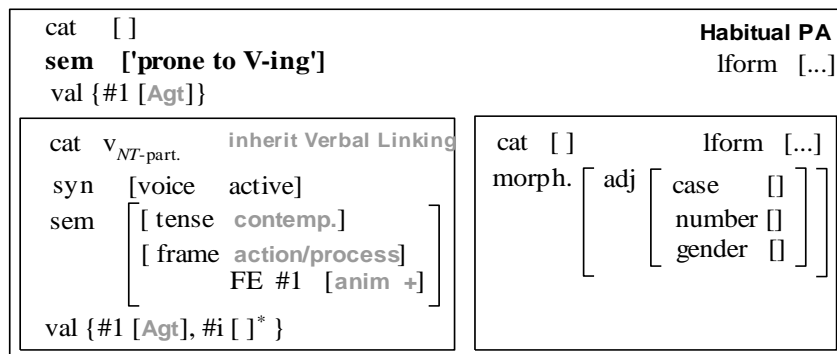
In the B order, the ambiguity appears to arise from the high incidence of complementation (59%) and an equally high proportion of active roots; the semantics of the PA subject does not seem to be enough to resolve the conflict. In the C order, on the other hand, the ambiguity can be attributed squarely to the semantics, both internal and external: predominantly active roots and a noticeable proportion of animate subjects. Both of these features suggest a verb-like usage, which puts them in direct conflict with the attributive interpretation suggested by the linear pattern itself (PA-NP).

We can now comment further on the ambiguities in (8), repeated below:

- (13) a. *ν duši <žádající zlého > {nevende duch milosti}*  
 into soul.ACC.SG.F desire.PA.ACC.SG.F evil.GEN.SG.N  
 (i) 'into the soul; if/when it; desires evil things {the spirit of mercy will not enter}'  
 (ii) 'into an evil-minded soul' (lit. 'habitually desirous of evil things')
- b. *nerodil si přestati a k <tepúciemu >*  
 NEG.Want.PST.SG.M AUX.2SG STOP.INF and toward hit.PA.DAT.SG.M  
*súdcí se obrátiti*  
 judge.DAT.SG.M REFL turn.INF  
 (i) 'you didn't want to stop {committing sins} and turn toward a judge for punishment'  
 (ii) 'you didn't want to ... turn toward a punishment-giving judge ...'

The PA in (8a) is used in the B pattern, has an animate subject (*duše* ‘soul’), and is accompanied by its object, but the root *žád-* ‘desire’, though transitive, is not truly a verb of action. This combination – stative verb, subject adjacent to the PA, and the overall context – creates an opportunity for an atemporal analysis of the PA, in spite of the internal structure and subject animacy. In (8b), the conflict is between having an animate subject and an active transitive root (favoring a verb-like interpretation) but no direct object and, perhaps most significantly, the PA is used in the C pattern, which strongly favors an attributive conceptualization. It had to be constructs like these that opened up the path toward the loss of the compositional structure of the PA and toward fixing its functional status as an atemporal modifier.

We can thus conclude that the structurally and semantically transparent PA construction shown in Diagram 2 gradually shifted to a less compositional configuration, in which a cluster of internal and external changes yields a grammatical entity with a distinct syntactic function, namely, modification. A formal constructional representation of the latter is given in Diagram 4. The verbal features that are being ‘demoted’ are shown in gray, to indicate their diminished salience; the original pragmatic function of the PA-forming CNG suffix is lost completely; and the lexical category of the PA still is best left unspecified as there is no evidence of a complete shift to a full-fledged adjective class (for example with respect to derivational processes that target true adjectives). The adjective-like status cannot be posited as an inherent feature of the PA, despite its external morphology; the adjective-like behavior only follows from the PA’s use in a particular syntagmatic string (licensed by a syntactic modification construction) in a particular pragmatic context, one that favors describing the habits of entities, rather than their actions in specific, individuated instances. The acquired habitual, atemporal semantics is captured by the boldface *sem* statement at the external level: this is clearly a feature not predictable from the morphosemantic structure and must be, therefore, marked as a special property of this newly emerging PA construction.



**Diagram 4.** Constructional representation of the PA as a modifier

### 4.3 From modifiers to lexical adjectives

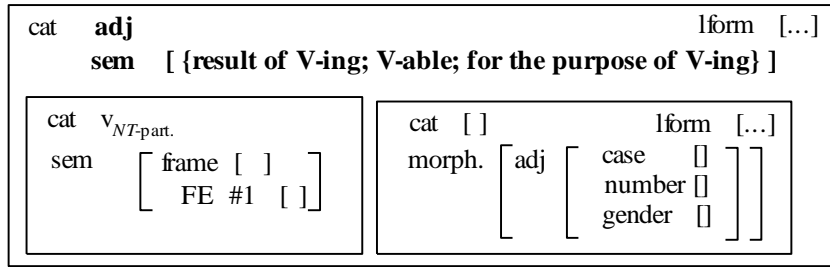
The erosion of the internal features and the external semantic requirements manifests itself to the extreme in examples such as (1a), in which we have *neumierající* ‘immortal’ (< lit. ‘non-dying’), or (14) below, with the PA *žádající* ‘desired/desireable’ (< lit. ‘desiring’):

- (14) < *žádajícího* >      *vítězství*      *trojzvuk*      *sčastně přijal*  
desire.PA.GEN.SG.N      victory.GEN      triad.ACC.SG.M      happily accept.PST.SG.M  
‘he joyously accepted the sound of the desirable/welcome victory’  
[administrative, late 14<sup>th</sup> cent.; ŘádKor 42b]

Here we see a dramatic shift from the transparent morphosemantic structure. In these cases, the PA is always bare, the subject may or may not be animate but, crucially, it does not fill the role of an agent with transitive roots. Instead, the active orientation of the stem is lost, giving way to a resultative or passive reading (*znající* ‘full of knowledge’ < ‘knowing’; *nastávající* ‘present’ < ‘up-coming’; *žádající* ‘desired’ < ‘desiring’), often also shifting toward purpose meanings, found especially in specialized vocabulary – administrative, medical, legal, etc. (*věc uzralující* ‘substance for maturing’, *olej posilující* ‘oil for strengthening’, *list napomínající* ‘letter of reprimand’; cf. Michálek 1963). In the case of intransitive roots, such as *neumierající* ‘immortal’ (1a), the loss of the diminished active orientation manifests itself especially in the shift in modality (e.g. ‘[who] not dying’ > ‘[who] cannot die’), but the purpose meaning is also very common.

These changes reflect a reconfiguration of the semantic participants contributed by the participial stem, whereby the PA becomes semantically fully dissociated from its active orientation signaled by the *-NT-* morphology. The NP that forms a conceptual unit with the PA is, then, just that: an NP whose referent bears no event-role relationship to the verbal meaning of the PA’s stem. Its inherent semantics is irrelevant, and the PA can only be interpreted as attributing some characteristic to its adjacent NP, as in any other modification relationship.

A constructional representation of this extreme shift is in Diagram 5. The internal features contributed by the *NT-*stem have been obliterated, the only piece of information that remains is the meaning of the root (through the *frame* specification), which, however, is not semantically constrained beyond ensuring that zero-valent roots cannot appear (i.e., only frames that contain at least one syntactically expressed participant are allowed, which excludes certain verbs of atmospheric states, physical or mental states, etc.). At the same time, the external properties (in boldface) are completely unpredictable from the structure of the stem and must be specified directly, as idiosyncratic constructional features: categorially, this is as close to an adjective as a PA can get, and the construction also has non-compositional semantics. We have seen that the meaning comes in several flavors; in this diagram they are represented in an abbreviated way as a list of possibilities in the *sem* statement (each of them should, strictly speaking, be presented as a distinct sub-construction, along the lines of Traugott’s, this volume, classification into meso- and micro-constructions).



**Diagram 5.** Representation of an adjective-like PA construction

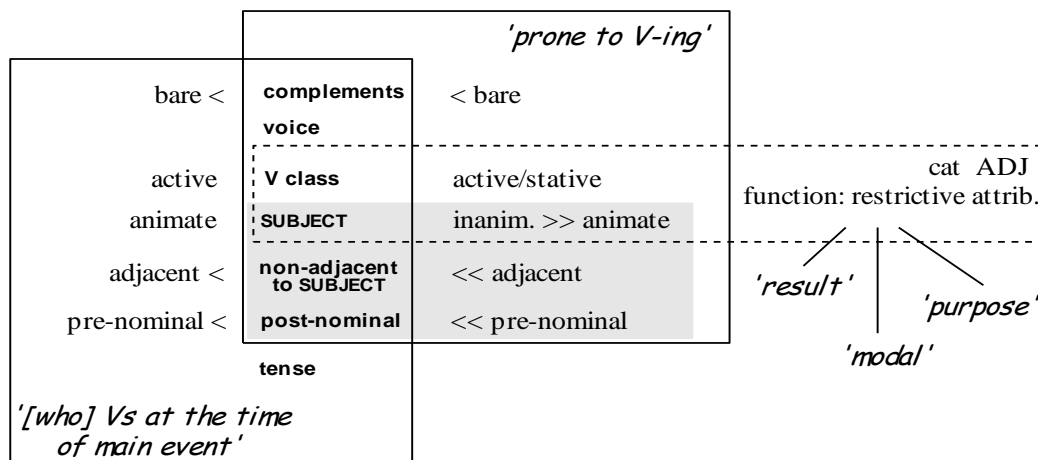
## 5. Constructional representation of grammatical reorganization

The PA clearly went through a long period of shifting toward an attributive usage, in co-existence with truly predicate-like uses motivated by the morphosemantic structure (namely, that of an inflectional member of the verb paradigm). The factors that contributed to the shift toward modification have to do both with the internal properties of the PA itself and with the syntagmatic and semantic environment the PA occurred in. With respect to the *PA-internal* features, the partial changes concerned primarily the loosening of semantic restrictions on the root (from verbs of action to allowing also verbs of states and perception). Less prominent, but still relevant in many cases, were the loss of internal syntax, the erosion of temporal grounding, and, as an extreme shift, the emptying of the *-NT-* suffix of its voice-marking content. The factors *external* to the form itself (in Diagram 1 italicized) involve a combination of abandoning semantic restrictions on the subject NP (loss of constraints on the inherent noun semantics and neutralization of any event-role distinctions introduced by the stem) and syntagmatic patterns that put the PA and its subject in adjacent positions, thus suggesting a tighter conceptual unit.

The data show, however, that whatever functional shifts took place, they cannot be attributed to any one of these factors individually; instead, we must conclude that various clusters of those factors may be equally capable of inviting a shifted interpretation of a given PA token. Thus, returning to the functional predicative-attributive continuum that was presented in Diagram 1, we can now conclude that the less prototypical cases of either function represent various points in between the two poles, depending on which features prevail in a given instance.

As noted in 4.2.2, the source of innovation must have been the ambiguous constructs, which presented language users with various degrees of mismatches between the PA's morphosemantic structure (licensed by a familiar construction, represented in Diagram 2) and the syntactic and semantic requirements of a particular modification structure (another, independently existing grammatical construction) in which the PA appeared to be used. The presence of constructs that allowed multiple interpretations of such mismatches led to 'analyses' that gradually adjusted the internal organization of the PA construction, giving rise to additional (types of) PA constructions.

The emergence of these different constructional outcomes can be summarized in a representation that is akin to the functional/semantic maps used in cognitively oriented typological research (Haspelmath 1997, 2003, Croft 2001). A functional map representing the diachronic relationships between different PA constructions is in Diagram 6. The list of (boldfaced) properties in the center of the map corresponds to the constructional features, both internal and external, that must be referred to in representing the PA morphosemantic structure. The symbols '<' and '>' read as 'less common/favored' and 'more common/favored', respectively; the doubling, '<<', '>>' indicates an overwhelming preference in the corresponding direction. The rectangles delimit the sets of features and preferences of individual PA constructions, here identified by their meaning (italicized boldface in single quotes). The dashed line around the rectangle labeled as *cat(egory) ADJ* indicates that this set of innovations was both more recent than the other two and relatively short-lived, not surviving much beyond the OCz period delimited by the early 1500s. The fact that this adjectival shift consisted of several semantic variants is indicated by the branches leading out of the general representation.



**Diagram 6.** Functional relationships among PA constructions.

The map shows that the transitions for a given feature can only be expressed as tendencies. Nevertheless, the give-and-take of the conflicting pressures is not random; it is clear that some of the features had a stronger effect overall and it is significant that the dominant features were the ones outside of the PA form: the semantics of the subject and its position relative to the PA in a concrete expression. In Diagram 6, this crucial cluster is enclosed in the gray area, and we can also appeal to this difference in relative weight between external and internal factors in explaining the PA's resistance to a full categorial shift; the resistance was evident in OCz and remains even stronger in ModCz.

The shift was primarily motivated by factors *external* to the PA: its co-occurrence with a NP that could be construed as its subject, in a particular syntactic pattern that imposes or at least strongly invites a conceptualization that



is fundamentally different from what the internal features of the PA signal. But this opportunity for changing the PA's character goes against the apparently stronger tendency toward maintaining a transparent *internal* semantic structure (root meaning, voice, tense) at the expense of the function and semantics introduced by the CNG morpheme, including the syntagmatic context its adjectival morphology might favor. Unlike the passive participle, which emphasizes the resultant state of an event, this PA is not naturally compatible with atemporal stative interpretation, a prototypical feature of adjectives. The PA's compatibility with the meaning and function of adjectives must remain extremely low regardless of external morphology if there is no change in the PA's essential semantic features: marking an active, contemporaneous (hence, on-going) process; such a change would require a complete loss of the internal morphosemantic structure.

## 6. Conclusions

This study takes a diachronic perspective on the resolution of a categorial and functional mismatch between the internal structure of an item and its external function. We can conclude that the strength of the external factors in motivating a shift in speakers' understanding of a particular morphological form provides evidence that speakers' grammatical knowledge includes relatively abstract grammatical patterns, 'constructions', which themselves serve specific syntactic functions and carry certain semantic and pragmatic expectations with respect to their potential fillers. The interpretation of an individual form (in our case the PA) in concrete syntagmatic strings thus (i) involves a matching between its own properties and the requirements (semantic, syntactic, pragmatic) of the construction that licenses a given construct (in our case a particular variant of a modification structure) and (ii) underscores the relevance of conceptual unity in establishing a new syntactic function. It is the goodness of match between the two that allows the PA to be understood as an appropriate filler of the modifier slot in the larger pattern and thus give the form a different functional status. However, as long as the external factors do not erode the internal morphological structure of the PA, we cannot claim a real categorial shift for the form outside of any syntagmatic context. Which also lends support to the theoretical claim (Croft 2001) that syntactic function and lexical category can only be established relative to particular syntagmatic patterns ('grammatical constructions'), not in absolute and universal terms.

With respect to the potential of Construction Grammar for representing diachronic processes, the study establishes at least the following points. First, we have seen that CxG allows us to pay a close and systematic attention to the context in which a given element occurs and to identify properties of that context that may collectively shape a gradual change manifested by the item in question. As a result, we can formulate quite precisely the details of both the holistic dimension of change and the partial transitions that lead up to it. Second, constructions are understood as 'blueprints' (generalizations over constructs) and

as such presuppose variation and change as inherent part of grammar. Constructional specifications thus can change through the appearance of novel constructs, which invite novel interpretation of existing patterns. New constructions thus arise through gradual conventionalization of a particular pattern of understanding, in which lexical meaning, syntactic function, and communicative intent form an integrated whole. Third, the multi-layered representation, which gives no single layer or individual feature an a priori more prominent status, naturally accommodates non-compositionality that often results from the dynamic interplay between conflicting internal and external properties and incremental changes that may not be driven by a single property. And finally, since the conceptual and representational apparatus of CxG does not require complete specification of every feature in every pattern, it gives us a theoretically coherent way of dealing with imperfectly attested past grammatical systems.

\* Part of the research was supported financially by a Princeton University RHSS grant. In addition, my work would not have been possible without the generous help of the researchers in the Staročeské oddělení ÚJČ in Prague, who gave me full access to their Old Czech data archives and to their extensive library of Old Czech texts. I also wish to acknowledge two anonymous reviewers for their thoughtful suggestions, and I particularly want to thank Emily Klenin and Elizabeth Traugott for their interest in this work, very helpful comments on various versions of the paper, and for their encouragement.

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