

PARTITIVITY AND PREFIXATION IN SLAVIC VERBAL PREDICATES *

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1. Introduction

In Slavic languages, the aspectual contrast between ‘activity’ and ‘accomplishment’ predicates often correlates with morphological prefixation of the verbal stem. The Bulgarian paradigm in (1) demonstrates that in the absence of a prefix, prototypical ‘activity’ predicates such as *drink* cannot receive a telic (‘accomplishment’) interpretation, even when their object argument is quantized:

- 1a. Pih (vino-to) (edin čas) (*za edin čas).
 drink-1st.sg.aor (wine-the) (one hour) (in one hour)
 ‘I drank the wine (for an hour) (*in an hour).¹ (no commitment as to
 amount of wine drunk)
- b. **Iz**pih vino-to (*edin čas) (za edin čas).
pref-drink-1st.sg.aor wine-the (one hour) (in one hour)
 ‘I drank (**up**) the wine (*for an hour) (in an hour). (more or less all of the
 wine was drunk)

Aspectual pairs of the kind exemplified in (1) are widespread in the Slavic languages. At first, they suggest a transparent relation between the presence of a verbal prefix and the aspectual value of the predicate: The prefix contributes some bit of content necessary to the computation of telic interpretations. However, as has been argued extensively in Filip (1999, 2002) for Czech and Russian, and as I will argue here for Bulgarian, this view of Slavic prefixes does not withstand closer empirical scrutiny. But then, what *can* we say about the semantic contribution of the prefix in (1b) and about the relationship, if any, between prefixation and

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¹ The non-telic complex predicate in (1a) does not have a progressive reading. The same holds for all predicates identified as aspectually non-telic in the rest of this paper. In Bulgarian, the progressive is morphologically distinct:

i. Pi-*eh* vino-to.
 drink-1st.sg.past.progressive wine-the
 ‘I was drinking the wine.’

telicity? In this paper, I will examine aspects of the empirical evidence that are crucial for answering these questions. Further, I will situate the discussion of the nature of Bulgarian prefixes within current theoretical debate, and I will briefly evaluate the resulting possibilities against empirical and theoretical considerations.

2. Some empirical facts

Filip (2002) has demonstrated that Slavic prefixes constitute a heterogeneous set. Nevertheless, sub-classes of these morphemes exhibit consistent semantic behaviour. I will concentrate here on the kind of prefix implicated in deriving the contrast in (1), which generally induces a change in predicate aspectuality (for ‘activity’ verbs), but not a change in predicate valence or core lexical meaning.²

A key argument against a transparent relationship between prefixation and telicity comes from the observation that predicates that are already (lexically) telic are still subject to prefixation. In Bulgarian, one such predicate is *buy*; in (2), I illustrate the contrast between the non-prefixed and the prefixed form of *buy*:

- 2a. Kupih kravi-te (zaedno) (*edin mesets) (*za edin mesets).
bought-1st.sg.aor cows-the (together) (one month) (in one month)
‘I bought the cows (together) (*for an month) (*in a month).’
- b. **Izkupih** kravi-te (*zaedno) (*edin mesets) (za edin mesets).
pref-bought-1st.sg.aor cows-the (together) (one month) (in one month)
‘I bought the cows (*together) (*for a month) (in a month).’

Non-prefixed *buy* (2a) behaves like an ‘achievement’: It does not tolerate durative or frame adverbials, indicating a telic aspectual value and lack of subevent structure associated with the event description. Prefixed *buy* (2b) behaves like an ‘accomplishment’: It co-occurs with frame adverbials, indicating a telic aspectual value and some notion of ‘extendedness’ associated with the event description. The salient observation here is that ‘extendedness’ appears to relate to a distributed interpretation of the Theme: (2b) describes repeated buying of cows that terminates when the stock of cows is exhausted. Suitably, prefixed *buy* bars modification of its argument by collective ‘together’ (2b). Further, prefixed *buy* typically takes

² As a consequence, none of the empirical and theoretical claims made in this paper should be automatically taken to extend to instances of prefixation that introduce these additional semantic complications. Similarly, none of the prefixes discussed in this paper correspond to the ‘measurement’ prefixes described in Filip (2002).

arguments that have a natural construal in terms of the proper parts of their referent – plural, mass, group, and ‘container’ nouns, but not ‘atomic’ count nouns:

- 3a. **Izkupih** kravi-te / zemja-ta / futbolnij-a otbor / magazin-a.
pref-bought-1st.sg.aor cows-the / land-the / soccer team-the / store-the
 ‘I bought the cows / the land / (the members of) the soccer team / (the items in) the store.’
- b. **##Izkupih** krava-ta / stol-a / paltot-o.
pref-bought-1sg-aor cow-the / chair-the / coat-the
 ‘I bought the cow / the chair / the coat.’

The ‘##’ mark on (3b) indicates that the pairing of verb and argument is not ungrammatical, but rather gives rise to a very unnatural interpretation. Overall, the facts in (2) and (3) seem to establish that prefixation of lexically telic predicates restricts the verbal denotation to (complex) events involving the piecemeal manipulation of some argument.³ The sense of ‘complexity’ or ‘extendedness’ associated with these predicates is strictly related to the requirement that the action expressed by the verb recurs in relation to different parts of the argument.⁴

A relevant question at this point is whether prefixation carries an identical import in cases where it correlates with a change in aspectual value – i.e., resulting in ‘accomplishment’ readings for ‘activity’ verbs, as in example (1). Typically, ‘accomplishment’ predicates are taken to involve a gradual progression through (the parts of) some argument (Krifka 1992, 1998). With consumption verbs such as *drink*, progression affects the material parts of the Theme. Hence, the presence of a prefix in Bulgarian (1b) can still be taken to correlate with a piecemeal manipulation of the Theme. Further, many of the lexically non-telic predicates in Bulgarian have not one, but two telic forms: A prefixed form, as in (1b), and a suffixed (‘semelfactive’) one. They differ with respect to the entailments about the piecemeal vs. ‘holistic’ manipulation of the argument. In (4), I illustrate the two telic forms for the verb *swallow*:

- 4a. **Glutnah** jabulkata. (semelfactive)
 swallow-**sf-1sg-aor** apple-the.
 ‘I swallowed the apple (as a **whole** / in **one swallowing**).’

³ For reasons of brevity, this paper focuses on cases where the relevant argument is the Theme. With other prefixes, distribution may scope over a different argument, e.g. the Recipient.

⁴ Significantly, the ‘extendedness’ of prefixed predicates is not of a purely temporal nature. It is impossible to interpret prefixed *buy* in e.g. *buy the cows* (2b) as denoting an event of buying the totality of cows that is temporally drawn out (e.g., because payment occurs in installments).

- b. **Izgultah** jabulkata. (prefix)
pref-swallow-1sg.aor apple-the.
 ‘I swallowed, **piece by piece**, the entire apple.’

In ‘semelfactive’ predicates (4a), the thematic participant is treated as a unitary whole. In contrast, prefixed predicates (4b) foreground a part-structure associated with the thematic participant.

Given the data in (1 – 4), we can tentatively conclude that the presence of the relevant prefix on Bulgarian predicates marks the so-called ‘incremental interpretation’ of some argument (Dowty 1991; Krifka 1998). Hence, I will refer to the class of prefixes under consideration as ‘incrementality prefixes’.

It is sometimes suggested that Slavic prefixes are incorporated prepositions. The Bulgarian prefix morpheme from (1 – 4) above indeed has an independent existence as a locative preposition. In this function, it again conveys the notion of distribution over the relevant argument, cf.:

- 5a. Hvurlih drehi-te **iz** staja-ta.
 throw-1st.sg.aor clothes-the **in-DIST** room-the
 ‘I threw the clothes **around** the room.’
- b. Hvurlih drehi-te **v** staja-ta.
 throw-1st.sg.aor clothes-the **in** room-the
 ‘I threw the clothes **in** the room.’

The sentence in (5a) with the distributing preposition ‘**iz**’ entails that different (portions of) clothes end up in different parts of the room. The sentence in (5b) with the general locative preposition ‘**v**’ carries no such requirement.⁵ I have glossed the meaning of the preposition in (5a) as ‘**in-DIST**’. This reflects the fact that it combines the sense of distribution with the notion of spatial containment associated with the preposition *in*. Another locative distributing preposition, ‘**po**’, conveys the relation of surface contact associated with the preposition *on*, cf.:

- 6a. Hvurlih drehi-te **po** pod-a.
 throw-1st.sg.aor clothes-the **on-DIST** floor-the
 ‘I threw the clothes **about** the floor.’

⁵ The most natural interpretation of (5b) is that the clothes from a more or less coherent pile at a more or less circumscribed spot in the room.

- b. Hvurlih drehi-te **na** pod-a.
 Throw-1st.sg.aor clothes-the **on** floor-the
 ‘I threw the clothes **on** the floor.’

As before, (6a) requires that different (portions of) clothes end up on different parts of the floor. (6b) carries no such commitment.

Earlier I have referred to a class of incrementality prefixes, though I have so far illustrated only one such prefix, ‘**iz-**’. As it happens, the difference between individual incrementality prefixes is very similar to the difference between the two distributing prepositions from (5) and (6): Each picks out some defining aspect of the relation that holds between verb and argument. For instance, the prefix ‘**iz-**’ occurs with ‘consumption’ verbs such as *drink* and *buy*:

7. **Iz**pih vino-to.
pref-drink-1st.sg.aor wine-the
 ‘I drank (**up**) the wine.’

Generally, ‘**iz-**’ attaches to predicates whose lexical meaning suggests an attrition-like effect on (the material parts of) the Theme argument. These include *eat*, *clean*, *swallow*, *burn*, *wash*, etc.⁶ A different prefix is illustrated in (8) below:

8. **O**pipah masa-ta.
pref-touch-1st.sg.aor table-the
 ‘I touched the table **all over**.’

Sentence (8) describes a complex event in the course of which distinct parts of the table are touched (since the predicate in (8) is telic, (8) is further understood to claim that more or less the entire surface of the table was covered in this manner). Touching involves surface contact with some object, which is the aspect of predicate meaning that determines the distribution of the prefix ‘**o-**’. Other predicates that form their ‘accomplishment’ senses with this prefix include *knock*, *shave*, *peel*, *pick* (e.g. *apples from trees*), *lick*, etc.

The facts in (5 – 8) support the view that prefixes have their origins in the prepositional system of the language. They don’t immediately dictate a treatment of the prefix morpheme is a syntactically incorporated preposition: A language may recruit its lexical items to express novel functions. What seems to be clear, though, is that a sense of distributivity is associated with the relevant morphemes

⁶ This prefix also typically modifies predicates expressing motion along a (bounded) Path, e.g. *push x into the corner* or *walk the distance to x*.

across different contexts, suggesting that this is a part of their core meaning. If so, we must inquire into the nature of the connection between this characteristic of the prefix morpheme and the semantic properties of prefixed verbal predicates. I explore some possibilities in the following section.

3. The sources of incrementality and possible meanings of the prefix

A familiar hypothesis about the origins of incrementality holds that (certain) verbs may enter into so-called incremental relations with a privileged argument specified in the lexical definition of the verb. Incremental relations are formally defined in Krifka (1992, 1998); I give here a simplified version of his proposal:

9. Incremental relations (following Krifka 1998, simplified):

An event denotation E and an argument denotation A stand in an incremental relation R iff the following are satisfied:

Extendedness condition: Both E and A have proper parts.

Mapping conditions: Each proper subevent of E is related to some proper subpart of A; and each proper subpart of A is related to some proper subevent of E.⁷

Uniqueness conditions: Each proper subevent of E is related to some unique subpart of A; and each proper subpart of A is related to some unique subevent of E.⁸

Incremental relations, defined as in (9), are considered crucial to the computation of the aspectual value of ‘accomplishment’ predicates. Very briefly, (9) guarantees that predicating any verb to a quantized argument via R will result in a complex verbal predicate that is itself quantized.⁹ For our current purposes, it appears that if we can relate the semantics of Bulgarian prefixes to the theory of incremental roles, we may be able to account both for the sense of piecemeal manipulation of the argument and the telic aspectual value associated with prefixed predicates. A plausible hypothesis here is that the prefix realizes the formal element responsible for assigning incremental R. There might be a connection to the prepositional

⁷ These conditions are called Mapping to Subobjects (MSO) and Mapping to Subevents (MSE).

⁸ These conditions are called Uniqueness of Objects (UO) and Uniqueness of Events (UE).

⁹ A formal proof of this statement can be found in Krifka (1998), p. 214. The two components of (9) that are crucial to this proof are MSO and UO. Quantized verbal predicates are telic, given Krifka’s definition of telicity.

origin of Bulgarian prefixes, on the view that (some) prepositions are thematic role assigners (a capacity transmitted to them by the lexical verb).¹⁰

To set up an alternative, we must take a closer look at the relationship between incremental predication as in (9) and intuitions about the piecemeal manipulation of some argument. The Extendedness condition from (9) assumes that the argument denotation instantiates a part-structure. Yet, ‘accomplishment’ predicates may apply to singular count nouns, as in *John ate the apple*. On most models of the domain of individuals, these nouns denote ‘atomic’ entities, i.e. entities without proper parts. Still, there are means of viewing ‘atomic’ individuals under a partitive ‘guise’ if such a representation is called for by their semantic environment. For instance, the so-called ‘materialization’ function from Link (1983) maps the ‘atomic’ referent of *apple* onto the plurality of its material parts. Hence, it is conceivable that if the ‘accomplishment’ sense of *John ate the apple* is (in part) the result of incremental predication, the denotation of the argument *the apple* is associated with a part-structure (so as to meet the Extendedness condition) by means of an operation unspecified in definition (9). Further, consider the interpretation of the ‘accomplishment’ predicate *John ate two apples*. On some approaches, the NP *two apples* is inherently associated with a part structure by virtue of being a semantic plurality. Its ‘atomic’ (and only) components are two individual apples. Yet, there seems to be an intuition that in the course of eating two apples John may have eaten a piece of, say, the first apple. Or, the space of possible hypotheses about the nature of the subevents of *ate two apples* is not restricted by the requirement that these subevents are whole-apple sized. This suggests that the part structure associated with *two apples* here is finer than provided by (common assumptions about) the semantics of this noun. Again, this structure may be recovered through formal means not specified in (9).¹¹

This discussion is of relevance given the following observations: Empirically, the facts relating to the incremental interpretation of arguments in ‘accomplishment’ predicates are very similar to the facts relating to the so-called ‘distributive’ interpretations of plural NPs (cf. especially the contrasts in ex. (2) and (4)). Theoretically, the issue of modeling the processes through which the argument denotation in incremental predication is associated with a part structure evokes a class of approaches to distributive interpretations. Specifically, one line of thinking locates the source of distributive interpretations in a (silent) quantificational operator *D* associated with the verbal meaning. This operator

¹⁰ Ramchand (1996) claims that incremental role assignment is the property of a syntactic head above the level of VP – a proposal that might explain the surface realization of the prefix.

¹¹ In addition, I am assuming that the underlying theory of part relations must be close in spirit to the one proposed in Moltmann (1997) – specifically, that it admits the possibility that entities are associated with different part structures in different contexts.

recovers a contextually appropriate part-structure for the nominal denotation. Event-based theories further assume that the presence of *D* (and hence, distributive interpretation) is conditioned by event plurality.¹² Viewed from this perspective, Krifka's incremental R is an instance of (tightly constrained) plural predication in the sense of Landman (1996). This leads to the interesting question of whether (aspects of) the theory of aspectual interpretation can be reduced to the theory of plurality. A critical examination of the issues involved is beyond the scope of this paper. Here, I will simply outline two diverging possibilities: Krifka-style incremental predication is often taken to define a special relationship with a privileged argument. On its strictest interpretation, it maintains that the lexical properties of verbs determine which thematic argument is interpreted via a *D*-type operator and specify necessary and inflexible conditions on the interpretation of this argument. The general theory of plural roles has greater flexibility: In its weakest form, it simply states that verbal predicates with certain properties may relate to any of their arguments via a *D*-type operator. Further, the conditions on the interpretation of *D*-arguments may be relative to context of interpretation (e.g., by taking into consideration scope assignment).¹³

The point of this discussion is twofold. First, there is now a different possibility with respect to the semantics of the Slavic prefix, namely that it realizes overtly some *D*-type operator. Second, this hypothesis requires an explicit statement of a background theory of the factors that govern the interpretation of nominal arguments under *D*-operators and their connection to the theory of aspect. Ultimately, this means motivating a choice between the two interpretations of incrementality sketched out above. In the following section, I will discuss some data that appear to be of relevance in the making of that choice.

A final possibility with regard to the status of the prefix morpheme is to take it as a pluractional marker. Pluractional markers have been described for many non-Indo-European languages, where their presence on a verbal predicate indicates that the kind of event denoted by the base is repeated along some individuating dimension. Some examples of the contrast between pluractional and non-

¹² Approaches that posit a *D*-operator include Roberts (1987), Heim, Lasnik & May (1991), Lasnik (1995). The latter also represents an implementation of this idea in an event-based theory. A common assumption for this approach is that all nominal predicates unambiguously refer to semantically singular / atomic objects: singular count nouns such as *the apple* refer to individuals, whereas plural nouns such as *the apples* refer to groups. Only when interpreted under *D* can they be associated with a part-structure, i.e. constitute semantic 'pluralities'.

¹³ The two positions are in principle distinguishable on empirical grounds. The strict interpretation of incremental roles requires that incrementality (= piecemeal manipulation of some argument) and telicity (\approx exhaustive manipulation of that same argument) go hand in hand. The theory of plural roles does not.

pluractional predicates resemble closely the contrast between prefixed and semelfactive Slavic predicates discussed in Section II. For instance, consider the following example from Yurok:

- 10a. no:l nepe?wisneg?u-?wis ?emel ma?epoyew ku ?we-?lep
 then otter 3-skin CIRC tie.up.PASS ART 3-hair
 ‘And then his hair was tied up with an otter skin.’
- b. k^welek^w kic ko:so **ma**:-ma?epoyew
 well PERF all over **PA**-tie.up.PASS
 ‘He was all tied up.’

(Garrett 2002: 17 - 18)

In Yurok, the pluractional marker is a reduplicative prefix on the verb. The contrast between (10a) and (10b) pertains to the number of instantiations of the relevant event: A single tying in (10a) vs. a series of tyings in (10b). In addition, the tying events in (10b) collectively exhaust the tie-able surface of the Theme.

Lasersohn (1995) proposes the following meaning for pluractional markers:

11. $V\text{-PA}(X) \Leftrightarrow \forall e, e' \in X [P(e) \& \neg f(e) \oplus f(e')] \& \text{card}(X) > n$
 (where \oplus = overlap)

Definition (11) says that a pluractional verb denotes a set of events whose cardinality exceeds some contextual variable n and whose members differ with respect to an individuating dimension f . The dimension f can represent the spatial or temporal trace associated with individual events, or a thematic relation. These generate the senses of temporal, spatial, or participant-based distributivity commonly present in the interpretation of pluractional predicates.¹⁴

If the Bulgarian prefix is a pluractional marker, it must also be assumed that it specifies a concrete dimension of distributivity associated with the verbal predicate - that provided by the Theme relation. This proposal does not require immediate commitment to any theoretical view pertaining to the origins of distributivity or telicity, since if defined as in (11) the pluractional marker is essentially an (object) agreement morpheme.

In the following section, I will examine some empirical data that may help narrow down the options discussed so far.

¹⁴ Lasersohn's proposal is based on data from Klamath, where the pluractional marker appears to be non-specific.

4. Incrementality in non-telic predicates

At the start of this paper, I claimed that in Bulgarian, complex predicates made up of ‘activity’ verb and quantized arguments may receive a non-telic (but non-progressive) interpretation. In (1), I illustrated this claim for the predicate *drink the wine*. Some further examples are given below:

- 12a. Chetoh kniga-ta (polovin čas) (*za polovin čas).
 read-1st.sg.aor book-the (half hour) (in half hour)
 ‘I read the book (for half an hour) (* in half an hour).’
- b. Pisah si domashno-to (polovin čas) (*za polovin čas).
 write-1st.sg.aor refl homework-the (half hour) (in half hour)
 ‘I wrote my homework (for half an hour) (*in half an hour).’

The data in (12) conflict with the traditional conception of the relationship between properties of the argument and predicate aspectuality, and their semantics are not well understood. However, it seems intuitively right that as far as interpretation of the argument is concerned, incrementality (= piecemeal manipulation of the argument) is a property as much of non-telic predicates as of telic predicates. For instance, the event described in (12a) may have subevents of reading parts of the book: It is just not guaranteed that this is the case for all parts of the book. Even more to the point, I demonstrated earlier (ex. 5) that predicates like *swallow* have two distinct telic forms, corresponding to incremental (prefix) vs. non-incremental (suffix) treatment of the argument. Non-telic *swallow* allows both readings:

13. Gultah jabulkata (polovin chas) (*za polovin chas).
 Swallow-1sg-aor apple-the
 ‘I swallowed the apple (for half an hour) (*in half an hour).’ =
- i. I swallowed pieces of the apple for half an hour.
 - ii. I swallowed the whole apple over and over again for half an hour.¹⁵

A priori, an explanation of the contrast in (13) must point to some component of the logical form(s) assigned to (13) that differentiates its two readings. One possibility, given previous discussion, is that reading i) above is generated in the presence of a *D*-operator. Now, two issues arise. First, we may ask whether data as in (12 – 13) help decide between the contending hypotheses sketched out in

¹⁵ This interpretation requires us to imagine that the apple is regurgitated and swallowed again.

Section 3. Second, we must assess the compatibility of the earlier claim that the Bulgarian prefix is a marker of incrementality with its absence from (12) and (13).

It seems clear that the strict interpretation of incremental relations is at a disadvantage here: It maintains that incremental predication to a quantized argument must result in telic interpretations, contrary to what we see in (12) and (13). To accommodate the latter facts, this approach must either define a different type of ‘role’ for the nominal arguments in (12) and (13), or claim that in these examples the arguments fail to be quantized.¹⁶ The view of the prefix as a *D*-operator does not have this problem, although it must specify the conditions on the interpretation of the argument that account for the non-telicity of (12) and (13). The treatment of the prefix as a pluractionality marker is not tied to a particular theory, hence still in contention. The last two options are not inherently incompatible with the absence of a prefix from (12) and (13), yet must provide at least a preliminary basis for its explanation.

As it turns out, it is not always the case that an overt marker of distributivity is absent from non-telic predicates. Three possibilities are attested:

- 14a. *no marker in the non-telic form, prefix marker in the telic form, e.g.:*
- | | |
|------------------------|-------------------------------------|
| Pih vinoto. | I zpih vinoto. |
| Drink-1sg-aor wine-the | pref -drink-1sg-aor wine-the |
| ‘I drank the wine.’ | ‘I drank (up) the wine.’ |
- b. *prepositional marker in the non-telic form, prefix marker in the telic form; the two are phonologically distinct, e.g.:*
- | | |
|--------------------------------------|--|
| Risuvah po stenata. | O brisuvah stenata. |
| Draw-1sg-aor on-DIST wall-the | pref -draw-1sg-aor wall-the |
| ‘I drew on the wall.’ | ‘I covered the wall with drawings.’ |

¹⁶ Both proposals have been made without the necessary elaboration. Ramchand (1996), in discussion of a similar class of data from Scots Gaelic, suggests that nominal arguments in non-telic complex predicates fill a different ‘role’ of the verb. She does not provide a definition of this ‘role’, though she states that its presence indicates that the part structure of the argument is irrelevant. Examples like (13) cast doubt on the latter claim; more generally, if we accept that a distinction between an incremental vs. non-incremental manipulation of the argument is present in both telic and non-telic complex predicates, its modeling in term of distinct ‘roles’ threatens both a proliferation of such roles as well as a certain loss of generality. Ogihara (1998) suggests, as an alternative to Ramchand’s proposal, that nominal arguments in non-telic complex predicates don’t have quantized reference. The problem with this solution is that it fails to provide an explanation of the factors that determine the alleged variation in the referential properties of nominal predicates, especially as it appears to be the case that such variation must be postulated only in predication to ‘activity’ verbs.

- c. *prepositional marker in the non-telic form, prefix marker in the telic form; the two are phonologically identical, e.g.:*

Hodih **iz** stranata.

Izhodih stranata.

Go-1sg-aor **in-DIST** country-the

pref-go-1sg-aor country-the

‘I traveled **around** the country.’

‘I traveled (**all over**) the country.’

The data in (14) open up an interesting possibility, namely that (14c) represents the basic configuration of members of the predication that must be assumed for all pairs of complex predicates that differ in aspectual value. An explicit articulation of this idea would take the following form: Bulgarian (and maybe Slavic) encodes the *D*-operator associated with semantically plural predicates in the syntactic category of prepositions. All incremental / distributed arguments originate inside prepositional phrases headed by *D*. Non-telic predicates reflect a syntactic configuration where the argument is interpreted in-situ. Hence, when visible, the *D*-operator takes the form of a preposition. Telic predicates reflect a syntactic configuration where the argument has been raised out of its base position. We would need to assume that this process results in the incorporation of the prepositional head into the verb, where it is seen as a prefix. The hypothesized syntactic difference can, in principle, be related to the corresponding difference in aspectual interpretation.¹⁷ In addition, we must assume that idiosyncratic rules of phonological realization determine the form of the relevant morpheme that we hear (or not). These ‘pronunciation’ rules will have to be sensitive both to the thematic category of the argument and to the syntactic configuration in which the distributive operator is interpreted.

Clearly, this proposal needs to be fleshed out, a project that is beyond the scope of this paper. Here, I will briefly list two empirical arguments in its favour. First, it offers an explanation for the fact that Slavic predicates bearing incrementality prefixes obligatorily occur with overt arguments. This is true even if the base (unprefixed) verb can occur without an overt argument, cf.:

15a. Pih.

drink-1st.sg.aor

‘I drank.’

b. **Izpih** vinoto / ***Izpih**

pref-drink-1st.sg.aor wine-the / **pref-drink-1st.sg.aor**

‘I drank (**up**) the wine / * I drank (**up**).’

¹⁷ Where the aspectual difference may be derived either strictly from conditions on argument interpretation relativized to syntactic configuration, or by assuming that syntactic movement is related to the presence of a higher head whose meaning provides a necessary semantic component of telic interpretations – e.g. an endpoint, result, or measure expression.

The difference between (15a) vs. (15b) can be easily captured within the above proposal, which treats prefix and argument as a syntactic constituent. This is not the case if the prefix is taken to be simply a pluractional marker: The latter view fails to explain why there couldn't be a predicate *izpîh* which, in the absence of a specified argument, is interpreted roughly as *I drank different somethings*.

Second, there is some evidence that the degree of referentiality associated with a nominal denotation determines the availability of a non-telic interpretation for the respective complex predicates. Above, I have demonstrated that Bulgarian predicates containing quantized NPs can receive non-telic readings. The actual pattern is more subtle. Predicates containing referential NPs (e.g. definites, as in the examples above) can receive non-telic interpretations, while predicates containing quantificational NPs typically resist non-telic interpretations, cf.:¹⁸

16a. Pîh vinoto / *povecheto vino / *vsichki vina.
 Drink-1sg-aor wine-the / most-the wine / all wines
 'I drank the wine / *most of the wine / *all wines.'

Izpîh vinoto / povecheto vino / vsichki vina.
Pref-drink wine-the / most-the wine / all wines
 'I drank (**up**) the wine / most of the wine / all wines.'

The data in (16) are reminiscent of an assumption within the Neo-Davidsonian framework pertaining to the scope construal of nominal arguments with respect to the event variable contributed by the verb. The generalization is that referential NPs may or may not be scoped out of the minimal VP, whereas quantificational NPs are necessarily scoped out (Landman 1996). If we assume that determination of scope assignment relies on syntactic movement, the facts in (16) conform to the earlier hypothesis that the distinction between the telic and the non-telic complex predicates in Bulgarian is – in part – a syntactic distinction. Again, the factors that determine scope construal of nominal arguments must be made precise: An interesting line of inquiry to pursue here is the extent of their overlap with the factors that determine the aspectual values of complex predicates.

¹⁸ NPs introduced by numeral, e.g. *three apples*, generally pattern with referential NPs with respect to the availability of non-telic interpretations; however, their distribution in non-telic predicates also appears to rely on some further differences in the semantics of lexical verbs.

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