

Fernando Zúñiga, Peter Arkadiev, and Veronika Hegedűs

14 Applicativizing preverbs in selected European languages

Abstract: This chapter surveys the morphology, syntax, and semantics of applicativizing preverbs in English, German, Hungarian, and the Slavic and Baltic languages, with some comments on their non-applicativizing uses. Applicativizing preverbs may be particles or affixes, are transparently related to adverbs/adpositions with spatial and/or aspectual functions, and introduce a new participant to the clause (usually a direct object, occasionally an oblique argument, rarely an indirect object). The chapter pays special attention to English *out*-verbs and German *be*-verbs, which have semantics of a kind hitherto unattested outside Germanic; it also gives a detailed overview of the semantics of the relatively numerous Slavic and Baltic preverbs.

1 Introduction

The term **PREVERB** as used in Indo-European linguistics denotes a class of preverbal particles or prefixes that form a close semantic unit with their host verb and frequently appear as adverbs or adpositions as well (Booij and Van Kemenade 2003). Such preverbs often have spatial and/or aspectual semantics; this has been extensively explored in the literature on Romance, Germanic, and Slavic. (The authoritative sources on early Indo-European preverbs are Kuryłowicz 1964 and Watkins 1964; see Rousseau 1995, Booij and Van Marle 2003, and references therein for studies covering modern languages, also beyond Indo-European, and Arkadiev 2014, 2015 for a broader perspective.) What has attracted comparatively less attention is the fact that some preverbs have a syntactic effect, either in addition to or instead of the spatial-aspectual meaning: a number of preverbs can alter the verb's argument structure to introduce or promote non-subjects in the clause. (See Zúñiga and Creissels, this volume, for a discussion of the notion of applicativization and an explanation of the terms P-applicative, D-applicative, and X-applicative.) After this introduction, the present chapter surveys the morphology, syntax, and semantics of such applicativizing preverbs in selected languages of Europe, namely English (§ 2), German (§ 3), Slavic and Baltic languages (§ 4), and Hungarian (§ 5).¹ Section 6 closes the chapter summarizing the findings and tentatively

¹ Close parallels are found across Germanic. Specialized studies focusing on preverbs in languages other than the ones outlined here range from numerous (for Dutch; see, e.g., Van der Auwera 1999 and

Acknowledgments: We are grateful to Denis Creissels, Andrew McIntyre, Jurgis Pakerys, Guido Seiler, Sergej Skorwid, Mladen Uhlík, and Björn Wiemer for their valuable comments on earlier versions of this chapter.

framing them in comparative terms, along the lines proposed in Zúñiga and Creissels (this volume).

The Dutch example in (1) illustrates the kind of phenomena at the center of attention here. The intransitive verb *werken* ‘work’ can occur with a direct object when applicativized by a preverb like the particle *uit*:

(1) Dutch²

- a. *Het systeem werk-t langzaam.*
the system work-3SG slow(ly)
‘The system works slowly.’
(<https://www.asus.com/be-nl/support/FAQ/1042398>, 31.12.21)
- b. *Hier kun je ongestoord nieuwe plannen uit-werk-en.*
here can you undisturbed new plans APPL-work-INF
‘Here, you can elaborate new plans undisturbed.’
(<https://www.beleefzaltbommel.nl/winkels/work-zaltbommel>, 29.04.22)

We find close semantic equivalents of Dutch *uitwerken* ‘elaborate, effect’ in the languages of our sample that are also close morphosyntactic equivalents: English *work out*, German *ausarbeiten*, Hungarian *kidolgoz*, and Czech *vypracovat*. (English is the exception here, featuring as it does a postverbal particle; all other languages have preverbal particles or prefixes). The pattern is definitely old: even the classical languages have equivalents (viz. Classical Greek *exergázomai* and Classical Latin *ēlabōrō*). Among the many related phenomena that fall outside the scope of this chapter are those addressed by Jackendoff (1997) in his study of English constructions like *Bill slept the afternoon away* and *Susan worked her head off last night*.

2 English

2.1 Morphology

English particles are postverbal rather than preverbal and characteristically have a spatial and/or aspectual meaning; the particles *out* and *off* occasionally applicativize as well (e.g., in *I worked the instructions out* and *he slept off the flu*). There are cases like

Van Kemenade and Los 2003) through few (for Scandinavian; see, e.g., Gronemeyer 1995) to non-existent (for Yiddish). Parallels are also found in Romance, for instance, French *le coureur est passé devant son concurrent* ‘the runner passed in front of his competitor’ vs. *le coureur a dépassé son concurrent* ‘the runner overtook his competitor’ (Denis Creissels, p.c.).

² Unless otherwise specified, numbered examples come from the authors’ personal knowledge (in case they speak the specific language) or personal documentation (in case they have worked on it but have not yet published the data).

outride, which means both ‘surpass in riding’ and ‘(tackle and) survive, ride out’, but they are infrequent; many *out*-verbs have only one of these kinds of meaning, namely either the one that clearly differs from the meaning of the [V *out*] complex or the one that is closer to it.³

The most productive applicative marker is the verbal prefix *out*-. It can also, albeit less productively, verbalize adjectives (*outsmart*) and nouns (*outnumber*). The few instances where deverbal *out*- is blocked include the verb *have* (e.g., *we have cars* vs. **we outhave them*), some change-of-state verbs (e.g., *the mugs dried* vs. **the mugs outdried the glassware*), and some idiomatic expressions (e.g., *we shot the breeze* vs. **we outshot them*) (Ahn 2022: 446). The prefix *be*- applicativizes some verbs but is no longer productive in present-day English; many *be*-verbs are also either archaic, formal, or informal in standard varieties of the language. This prefix can also occasionally verbalize adjectives (*bedumb*) and nouns (*befriend*).⁴ As in German, in some cases, non-finite forms are in use even where finite verbs are not (*beloved*, *benighted*). The prefix *out*- does not combine with the particle *out* or the prefix *be*-.⁵ Other prefixes, like *down*-, *over*-, and *under*- are quite productive in general but applicativize only occasionally (e.g., in *downplay*, *overcome*, *undergo*).

The prefix *out*- is a spatial or aspectual verbal marker in instances that are mostly archaic or poetic, as in *outburst* ‘burst out’ and *outgo* ‘go out’. More often, however, it functions as a dedicated applicativizer or verbalizer, much as *be*-.

The origin of *out*(-) is OE *ūt* ‘out’ / *ūte* ‘outside’ < PG **ūt* / **utai* < PIE **úd* ‘upwards, away’ (cf. its German cognate *aus* ‘out’ < OHG *ūz*, which can also applicativize in that language; see § 3.2). The English prefix *be*- is cognate with German *be*-; see Section 3.1.

2.2 Syntax

English applicatives are normally optional P-applicatives. *Out*-verbs are invariably transitive, irrespective of their base’s transitivity.⁶ Applicative *be*-verbs can be monotransitive or ditransitive.

The applied phrase (AppP) is a direct object in applicative constructions (ACs) with either *out*-verbs (2) or *be*-verbs (3):

3 See Dehé et al. (2002), Haiden (2006), Dehé (2015), and McIntyre (2015) for overviews of so-called particle/phrasal verbs in Germanic. See Thim (2012) for English preverb+verb constructions and their diachrony.

4 Not only *out*-, *be*-, and other prefixes but also several particles appear with nominal and adjectival bases that do not normally occur as verbs on their own, for instance, in *tone down*, *clock in*, *tail off*, *soldier on*, *pig out*, *ramp up* and *dumb down*, *single out*, *wise up*. See McIntyre (2016) for more details.

5 See Schröder (2011) for an overview of the productivity of verbal prefixes in English.

6 See Ahn (2022) for an analysis of this particular feature in the Chomskyan tradition.

- (2) English
 - a. *Stocks performed better than other investments.* (BC)
 - b. *Stocks **out**performed other investments.* (AC)
- (3) English (b: Peter Russell, *Nine*, 1954)
 - a. *Imagine Achilles barking at a plan of Agamemnon's!* (BC)
 - b. *Imagine Achilles **be**barking a plan of Agamemnon's!* (AC)

Passivized *out*-ACs grant their P's subject status; this is illustrated for *outdo* and *outrun* in (4):

- (4) English
 - a. *He himself was **out**done by Jocelyne.*
(J. Willis, *The Irish Nation*, 1875, p. 105)
 - b. *Not all of the Cops were **outrun**.*
(*Tampa Bay Times*, Florida, September 3, 2005)

Transitive applicative *be*-verbs in passive clauses behave like *out*-verbs: the new P is granted subject status, as in *the relative lack of female doctors was bemoaned*.⁷ Other verbs show some syntactically and lexically conditioned variation. Active ditransitive *begrudge*, for instance, can occur either with the double-object construction (e.g., *they begrudged him his wealth*) or, albeit under more restricted circumstances, with the *to*-construction (e.g. *they begrudged its facilities to a city that. . .*) (Wasow 1997: 84). Note in (5) that either non-Agent-like (i.e., non-Experiencer) participant can be a passive subject, but this is not a simple consequence of the corresponding active syntax; with the *to*-construction, the subject is—as expected—the Theme-like argument (5a); with the double-object construction, however, the subject can be either the Goal-like argument (5b) or the Theme-like argument (5c):

- (5) English
 - a. *They took satisfaction in abusing the advantages that were begrudged to them.*
(*Cumberland Evening Times*, Maryland, January 28, 1952)
 - b. *I was begrudged what I was paid.*
(*Archbold Buckeye*, Ohio, August 8, 2007)
 - c. *Even these precarious occupations were begrudged them.*
(Joseph Strauss, 'A modern Synhedrin', *Westminster Review*, 1914, p. 304)

The prefix *out-* is normally transitivity-increasing, but it can also be re-directing/valency-neutral; (6) shows one example of each type. The marker transitivity-

⁷ Source: McKinstry, Brian. 2008. Are there too many female medical graduates? Yes. *The BMJ* 336(7647): 748.

either intransitive or ambitransitive verbs (*outstay*, *outsit*, *outdrink*) (6a); it also appears on monotransitives and ditransitives when construed with generic/implicit objects in the BC (*outkill*, *outgive*) (6b):

- (6) English (b: Pinker 2012: 119, *The better angels*. . ., Penguin ed.)
- a. *The dictator outstayed several of other leaders.*
 - b. *Southerners do not outkill northerners in homicides carried out during robberies. . .*

When occurring on (di)transitive base verbs, *out-* suppresses any base direct objects in the AC in order to accommodate the applied phrase (e.g., *she killed more people than you* → *she outkilled you*). By contrast, valency-neutral *be-*—found more often in earlier stages of the language—does not normally change clausal syntax (e.g., *he cursed the enemy* → archaic *he becurse the enemy*). The prefix *be-* can also be valency-increasing, as in the alternation illustrated in (3) above.

Out-verbs normally participate in straightforward BC-AC oppositions when they are not deadjectival or denominal; consider (7), for instance, where the relevant constituent is licensed by the expression *longer than* in the BC:

- (7) English
- a. *The guests stayed longer than their hosts.* (BC)
 - b. *The guests outstayed their hosts.* (AC)

By contrast, *be*-verbs seldom show alternations like the one in (8), where a PP in the BC corresponds to an object in the AC:

- (8) English
- a. *An unusual calm fell upon the wetlands.* (BC)
 - b. *An unusual calm befell the wetlands.* (AC)

Even with deverbal *be-*, frequently there is no BC-AC alternation; consider verbs like *behave* ‘act’, *become* ‘befit’, *begive* ‘endow’, for example.

Particles have a comparable effect when they applicativize; with *out*, for instance, the applied phrase is a direct object and the AC (9b) can undergo passivization (9c):

- (9) English
- a. *She is still working on those details.* (BC)
 - b. *She is still working out those details.* (AC)
 - c. *Those details haven’t been worked out yet.*

Note that the valency-increasing effect of spatial/aspectual particles is a special case of a broader phenomenon in Germanic (McIntyre 2007); intransitive *vote* (10a), for instance,

can accommodate a Figure object by adding *out* with a covert or overt Ground (10b), or by adding other particles, like *in* and *off* (and even *up* or *down*) (10c).⁸

(10) English

- a. *She is too young to vote.*
- b. *We voted her out (of office).*
- c. *New Boston voted the measure in as well during their meeting Thursday.*
(<https://kkyr.com/four-day-school-weeks-begin-this-fall-in-four-east-texas-districts>, 29.04.22)

Table 1 below summarizes the syntactic effects of *out-*, *be-*, and *out*.

Table 1: Syntactic effects of three English applicative markers.

| | | <i>out-</i> | <i>be-</i> | <i>out</i> |
|--------------------|-----------|-------------|------------|------------|
| valency-increasing | (1/2 → 2) | ✓ | (✓) | (✓) |
| valency-neutral | (2 → 2) | ✓ | ✓ | × |
| valency-decreasing | (3 → 2) | (✓) | × | × |

2.3 Semantics

Like many other English compound verbs, those of the *out*-V and [V *out*] types often show spatial and aspectual meaning components related to their prefix or particle and do not alter argument structure. When some prefixes or particles applicativize, however, not only do they introduce an argument to the clause, but they also have “a scalar or quantitative reading, rather than a purely locative one” (Bauer et al. 2013: 353).

More precisely, the semantics of ACs headed by *out*-verbs seems to be meaningfully captured by an interpretational cline ranging from two related but distinct poles (Kotowski 2020). With the “comparative” reading, the subject and the applied object engage in an event of the same kind, and the latter is a threshold exceeded by the former. With the “resultative” reading, the applied object is a participant of a sub-event caused by an event in which the subject participates; here, the notion of competition (and therefore of defeat) is prominent. Depending on semantic features of the participants and contextual clues, one of these readings is usually favored. In (11), for instance, the applicative clause *to outsit your neighbors* can be given a comparative interpretation, according to which the implicit subject simply surpasses the object in sitting (i.e., someone sits longer than their neighbors). Alternatively, the resultative interpretation

⁸ See McIntyre (2007) for a discussion of applied Ground objects, as well as for a general discussion of the argument structure of English and German verbs.

regards sitting as a competition in which the object loses out (i.e., some sits longer than their neighbors and thereby the latter are outdone):

(11) English (Kotowski 2020: 63)

The trick is to outsit your neighbors. Lots of hunters get tired and antsy after spending many hours in a stand, and start coming down to the ground by 10 A.M. or so.

Further note that *out*-verbs are monotransitive irrespective of their base's transitivity (see § 2.3), and that the semantic roles of their subjects and objects are not mechanically adopted from their base counterparts as with canonical applicatives. Consider *Atlanta also out-rained Seattle in 1922 and 1923* (Ahn 2022: 459), where both arguments are arguably introduced into the clause by *out*-. By a similar token, both the subject and the object in (12a) are agentive (they are Agents of transitive *sell*), just as both arguments in (12b) are patientive (they are Patients of *sell* in its habitual/potential-passive use).⁹ In both clauses, however, an asymmetrical threshold-/competition-related feature is combined with base agentivity/patientivity in order to arrive at a composite semantic role:

(12) English (Ahn 2022: 457)

- a. *We out-sell all other fruit sellers.*
- b. *Bananas out-sell plums.*

Lastly, note that base verbs show clear actionality-related tendencies (Kotowski 2020): activities (*outrun*) and semelfactives (*outblink*) seem to be much more common than states (*outweigh*) and achievements (*outwin*).

As in German, the semantic effect of *be*-prefixation is heterogeneous. With many verbs (like *befall* in (8) above), *be*- in the AC closely mirrors the spatial and related notions expressed by prepositions like *about*, *across*, *around*, *at*, *by*, *on*, *over*, and *to* in the BC. Interestingly enough, the semantics seem to have included something akin to the “holistic” effect present with German *be*-verbs in the past, namely a feature of spatial expansion, intense action, and/or higher affectedness (see § 3.3).¹⁰ Nowadays, this holds only marginally and occasionally, for verbs like *beset* ‘attack, especially from all sides’, and for some speakers with *belabor* ‘work (hard) on’ and *bedazzle* ‘disarm by dazzling’.

⁹ Interestingly enough, as mentioned in Section 2.1, some change-of-state verbs do not behave like *sell*, which applicativizes in both its transitive and its patientive-intransitive (“middle”) version. For instance, *dry* can be applicativized in its transitive version (*Alun dried silverware better than Colin in the dish-washing competition* vs. *Alun outdried Colin in the dish-washing competition*), but not in its patientive-intransitive (non-causative) version (*the mugs dried* vs. **the mugs outdried the glassware*) (Ahn 2022: 446).

¹⁰ See Beavers (2017) for a discussion of the holistic effect in the so-called locative alternation in English.

2.4 Lookalikes

As mentioned in Section 2.1, English applicative preverbs exist in spaces teeming with lookalikes. Since uncoded polyvalency alternations are quite common in the language, syntactic lookalikes are the norm rather than the exception, and there is a vast literature that addresses them (see Levin and Rappaport Hovav 2005 and references therein). The following examples illustrate three common alternations that often correspond to BC-AC pairs in other languages, namely the benefactive alternation (13a–b), the locative alternation (13c–d), and the conative alternation (13e–f):

- (13) English
- a. *I bought flowers for Bridget.*
 - b. *I bought Bridget flowers.*
 - c. *You sprayed paint on the wall.*
 - d. *You sprayed the wall with paint.*
 - e. *She shot at the sheriff.*
 - f. *She shot the sheriff.*

By contrast, the dative alternation (14a–b) does not normally correspond to BC-AC pairs in languages with applicatives:

- (14) English
- a. *He gave flowers to Claire.*
 - b. *He gave Claire flowers.*

Morphologically, there is no English preverb, either particle or prefix, that is dedicated for, or even predominantly used with, an applicativizing function; all such markers have spatial/aspectual notions as their most usual functional domain. The closest present-day English comes to having something like an applicative marker that has other functions as well (rather than the other way round) is the prefix *out-* with intransitive bases.

3 German

3.1 Morphology

Before discussing applicativizing preverbs, some general remarks on German preverbs are in order. A number of these elements occur only as verb prefixes, like *be-* and *ent-*; they are unstressed and cannot be detached from their host. Other preverbs occur as either particles (sometimes called “separable prefixes” in the literature) or preposi-

tions, like *ab(-)* ‘off, from’ and *aus(-)* ‘out’. Yet other preverbs occur as either prefixes, particles, or prepositions, like *durch(-)* ‘through’ and *um(-)* ‘around’. Verb particles are stressed and appear detached from their host in some forms (e.g., finite synthetic forms, like *es laufen Gerüchte um* ‘rumors are circulating’) but attached to them in others (e.g., nonfinite forms and finite analytic forms that used them, like *es sind Gerüchte umgelaufen* ‘rumors have circulated’). The slot for prefixes is closest to the verb root, while the slots for particles are more peripheral (e.g., *an-zu-be-fehlen* ‘to order, entrust’). Most prefixes and particles are invariable and multifunctional (i.e., they applicativize some verbs but have different functions with others; see § 3.4); the prefix *ent-* changes to *emp-* before *f* in some verbs (*empfangen*, *empfehlen*, *empfinden*) but not in others (*entfallen*, *entfesseln*, *entführen*).

German applicative preverbs can also be classified in three groups. Group I consists of the prefixes *be-*, *er-*, *ver-*, *zer-*, and *ent-*, which only occur as prefixes; (15) illustrates the first of these:

(15) German

- | | | | | | | | |
|----|------------|-------------------------------------|-----------|---------------|-----------------|---------------|------|
| a. | <i>Sie</i> | <i>arbeit-et</i> | <i>an</i> | <i>ihr-em</i> | <i>letzt-en</i> | <i>Roman.</i> | (BC) |
| | she.NOM | work-3SG | at | her-SG.M.DAT | last-SG.M.DAT | novel | |
| b. | <i>Sie</i> | <i>be</i> - <i>arbeit-et</i> | | <i>ihr-en</i> | <i>letzt-en</i> | <i>Roman.</i> | (AC) |
| | she.NOM | APPL-work-3SG | | her-SG.M.ACC | last-SG.M.ACC | novel | |

Both: ‘She is working on her last/latest novel.’

These markers differ regarding their semantics and often also their syntax. As to their occurrence across the lexicon, many verbs can take several of them: *schießen* ‘shoot’, for instance, can be applicativized with any of these markers (*erschießen* ‘shoot dead’, *verschießen* ‘shoot off’, *zerschießen* ‘pierce/destroy through shooting’). Others are slightly more restrictive: *sprühen* ‘spray’ is fine and predictable with *be-* and *ver-* (both ‘spray’, with some nuances; see Stiebels 1996: 98–102) but does not take *er-* or *zer-*. By contrast, auxiliaries like *sein* ‘be’, *werden* ‘become’ and all modal verbs except *dürfen* ‘may’, as well as verbs like *heißen* ‘be called’ and *wissen* ‘know’, cannot take any of these markers.

Group II consists of the prefixes *durch-* ‘through’, *über-* ‘over’, and *um-* ‘around’ (as well as, albeit more marginally, *unter-* ‘under’). Example (16) illustrates *um-*:

(16) German

- | | | | | | | | |
|----|--------------|-----------------|---------------------------------|-----------|--------------|------------------|------|
| a. | <i>Der</i> | <i>Satellit</i> | <i>läuft</i> | <i>um</i> | <i>den</i> | <i>Planeten.</i> | (BC) |
| | ART.SG.M.NOM | satellite | run.3SG | around | ART.SG.M.ACC | planet.ACC | |
| b. | <i>Der</i> | <i>Satellit</i> | <i>um</i> - <i>läuft</i> | | <i>den</i> | <i>Planeten.</i> | (AC) |
| | ART.SG.M.NOM | satellite | APPL-run.3SG | | ART.SG.M.ACC | planet.ACC | |

Both: ‘The satellite orbits the planet.’

These elements can also occur as prepositions (as in [16a]) or as particles (as in the example given at the beginning of this section, *umlaufen* ‘circulate’, different from *umláufen* ‘orbit’ in [16b]). Note that the productive applicativizing prefixes in Baltic-Slavic and some applicativizing particles in Hungarian have roughly the same meanings; see Sections 4.1 and 5.1, respectively. As with those in Group I, these markers appear in lexically conditioned, unpredictable patterns. *Laufen* ‘run’, for instance, is applicativized by *durch-* ‘(run through)’ and *um-* ‘(run around)’, but not by *über-* ‘(overflow; defect)’. By contrast, *denken* ‘think’ is applicativized by *durch-* ‘(think through)’, *über-* ‘(rethink, reconsider)’, and *um-* (ambitransitive ‘rethink’).

Group III consists of particles that have spatial-aspectual meanings with many verbs in most contexts but can occasionally applicativize, like *ab(-)* ‘off, from’ and *an(-)* ‘at, in’, as well as like *aus(-)* ‘out’ and *auf(-)* ‘up, on’ in (17).¹¹ Note also the subtle semantic variation in such cases:

(17) German

- a. *Wir arbeit-en an unser-em neu-en Plan.* (BC)
 we.NOM work-1PL at our-SG.M.DAT new-SG.M.DAT plan
 ‘We are working on our new plan.’
- b. *Wir arbeit-en unser-en neu-en Plan aus.* (AC)
 we.NOM work-1PL our-SG.M.ACC new-SG.M.ACC plan APPL
 ‘We are working out / elaborating our new plan.’
- c. *Wir arbeit-en die Vergangenheit auf.* (AC)
 we.NOM work-1PL ART.SG.F.ACC past APPL
 ‘We are processing the past.’

For an overview of German applicativizing preverbs, see Table 2.

Table 2: Main German applicativizing preverbs.

| Group I | Group II | Group III |
|-------------|----------------|-----------|
| <i>be-</i> | <i>durch-</i> | ‘through’ |
| <i>er-</i> | <i>über-</i> | ‘over’ |
| <i>ver-</i> | <i>um-</i> | ‘around’ |
| <i>zer-</i> | <i>(unter-</i> | ‘under’) |
| <i>ent-</i> | | ... |

The etymons of Group I markers are as follows: *be-* < OHG *bi-* < PG **bi-* ‘on, at, by’; *er-* is originally spatial in origin, namely OHG *ar-/ir-* < PG **uz-* ‘out, up’; *ver-* < OHG *far-/fir-* <

¹¹ See Stiebels (1996) for a detailed discussion of such particles. See also Cysouw (2023: 362–264) for a brief overview of applicativizing prefixes and particles.

PG **fra-* ‘in front of’, **firi-* ‘through, across’, **furi-* ‘for, in front’; *zer-* possibly comes from OHG. *zar-/zur-* < *ze-ar-/ze-ir-* < PG **twiz-* ‘in two, apart’; *ent-* < OHG *ant-* < PG **anda-/andi-* ‘against, un-’ (apparently originally an allative of the PIE noun **h₂énts* ‘face’). Group II markers originate in Proto-Germanic prepositions/adverbs, namely *durch* < PG **þurhw* ‘through’ (apparently originally a PIE verbal compound of **terh₂* ‘cross’ and **h₃ek^w* ‘see’), *über* < PG **ubiri* < PIE **upér(i)* ‘over, above’, and *um* < PG **umbi* < PIE **h₂mb^{hi}* ‘around’ (apparently originally an instrumental of **h₂énts* ‘face’) (see Koonen 2013 for the PG and PIE forms). Group III markers also originate in Proto-Germanic prepositions/adverbs.

Applicative prefixes cannot co-occur, either with each other or with themselves. The markers or their lookalikes can occur after some verbal particles, for instance, in *mit-be-kommen* ‘notice’, *an-be-halten* ‘keep (sthg.) on’, *auf-er-legen* ‘impose’, and *an-er-kennen* ‘acknowledge’.¹² Verbs that have prefixes before the particles are actually denominal (e.g., *be-an-standen* ‘complain about’ < *Anstand* ‘objection’, *be-auf-tra-gen* ‘mandate’ < *Auftrag* ‘assignment’, *ver-an-lagen* ‘assess’ < *Anlage* ‘investment, asset’).

German applicative prefixes are not restricted by specific tense-aspect-mood values, but some markers often work as denominal verbalizers, in which case many lexemes appear as past participles only (e.g., *beblümt* ‘flowery, flowered’; *‘beblumen* ‘flower [v.]’ is obsolete). In other such cases, finite forms do exist, but nominalized ones are much more frequently used (e.g., *behausen* ‘house [v.]’ vs. *Behausung* ‘abode, dwelling’). Unlike their Slavic, Baltic, and Hungarian counterparts, the aspectual yield of German applicative particles seems to be typically telicizing, rather than perfectivizing (see also §§ 4.1 and 5.1).

3.2 Syntax

3.2.1 *Be*-applicatives

The syntax of the most common *be*-applicatives is schematically summarized in Table 3.¹³

¹² In most German varieties, *an-* is a particle and *er-* is a prefix in *anerkennen*. Nevertheless, in some southwestern varieties (e.g., Swiss High German, Swiss German, and Liechtensteiner German), the string *aner-* is treated as a complex prefix (<http://mediawiki.ids-mannheim.de/VarGra/index.php/Anerkennen>).

¹³ We are glossing over some uncommon patterns here, like the one found with *lehren* ‘teach (sthg. to sbdy.)’ (which takes two accusative-marked objects) vs. *belehren* ‘instruct, teach (sbdy.)’ (which only takes one), or like those where the oblique constituent in the AC takes the genitive instead of a preposition, as in (28).

Table 3: Syntax of *be*-applicatives.

| Type | Valency | BC | AC |
|------|---------|--|---|
| A | 1 → 2 | SBJ V [PREP NP _i] | SBJ <i>be</i> -V DOB _j |
| B | 1+ → 2 | SBJ V IOB _j [PREP NP _i] | SBJ <i>be</i> -V DOB _j [PREP NP _i] |
| C | 2 → 2 | SBJ V DOB _j [PREP NP _i] | SBJ <i>be</i> -V DOB _j [PREP NP _i] |
| D | 3 → 2 | SBJ V IOB _j DOB _j | SBJ <i>be</i> -V DOB _j [PREP NP _i] |

Cases where the AppP is semantically predictable show syntactic variation. The most common instances are those where intransitives are transitivized with *be*-, either as in (15) and in (18), where the non-agentive participant is a prepositional phrase in the BC (Type A; this also corresponds to the default Group-II cases), or as in (19), where it is an indirect object (Type B).

(18) German

- a. *Die Regierung kämpf-te gegen das Parlament.*
 ART.SG.F.NOM government fight-PST[3SG] against ART.SG.N.ACC parliament
- b. *Die Regierung be-kämpf-te das Parlament.*
 ART.SG.F.NOM government APPL-fight-PST[3SG] ART.SG.N.ACC parliament
- Both: 'The government fought against parliament.'

(19) German

- a. *Ein-e Katastrophe droh-te diesen Wäldern.*
 ART-SG.F.NOM catastrophe threaten-PST[3SG] these.DAT forests.DAT
- b. *Ein-e Katastrophe be-droh-te diese Wälder.*
 ART-SG.F.NOM catastrophe APPL-threaten-PST[3SG] these[ACC] forests[ACC]
- Both: 'A catastrophe threatened these forests.'

Cases broadly corresponding to the so-called locative-alternation are also numerous and come in three subtypes. First, some (few) verbs like *stopfen* 'stuff' can only participate in an uncoded alternation:

(20) German (Brinkmann 1995: 76)

- a. *Sie (*be-)stopf-te-n Wachs in das Loch.*
 they.NOM APPL-stuff-PST-3PL wax into ART.SG.N.ACC hole
 'They stuffed wax into the hole.'
- b. *Sie (*be-)stopf-te-n das Loch mit Wachs.*
 they.NOM APPL-stuff-PST-3PL ART.SG.N.ACC hole with wax
 'They stuffed the hole with wax.'

Some (also relatively few) verbs like *laden* 'load' participate in either an uncoded or a coded alternation:

(21) German

- a. *Sie lud das Heu*
 she.NOM load.PST[3SG] ART.SG.N.ACC hay
(auf den Wagen).
 on/onto ART.SG.M.ACC wagon
 'She loaded the hay onto the wagon.'
- b. *Sie (be-)lud den Wagen*
 she.NOM APPL-load.PST[3SG] ART.SG.M.ACC wagon
(mit dem Heu).
 with ART.SG.N.DAT hay
 'She loaded the wagon with the hay.'

Nevertheless, it is more common for locative verbs to participate only in a coded alternation (Type C in Table 3); consider the following example with *sprühen* 'spray':

(22) German

- a. *Er sprüh-te Wasser auf die Pflanzen.* (BC)
 he.NOM spray-PST[3SG] water on ART.PL.ACC plants
 'He sprayed water on the plants.'
- b. *Er be-sprüh-te die Pflanzen mit Wasser.* (AC)
 he.NOM APPL-spray-PST[3SG] ART.PL.ACC plants with water
 'He sprayed the plants with water.'

Cases where a three-argument clause is rearranged by applicativization are less common but do exist; in (23), the BC has a direct and an indirect object, the AC has a direct and a prepositional object, and the non-agentive referents are swapped vis-à-vis the BC (Type D). Due to a special reading of the HOLISM effect (viz. the "MANY effect"; see § 3.3), (23a) is comparatively neutral while (23b) means that probably many flowers were given:

(23) German

- a. *Er schenk-te ihr diese Blumen.* (BC)
 he.NOM gift-PST[3SG] she.DAT these[ACC] flowers
- b. *Er be-schenk-te sie mit diesen Blumen.* (AC)
 he.NOM APPL-gift-PST[3SG] she.ACC with these.DAT flowers
- Both: 'He gave her these flowers as a gift.'

Cases where variation is more considerable (and that often concern semantic unpredictability) include those with transitive verbs in the unmarked construction (see § 3.4).

3.2.2 *Er*-applicatives

The syntax of *er*-applicatives is summarized in Table 4.

Table 4: Syntax of *er*-applicatives.

| Type | Valency | BC | | | AC | | |
|------|---------|-----|---|---|---------------------|--------------|---|
| A | 1 → 2 | SBJ | V | [PREP NP _i] | SBJ (<i>sich</i>) | <i>er</i> -V | DOBJ _i |
| B | 2 → 2 | SBJ | V | DOBJ _i [PREP NP _j] | SBJ | <i>er</i> -V | DOBJ _j [PREP NP _i] |
| C | 3 → 2 | SBJ | V | IOBJ _i DOBJ _j | SBJ | <i>er</i> -V | DOBJ _j |

Er-transitivizes intransitive *kämpfen* ‘fight’ (24) (Type A) but rearranges the clause eliminating any indirect objects with ditransitive *geben* ‘give’ (25) (Type C):

(24) German

- a. *Die Regierung kämpf-te um den Sieg.* (BC)
 ART.SG.F.NOM government fight-PST[3SG] about ART.SG.M.ACC victory
 ‘The government fought for victory.’
- b. *Die Regierung er-kämpf-te den Sieg.* (AC)
 ART.SG.F.NOM government APPL-fight-PST[3SG] ART.SG.M.ACC victory
 ‘The government eked out victory.’

(25) German

- a. *Sie gab dem Polizist-en keinen Beweis seine-r Schuld.*
 she.NOM give.PST ART.SG.M.DAT policeman-DAT no.ACC proof
 his-GEN guilt
 ‘She gave no proof of his guilt to the policeman.’
- b. *Die Untersuchung er-gab keinen Beweis seine-r Schuld.*
 ART.SG.F.NOM investigation ER-give.PST no.ACC proof his-GEN guilt
 ‘The investigation found no evidence of his guilt.’

With *fragen* ‘ask’, however, the syntactic effect of *er*-prefixation corresponds to that of locative-alternation *be*-verbs, that is, the direct object and the prepositional object swap places (Type B):

(26) German

- a. *Sie frag-te ihn nach dem Weg.* (BC)
 she.NOM ask-PST[3SG] he.ACC after ART.SG.M.DAT way
 ‘She asked him about the way.’

- b. *Sie er-frag-te den Weg von ihm.* (AC)
 she.NOM APPL-ask-PST[3SG] ART.SG.M.ACC way of he.DAT
 ‘She inquired (information about) the way of him.’

3.2.3 *Ent*-applicatives

Finally consider one possible effect of *ent*-prefixation. Here, the AppP is an indirect, rather than a direct, object;¹⁴ it is relatively easy to find intransitive verb bases (like *steigen* ‘climb’) that show such a pattern:

(27) German (Stiebels 1996: 110)

- a. *Sie steigt aus dem Auto.*
 she.NOM climb-3SG out ART.SG.N.DAT car
 b. *Sie ent-steigt dem Auto.*
 she.NOM APPL-climb-3SG ART.SG.N.DAT car
 Both: ‘She gets out of the car.’

We have not found any instances of this D-applicative with transitive bases; consider, however, Examples (33)–(34) in Section 3.4, both based on transitive base verbs.

3.2.4 Summary

Most German applicatives are optional P-applicatives; *ent*-derivation yields optional D-applicatives. Table 5 below summarizes the syntactic effects of *be*-, *er*-, and *ent*-.

Table 5: Selected syntactic effects of three German preverbs.

| | | <i>be</i> - | <i>er</i> - | <i>ent</i> - |
|--------------------|---------|-------------|-------------|--------------|
| valency-increasing | (1 → 2) | ✓ | ✓ | ✓ (IOBJ) |
| valency-neutral | (2 → 2) | ✗ | ✓ | ✗ |
| valency-decreasing | (3 → 2) | ✓ | ✓ | ✗ |

¹⁴ Note in passing that the prefix *unter*-, which applicativizes only occasionally, can also introduce AppPs as indirect objects / D’s (e.g., *liegen* ‘lie’ → *unterliegen* ‘be defeated by, be subject to’, *stehen* ‘stand’ → *unterstehen* ‘be subordinate to’).

3.3 Semantics

Cross-linguistically common applied objects are Instruments and Comitatives on the one hand, and Beneficiaries and Locations on the other. In German ACs, only the latter group is found, and the picture is much more complicated than what such a simple semantic-role-based account can provide.

Semantically, the applied object found with Group-II prefixes and Group-III particles is usually transparently related to whatever spatial meaning the homophonous prepositions or particles have. Applied objects of verbs with Group-I prefixes show a more varied picture—except *ent-*, which has a separative meaning. Depending on the verb it applicativizes, *er-* introduces notions like killing, as in *schießen (auf)* ‘shoot (at)’ vs. *erschießen* ‘shoot dead’, or intended possession, as in *arbeiten* ‘work’ vs. *erarbeiten* ‘work (sthg.) out’. Similarly, *ver-* conveys resultativity, usually with some intensification (*urteilen* ‘deliver judgment’ vs. *verurteilen* ‘convict, condemn’), or damage/destruction (*pinkeln* ‘pee’ vs. *verpinkeln* ‘ruin by peeing’). *Zer-* typically also denotes, among other things, damage/destruction (*treten* ‘tread’ vs. *zertreten* ‘crush underfoot’).

Applied objects found with German *be*-verbs bear a fairly complex semantic relationship to their predicate. With locative base verbs—i.e., those that take Goal direct objects—the *be*-applicative corresponds to *auf* ‘on’ or *an* ‘at’, as in *werfen (auf)* ‘throw (on)’ vs. *bewerfen* ‘throw on/to’; with intransitive base verbs in particular, it can also correspond to *in* ‘in’ (cf. *treten* ‘tread’ vs. *betreten* ‘enter’). Notably, while such verbs denote a variety of spatial relationships in base clauses, depending on the specific adposition used and on lexical context, *be*-verbs denote relationships of contact with the applied phrase and usually exclude the interior of entities in applicative clauses, that is, the so-called “topological restriction” between Figure and Ground (Brinkmann 1995: 78–82). Some, but not all, locative verbs have *be*-forms; Brinkmann also points out (p. 86) that Goals must not be containers and subjects must be Agents in order for applicative clauses to be admissible.¹⁵

Moreover, Brinkmann (1995: 84–86) distinguishes six semantic classes of *be*-verbs in addition to the locative class just outlined, which are heterogeneous as to the semantic role of the non-agentive participant in the base clause. Four of these classes are rather transparent and systematic: material manipulation (e.g., *arbeiten [an]* ‘work [on]’ vs. *bearbeiten* ‘work on, edit’), active perception (e.g., *tasten [nach]* ‘feel [for]’ vs. *betasten* ‘examine by touching repeatedly’), emotion (e.g., *staunen [über]* ‘be amazed [at]’ vs. *bestaunen* ‘contemplate in amazement’), and speech (e.g., *sprechen [über]* ‘talk [about]’ vs. *besprechen* ‘talk about, discuss’). The other two classes are more idiosyncratic: Recipient/Beneficiary-verbs include not only those like *schenken* ‘present, gift’

¹⁵ Chapter 6 of Brinkmann’s study deals with the details of the restrictions on which verbs participate in the so-called locative alternation in German, which include, but are not limited to, the topological restriction. See Stiebels (1996) for details on non-*be*-applicatives in German and their semantic characteristics.

and *erben* ‘inherit’ but also those like *kochen* ‘cook’ (*bekochen* ranges from simple ‘cook for’ to ‘provide/support via cooking’); the last class includes some privative verbs (e.g., *rauben* ‘steal’ vs. *berauben* ‘rob, steal from’). Example (28) illustrates a pair with these latter verbs:

(28) German

- a. *Sie raub-te ihm sein-e Ersparnisse.* (BC)
 she.NOM steal-PST [3SG] he.DAT his-PL.ACC savings
 ‘She stole his life savings from him.’
- b. *Sie **be**-raub-te ihn (sein-er Ersparnisse).* (AC)
 she.NOM APPL-steal-PST[3SG] he.ACC his-PL.GEN savings
 ‘She robbed him (of his life savings).’

Besides this considerable semantic range, the topological restriction with locative verbs mentioned above shows an important but difficult-to-capture semantic parallel with the other verb classes. Brinkmann states that “these verbs usually imply a holistic interpretation of the goal, and the speaker can express the theme in an optional *with*-phrase” (1995: 86). Nevertheless, Michaelis and Ruppenhofer (2001) question some fundamental tenets of Brinkmann’s account and propose semantic constraints that originate differently, that is, not in general principles and the verbal input, but in the *be*-prefixation rule itself. This study advances an analysis in terms of a prototype and several extensions thereof (which also receives support from the historical evidence, pp. 89–92). With the prototype, the base object is a Theme that covers a surface expressed as the applied object (*schmieren* vs. *beschmieren*, both ‘smear’); with the extensions, this Theme-covers-surface schema is extended and superimposed to the domains of perception (*riechen* vs. *beriechen*, both ‘smell’), communication and discourse (*sprechen* ‘speak’ vs. *besprechen* ‘discuss’), and the others of Brinkmann’s non-locative classes. Examples (29)–(31) illustrate the case frames of (*be*)*schmieren*, (*be*)*riechen*, and (*be*)*sprechen*, respectively:

(29) German

- a. *Er schmier-te Butter auf-s Brot.* (BC)
 he.NOM smear-PST[3SG] butter on-ART.SG.N.ACC bread
 ‘He smeared butter on the bread.’
- b. *Er **be**-schmier-te das Brot mit Butter.* (AC)
 he.NOM APPL-smear-PST[3SG] ART.SG.N.ACC bread with butter
 ‘He smeared the bread with butter.’

(30) German

- a. *Der Hund roch an mir.* (BC)
 ART.SG.M.NOM dog smell.PST on 1SG.DAT

- b. *Der Hund be-roch mich.* (AC)
 ART.SG.M.NOM dog APPL-smell.PST 1SG.ACC
 Both: ‘The dog sniffed at me.’¹⁶

(31) German

- a. *Wir sprach-en über die Lokalpolitik.* (BC)
 we.NOM speak.PST-1PL about ART.SG.F.ACC local.politics
 ‘We spoke about local politics.’
- b. *Wir be-sprach-en die Lokalpolitik.* (AC)
 we.NOM APPL-speak.PST-1PL ART.SG.F.ACC local.politics
 ‘We discussed local politics.’

Note that, with extensions, the notion of coverage (i.e., the “HOLISM effect”) typically turns into saturation and affectedness (*wohnen* ‘dwell’ vs. *bewohnen* ‘inhabit’) or repetition and intensification (*siegen* ‘win’ vs. *besiegen* ‘defeat’).¹⁷

3.4 Lookalikes

Regarding syntactic lookalikes, German differs markedly from English in that labile verbs like *laden* ‘load’ (see Example [21] above for the relevant case frames) and *stopfen* ‘stuff’ do exist but constitute a small class, which makes polyvalency alternations like the ones illustrated in (20)–(21) above certainly notable precisely because they are not the typical case. German does have regular and frequent uncoded alternations, however; as in Slavic-Baltic and Hungarian, dative-marked NPs can be accommodated in clauses headed by identical predicates quite flexibly, in order to express a wide variety of extra-thematic participants, including Beneficiaries/Maleficiaries, Viewpoint Holders, etc. (cf. §§ 4.4 and 5.4).¹⁸

Regarding morphological lookalikes, German shows a plethora of important phenomena. First, *applicativa tantum* are numerous, especially with denominal and deadjectival verbs built with Group-I prefixes, for instance, *verstauben* ‘get dusty, dust (tr.)’ (from *Staub* ‘dust [n.]’) and *berichtigen* ‘correct (v.), rectify’ (from *richtig* ‘correct [adj.], right’).

¹⁶ The underived labile verb *riechen* ‘smell’ is unusual in that it can be A- or P-labile; it also allows a direct object (*der Hund roch mich* ‘the dog smelled me’ contrasts with (30b) only regarding semantics).

¹⁷ Along similar lines, Dewell (2015) proposes a Construction-Grammar account of German preverbs in general. In his view, German applied direct objects denote a “route-path” specified by the corresponding adposition (if any), either concrete (with locative verbs) or abstract (with other verbs). While applicative particles would then lead to a sequential reading of that route-path, paying attention to its successive locations, applicative prefixes would lead to a synoptic/holistic reading, focusing on a whole stable setting whose part that route-path is (Dewell 2015: 313).

¹⁸ See Cysouw (2023: 98–100) and references therein for an overview of such clauses.

Second, not only valency-neutrality but also broad syntax-neutrality with prefixes from Group I is also quite common. Consider, for instance, *fragen* ‘ask’ vs. *befragen* ‘question, interview’ in (32). The underived verb can occur with or without a direct object (32a); the derived verb normally occurs with a direct object corresponding to the same referent, but the main effect of prefixation is fundamentally semantic, not syntactic (32b)—not unlike what occurs with some Bantu applicative lookalikes (see Pacchiarotti, this volume):

(32) German

- a. *Er frag-te (sie) nach dem Weg.*
 he.NOM ask-PST[3SG] she.ACC after ART.SG.M.DAT way
 ‘He asked (her) about the way.’
- b. *Er be-frag-te sie nach dem Weg.*
 he.NOM INTENS-ask-PST she.ACC after ART.SG.M.DAT way
 ‘He asked her about the way.’

A particularly productive pattern consists in *ver*-verbs that take the middle marker *sich*;¹⁹ such expressions denote a faulty action (*laufen* ‘walk’ vs. *sich verlaufen* ‘get lost’). Lastly, there are many cases where *be-*, *er-*, *ver-*, and *zer-* have a purely semantic yield (occasionally idiosyncratic and often also aspectual, i.e. broadly telicizing; e.g., *schließen* ‘shut’ vs. *erschließen* ‘deduce, unlock, open up’), as well as all instances where *ent-* is simply a reversive prefix (*decken* ‘cover’ vs. *entdecken* ‘discover’).

Ent-verbs based on transitive predicates are not applicatives. Consider the following example with *ziehen* ‘draw, pull’—here in a coded alternation of the equipollent marking subtype (viz. *wegziehen*, with the particle *weg*, vs. *entziehen*) rather than *bona fide* applicativization:

(33) German

- a. *Sie zog ihr-e Hand von ihm weg.*
 she.NOM pull.PST[3SG] her-SG.F.ACC hand of he.DAT away
- b. *Sie ent-zog ihm ihr-e Hand.*
 she.NOM ENT-pull.PST[3SG] he.DAT her-SG.F.ACC hand
- Both: ‘She withdrew her hand from him.’

Other “transitive” pairs like *erben* ‘inherit’ vs. *enterben* ‘disinherit’ show a direct object in both clauses, but that object’s semantic role is altered (as in the English equivalents), and the oblique participant disappears from the clause headed by the derived verb:

¹⁹ An erstwhile accusative-marked reflexive, *sich* is nowadays used in reflexive (*sich fragen* ‘ask oneself’), reciprocal (*sich treffen* ‘meet’), anticausative (*sich öffnen* ‘open’), potential passive (*sich lesen* ‘[can] be read’), and other functions.

(34) German

- a. *Er erb-te ein Haus (von sein-em Großvater).*
 he.NOM inherit-PST[3SG] ART.SG.N.ACC house of his-SG.M.DAT grandfather
 ‘He inherited a house (from his grandfather).’
- b. *Sein Großvater ent-erb-te ihn.*
 his[SG.M.NOM] grandfather ENT-inherit-PST[3SG] he.ACC
 ‘His grandfather disinherited him.’

Finally, there is at least one instance of the causative-applicative polysemy common in other languages (Zúñiga and Kittilä 2019: Ch. 8.2.1; Bahrt 2021: Ch. 4.3.1): *leben* ‘live’ vs. *beleben* ‘quicken, stimulate, enliven’.

4 Slavic and Baltic

4.1 Morphology

There are about twenty verbal prefixes (preverbs) in Slavic languages and about a dozen in Baltic. None of them has applicativization as its only or primary function, their ability to modify the base verb’s argument structure and introduce arguments being a consequence of their origin as spatial modifiers and further development into aktionsart markers and perfectivizers. (For a general overview of Slavic, see Oertle 2016, Janda 2020 and references therein; for Baltic, the most comprehensive overview to date is still Endzelīns 1971[1907].) Most prefixes in both branches have an obvious formal and functional relation to prepositions and/or spatial adverbs (see again Oertle 2016 for a general and comparative overview of Slavic and Petit 2011 for Baltic) and both originate from adverbial or nominal roots with locational meanings, often with cognates across Indo-European. Table 6 lists the most common preverbs of both branches with their basic meanings.

Table 6: Common preverbs in Slavic and Baltic.

| Slavic (represented by Russian) | Baltic |
|-------------------------------------|--|
| <i>do-</i> ‘until’; to completion | Latg. + Lith., Latv. dialectal <i>da</i> - ²⁰ |
| <i>iz-</i> ‘out of’ | Lith. <i>iš-</i> , Latv. <i>iz-</i> ‘out of’ |
| <i>na-</i> ‘on top’; large quantity | Lith. <i>nu-</i> , Latv. <i>no-</i> ‘from top’ |
| <i>o(b)-</i> ‘around’ | <i>ap-</i> ‘around’; partly |
| <i>ot-</i> ‘away’ | <i>at-</i> ‘towards’; in response |

²⁰ Possibly a borrowing from Slavic.

Table 6 (continued)

| Slavic (represented by Russian) | Baltic |
|--|---|
| <i>pre-/pere-</i> ‘across’; excess, repetition, distributivity | Lith. <i>par-</i> ‘home’, to the ground, Latv. <i>pār-</i> ‘across, home’ |
| <i>po-</i> surface; temporal boundedness | Lith. <i>per-</i> ‘across’; excess, repetition |
| <i>pod-</i> ‘under’ | <i>pa-</i> ‘under’; temporal boundedness |
| <i>pri-</i> ‘near’ | Lith. <i>pri-</i> , Latv. <i>pie-</i> ‘near’ |
| <i>pro-</i> ‘through’ | Lith. <i>pra-</i> ‘through’ |
| <i>raz-</i> ‘apart’ | |
| <i>s-</i> ‘together’; from a surface | Lith. <i>su-</i> , Latv. <i>sā-</i> ‘together’ |
| <i>u-</i> ‘away’ | |
| <i>v-</i> ‘into’ | Lith. <i>j-</i> , Latv. <i>ie-</i> ‘into’ |
| <i>vy-</i> ‘out’ | |
| <i>v(o)z-</i> ‘up’ | Lith. <i>už-</i> ‘behind; up’, Latv. <i>uz-</i> ‘up’ |
| <i>za-</i> ‘behind’; inceptive | Latv. <i>aiz-</i> ‘behind’ |

Although most of the Baltic and Slavic preverbs can function as applicatives, at least occasionally, only for a subset of them are the applicative uses prominent and productive. Those are, in particular, Slavic *iz-*, Baltic *iš-/iz-*, Slavic *vy-*, Slavic *o(b)-*, Baltic *ap-*, Slavic *pre-/pere-*, Baltic *per-*, Baltic *pri-/pie-*, Slavic *pro-*, Lithuanian *pra-* and Slavic *za-*, Baltic *už-/uz-*. (Semantically, these correspond to the Group-II applicativizing prefixes in German and to some of the applicativizing particles in Hungarian; see §§ 3.1 and 5.1, respectively.) Each of these preverbs is fairly polysemous and introduces arguments with a variety of semantic roles. Besides that, there is a number of more specialized applicative uses of preverbs occurring in individual languages or sub-branches (e.g., *nad-* ‘surpass’ in South Slavic, see § 4.3).

Preverbs do not show much allomorphy and most of it is due to (morpho)phonologically conditioned sandhi. The general rule (apart from some lexicalized exceptions) is that prefixed verbs inflect exactly like their simplex counterparts. A notable exception to this consists in the reflexive verbs in Lithuanian, which attach the reflexive affix at the right edge of the word when unprefixed (e.g., *juokti-s* ‘laugh’) and immediately before the root when prefixed (e.g., *pra-si-juokti* ‘burst into laughter’); this rule is sensitive to the presence of any prefix regardless of its function. Another and more important morphological complication is due to the fact that prefixes typically perfectivize verbs, which affects the range of contexts they occur in and partly also their paradigms (on this, see e.g., Wiemer and Seržant 2017 and references therein). Thus, in North Slavic, imperfective verbs (including the vast majority of simplex verbs) have synthetic present and past tenses and a periphrastic future, while perfective verbs (mostly formed via prefixation) have a synthetic future (formally identical to the present) and past tenses and do not form periphrastic futures, see Table 7.

Table 7: Tense paradigms of simplex (imperfective) and prefixed (perfective) verbs in Polish (Swan 2002: 270).

| | Imperfective | Perfective |
|---------|--|---|
| Past | <i>писа́л</i> em ‘I was writing, I wrote’ | <i>написа́л</i> em ‘I wrote (to the end)’ |
| Present | <i>пи́шет</i> ‘I am writing, I write’ | — |
| Future | <i>бе́дет писа́т</i> ‘I will write, I will be writing’ | <i>напи́шет</i> ‘I will write (to the end)’ |

In South Slavic and Baltic, the paradigms of simplex and prefixed verbs are more symmetrical. Besides that, since prefixed perfective verbs are not allowed in durative/progressive contexts, and, at least in the eastern Slavic languages, in most habitual contexts as well, in order to express the lexical content of a prefixed verb in imperfective contexts, the so-called secondary imperfective is usually productively derived by suffixation, see (35) and (36).²¹

(35) Russian

rabotat ‘work’ (IPFV) → *za-rabotat* ‘earn’ (PFV) → *za-rabat-yva-t* ‘earn’ (IPFV)

(36) Lithuanian

bėgti ‘run’ (IPFV) → *per-bėgti* ‘run across’ (PFV) → *per-bėg-inė-ti* ‘run across’ (IPFV)

4.2 Syntax

Preverbs in Slavic and Baltic mainly function as either X-applicatives or P-applicatives; D-applicatives are rare. X-applicatives involve the spatial meanings of preverbs in combination with base verbs not denoting displacement. Such preverbs introduce arguments expressing the landmark of real or metaphorical motion, which are normally excluded with simplex verbs, see (37) and (38).

(37) Lithuanian (CCL)

puslap-į *į* *Latvij-os* *oper-os* *istorij-ą*
 page-SG.ACC in Latvia-SG.GEN opera-SG.GEN history-SG.ACC
į-raši-au.
 APPL-write.PST-1SG
 ‘I added (lit. wrote-in) a page into the history of Latvian opera.’

²¹ On the multiple functions of Slavic aspects and their inter-Slavic variation, see, for instance, Dickey (2000) and Fortuin and Kamphuis (2015). For a broader picture including Baltic, see Arkadiev (2014, 2015).

(38) Russian (Biskup 2017: 21)

- a. *On mērz (*v ajsberg).*
 3[SG.M.NOM] freeze[PST.SG.M] into iceberg
 ‘He was cold (*in an iceberg).’
- b. *On v-mērz v ajsberg.*
 3[SG.M.NOM] APPL-freeze[PST.SG.M] in iceberg
 ‘He froze into an iceberg.’

A case of X-applicative with a non-spatial meaning is the Slavic construction consisting of the preverb *do-* and the reflexive/middle marker (which is a suffix in East Slavic and an enclitic elsewhere), one of whose meanings is the acquisition of an object or property (often metaphorical, see Oertle 2016: 143–144). In Russian the object is usually expressed in a prepositional phrase (39), but in Polish and some other languages (see, e.g., Richardson 2007: 81–83) the bare genitive is possible (40) (accusative is ruled out for reflexive verbs).

(39) Russian (RNC)

- Ja ne mog-u do n-eě do-kriča-t'-sja.*
 1SG.NOM NEG can-PRS.1SG till 3-SG.F.GEN APPL-shout-INF-RFL
 ‘I can’t get her attention by shouting (because she cannot hear me).’

(40) Polish (Przybylska 2006: 62)

- Do-służy-t=się stopni-a pułkownik-a.*
 APPL-serve-PST[SG.M]=RFL rank-SG.GEN colonel-SG.GEN
 ‘He rose (lit. served) to the rank of colonel.’

P-applicatives predominantly show various non-spatial meanings (to be discussed in greater detail in § 4.3). With intransitive base verbs, such preverbs can either add a new argument expressed as a direct object, (41)–(42), or promote an indirect or oblique object to direct object status, (43)–(44).

(41) Bulgarian

- a. *Măž-ăt rabot-i.*
 man[SG]-DEF.SG.M work-PRS.3SG
 ‘The man works.’
- b. *Njama măž, koj-to da ja nad-rabot-i.*
 NEG.exist man[SG] what-REL SBJV 3SG.F.ACC APPL-work-PRS.3
 ‘No man can overwork her.’²²

²² Source: <http://old.segabg.com/article.php?id=221116>, accessed 7 November 2021.

(42) Lithuanian

- a. *Aš aug-au.*
1SG.NOM grow-PST.1SG
'I was growing.'
- b. *Aš iš-aug-au uniform-os keln-es.*
1SG.NOM APPL-grow-PST.1SG uniform-SG.GEN trousers-PL.ACC
'I outgrew the uniform's trousers.' (CCL)

(43) Czech (CNC)

- a. *Vlád-l-i <...> svět-ov-ým moř-ím.*
rule-PST-PL.M world-ADJZ-PL.DAT sea-PL.DAT
'They ruled . . . in the world's seas.'
- b. *Snáží-m se o-vlád-nou-t svoj-e vzrušen-í.*
try-PRS.1SG RFL.ACC APPL-rule-INF RFL.POSS-SG.N.ACC excitement-SG.ACC
'I am trying to take control over my excitement.'

(44) Lithuanian (CCL)

- a. *Labai daug galvoj-au apie jūs-ų žodži-us.*
very much think-PST.1SG about 2PL-GEN word-PL.ACC
'I thought about your words quite a lot.'
- b. *Ap-galvoj-au j-o žodži-us.*
APPL-think-PST.1SG 3-SG.M.GEN word-PL.ACC
'I thought his words over.'

Applicatives can also attach to zero-place verbs, at least marginally (45).

(45) Lithuanian

- a. *Jau tem-o.*
already grow_dark-PST.3
'It already was growing dark.' (CCL)
- b. *Mus ap-tem-o toli nuo nam-ų.*
1PL.ACC APPL-grow_dark-PST.3 far from house-PL.GEN
'It grew dark over us when we were far from home.' (Kozhanov 2015: 109)

With transitive base verbs, applicative preverbs may either add a new P-argument with a concomitant demotion (46) or elimination (47) of the original P, or rearrange the arguments promoting an oblique object of the BC to direct object in the AC and demoting the original P to an oblique (48).

(46) Lithuanian (CCL)

- a. *J-ie sėj-o griki-us.*
 3-SG.M.NOM sow-PST.3 buckwheat-PL.ACC
 'They sowed buckwheat.'
- b. *Pernai aštuonet-q hektar-ų griki-ais už-sėj-o.*
 last_year eight-SG.ACC hectare-PL.GEN buckwheat-PL.INS APPL-SOW-PST.3
 'Last year, they sowed eight hectares with buckwheat.'

(47) Russian (RNC)

- a. *On-a u-kra-l-a²³ u menj-a*
 3-SG.F.NOM PVB-steal-PST-SG.F at 1SG-GEN
zlot-uju cep-očk-u!
 golden-SG.F.ACC chain-DIM-SG.ACC
 'She stole a golden necklace from me!'
- b. *Tjuring-a obo-kra-l odin iz*
 T-SG.ACC APPL-steal-PST[SG.M] one[SG.M.NOM] from
j-ego ljubovnik-ov
 3-SG.M.GEN lover-PL.GEN
 'Turing was robbed by one of his lovers.'

(48) Russian (RNC)

- a. *Ego žen-a dari-l-a mam-e*
 3.SG.M.GEN wife-SG.NOM give_as_present-PST-SG.F mother-SG.DAT
plat'j-a i tufl-i.
 dress-PL.ACC and shoe-PL.ACC
 'His wife used to give (my) mother dresses and shoes as presents.'
- b. *Otec ščedro o-dari-l*
 father[SG.NOM] generously APPL-give_as_present-PST[SG.M]
ix zlot-om, serebr-om i drug-imi dar-ami.
 3.PL.ACC gold-SG.INS silver-SG.INS and other-PL.INS gift-PL.INS
 'Their father had given them many gifts of silver and gold and articles of value.'²⁴

Some of the preverbs in their spatial meanings can work alternatively as P-applicatives and as markers of oblique registration leaving the coding of the landmark intact, often with subtle differences in meaning (see § 4.3). This is especially characteristic of Slavic *pre-/pere-*, Lithuanian *per-*, Latvian *pār-* 'across, through' (49), Slavic *pro-/pre-*, Baltic

²³ The preverb *u-* has a purely perfectivizing function here and does not affect argument structure.

²⁴ Source: Old Testament, 2 Chronicles 21:3, English version quoted after <https://www.biblegateway.com/passage/?search=2%20Chronicles+21&version=NIV>, accessed 19 February 2022.

pra- ‘passing by, through’ and Slavic *o(b)-*, Baltic *ap(i)-* ‘around’, but other preverbs may behave in this way in individual languages as well, cf. Macedonian *nad-* ‘over’ (50), Czech *pod-* ‘under’ (Oertle 2016: 57) or Lithuanian *pri-* ‘approaching’ (Kozhanov 2016: 372–374).

(49) Lithuanian (CCL)

- a. *J-i* ***per-ėj-o*** *gatv-ę*.
 3-SG.F.NOM APPL-go-PST.3 street-SG.ACC
 ‘She crossed the street.’
- b. *J-is* ***per-ėj-o*** *per* *gatv-ę*.
 3-SG.M.NOM OBLREG-go-PST.3 over street-SG.ACC
 ‘He crossed (lit. went across) the street.’

(50) Macedonian (Mitkovska and Bužarovska 2012: 138)

- a. *Eden* *helikopter* *ja=nad-let-a* *zgrad-a-t-a*.
 one[SG.M] helicopter[SG] 3SG.F.ACC=APPL-fly-AOR.3SG building-SG-DEF-SG.F
- b. *Eden* *helikopter* ***nad-let-a*** *nad* *zgrad-a-t-a*.
 one[SG.M] helicopter[SG] OBLREG-fly-AOR.3SG over building-SG-DEF-SG.F
- Both: ‘A helicopter flew over the building.’

When combined with transitive verbs of displacement, the aforementioned preverbs normally do not affect the encoding of the base P-argument (51a–b). An exception to this rule consists in metaphorical uses of the preverb *ob-* ‘around’ such as shown in (51c), where the resulting verb denotes the trajectory of the person’s gaze over some object or spatial region encoded as a direct object, the abstract entity undergoing metaphorical motion (‘eyes’, ‘gaze’) being expressed as an instrument.

(51) Russian (RNC)

- a. *Rodžer* *vě-l* *nas* *po* *svo-im* *polj-am*.
 R.[SG.NOM] lead-PST[SG.M] 1PL.ACC along RFL.POSS-PL.DAT field-PL.DAT
 ‘Roger led us through his fields.’
- b. *Potom* *on* ***ob-vě-l*** *nas* *vokrug* *zamk-a*.
 afterwards 3[SG.M.NOM] APPL-lead-PST[SG.M] 1PL.ACC around castle-SG.GEN
 ‘Afterwards he showed us around the castle.’
- c. *Ver-a* ***ob-ve-l-a*** *glaz-ami* *komnat-u*.
 V-SG.NOM APPL-lead-PST-SG.F eye-PL.INS room-SG.ACC
 ‘Vera looked around the room.’

The same pattern is observed with non-motion base verbs, where the landmark is also promoted to direct object (52).

(52) Russian

- a. *Ja po-sadi-l²⁵ derev'j-a vokrug prud-a.*
 1SG.NOM PVB-plant-PST[SG.M] tree-PL.ACC around pond-SG.GEN
 'I planted trees around the pond.'
- b. *Ja ob-sadi-l prud derev'j-ami.*
 1SG.NOM APPL-plant-PST[SG.M] pond[SG.ACC] tree-PL.INS
 'I surrounded the pond with trees.'

As already mentioned, D-applicatives are rare. They are more frequently attested in Latvian, where, for instance, the landmark introduced by the prefix *pie-* 'approaching' can be marked either by the corresponding preposition or by the dative (53), but not by the accusative (Holvoet and Nau 2016: 24).

(53) Latvian (based on Holvoet and Nau 2016: 24–25)

- Viņ-š pie-gāj-a pie plaukt-a / plaukt-am.*
 3-SG.M.NOM APPL-go.PST-3 to shelf-SG.GEN shelf-SG.DAT
 'He walked to the shelf.'

Likewise, the landmark of motion verbs prefixed with *ap-* 'around' in Latvian can be expressed not only by the prepositional phrase and by the bare accusative, but also by the dative, with no difference in meaning (54).

(54) Latvian (Holvoet and Nau 2016: 24)

- Viņ-a ap-gāj-a ap māj-u / māj-u / māj-ai.*
 3-SG.F.NOM APPL-go.PST-3 around house-SG.ACC house-SG.ACC house-SG.DAT
 'She walked around the house.'

In Slavic, the rare D-applicatives are exemplified by the comitative use of the East Slavic preverb *pod-* and West and South Slavic preverb *pri-*, attested with a very limited class of verbs denoting sound emission (Oertle 2016: 236, 267–268), cf. parallel examples from Russian and Bulgarian in (55).

(55) Russian / Bulgarian (RNC parallel corpus)

- a. *Pod-pe-va-ja orkestr-u, Varj-a tixon'ko*
 APPL-sing-IPFV-CVB orchestra-SG.DAT V-SG.NOM quietly
za-tjanu-l-a. . .
 PVB-draw-PST-SG.F

²⁵ The preverb *po-* is purely perfectivizing here.

- b. *Pri-glas-ja-jki na orkeštär-a, Varja tixičko*
 APPL-sing-IPFV-CVB to orchestra-DEF.M.OBL V. quietly
za-pri-pjav-a. . .
 PVB-PVB-sing-AOR.3SG
 Both: 'Joining the orchestra, Varja quietly started singing. . .'

In most cases the AppP introduced by the P-applicatives shows all the syntactic properties of a regular direct object: the ability to be promoted to subject in passives (56), conversion of the accusative to the genitive under negation in East Slavic, Polish, Slovene and Lithuanian (on this see Pirnat 2015, Arkadiev and Kozhanov forthcoming) (57), and cross-referencing by bound pronominals (known as “clitic doubling”, Kalluli and Tasmowski eds. 2008) in Bulgarian and Macedonian, see (50b) above.

(56) Russian (RNC)

- a. *My pere-š-l-i most.*
 1PL.NOM APPL-go-PST-PL bridge[SG.ACC]
 'We crossed (lit. over-went) the bridge.'
 b. *Most pere-jd-ën.*
 bridge[SG.NOM] APPL-go-PST.PP[SG.M.NOM]
 'The bridge has been crossed.'

(57) Lithuanian

- a. *Už-dirb-au t-uos pinig-us.*
 APPL-work-PST.1SG DEM-PL.M.ACC money-PL.ACC
 'I have earned that money.'
 b. *<. . .> men-o žmon-ės didelį pinig-ėlių*
 art-SG.GEN people-PL.NOM big-PL.GEN money-DIM-PL.GEN
ne-už-dirb-a.
 NEG-APPL-work-PRS.3
 'artists do not earn much money.' (CCL)

Things are more complicated in the case of P-applicatives introducing phrases that express distance and temporal duration (the so-called perdurative), mainly Slavic *pro-/pre-* and Lithuanian *pra-*, see, for instance, Letučij (2012: 133–136) on Russian, Žaucer (2009: 146–164, 2012) on Slovene and Kozhanov (2016: 376–380, 382–385) on Lithuanian. First, distance and temporal phrases in the bare accusative case freely combine with simplex verbs (58a/59a), so the prefixes simply make these optional adjuncts obligatory (58b/59b).

(58) Russian

- a. *Im priš-l-o-s' beža-t'*
 3.PL.DAT get.to-PST-SG.N-RFL run-INF
(cel-yj kilometr).
 whole-SG.M.ACC kilometer[SG.ACC]
 'They had to run (a whole kilometer).'
- b. *Im priš-l-o-s' pro-beža-t'*
 3.PL.DAT get.to-PST-SG.N-RFL APPL-run-INF
 *(*cel-yj kilometr).*
 whole-SG.M.ACC kilometer[SG.ACC]
 'They had to cover a whole kilometer running.' (RNC)

(59) Lithuanian

- a. *Gyven-au Vilni-uje (dvidešimt dvej-us met-us).*
 live-PST.1SG Vilnius-SG.LOC twenty two-PL.M.ACC year-PL.ACC
 'I lived in Vilnius (for twenty two years).'
- b. *(*Dvidešimt dvej-us met-us*) *pra-gyven-au Vilni-uje.*
 twenty two-PL.M.ACC year-PL.ACC APPL-live-PST.1SG Vilnius-SG.LOC
 'I have been living in Vilnius for twenty two years.' (CCL)

Second, such applicatives freely attach to transitive base verbs, which retain their original direct objects (60a/61a), as well as to intransitive reflexive verbs, which retain their reflexive marking thus remaining intransitive (60b/61b).

(60) Russian (RNC)

- a. *A u nas čelovek možet pro-nosi-t' odn-u par-u vs-e*
 APPL-wear-INF one-SG.F.ACC pair-SG.ACC all-PL.ACC
četyr-e sezon-a.
 four-PL.ACC season-SG.GEN
 'At our place one can wear a single pair [of shoes] during all four seasons.'
- b. *Ja tam pro-uči-l-a-s' poltor-a god-a.*
 1SG.NOM there APPL-study-PST-SG.F-RFL one_and_a_half-ACC.M year-SG.GEN
 'I studied there for one and a half years.'

(61) Lithuanian

- a. *Srov-ė . . . nu-neš-ė j-į žemyn*
 current-SG.NOM APPL-carry-PST.3 3-SG.M.ACC down
kel-is šimt-us metr-ų.
 several-PL.M.ACC hundred-PL.ACC meter-PL.GEN
 'The current . . . carried him down for several hundred meters.' (CCL)

- b. *Kamuol-ys nu-si-rit-o du metr-us.*
 ball-SG.NOM APPL-RFL-roll-PST.3 two[M.ACC] meter-PL.ACC
 ‘A ball rolled down for two meters.’ (Kozhanov 2016: 378)

However, such distance and temporal phrases can undergo the genitive of negation rule (62) and are at least marginally passivizable (63), testifying to their hybrid status between obligatory adjuncts and full-fledged direct objects.

- (62) Slovene (Žaucer 2012: 341)

Juš v ječ-i ni pre-sede-l tr-eh let.
 J.[SG.NOM] in jail-SG.LOC NEG APPL-sit-PST[SG.M] three-GEN year[PL.GEN]
 ‘Juš did not spend three years in jail.’

- (63) Lithuanian (CCL)

po pra-šok-t-os nakt-ies
 after APPL-dance-PST.PP-SG.F.GEN night-SG.GEN
 ‘after a night of dancing (lit. danced-through night)’

P-applicativization of transitive verbs, apart from the distance and temporal cases just discussed, results in either the demotion of the original P to peripheral status or its complete elimination, see (46)–(49) above. The fate of the P of the BC apparently depends on the semantics of the AC, for instance, on whether the original argument can be construed as an instrument, means or spatial landmark of the new event. However, even in some cases where such construal would be possible, the original P still cannot be expressed in the AC, being generic and backgrounded (64).

- (64) Lithuanian

- a. *J-i skalbi-a drabuži-us.*
 3-SG.F.NOM wash-PRS.3 clothes-PL.ACC
 ‘She washes clothes.’
- b. *J-i ap-skalbi-a savo vyr-q (*drabuži-ais).*
 3-SG.F.NOM APPL-wash-PRS.3 RFL.POSS husband-SG.ACC clothes-PL.INS
 ‘She washes (clothes and stuff) for her husband.’ (CCL)

4.3 Semantics

Most X-applicatives introduce landmarks of the spatial relations roughly outlined in Table 6 above. Some of the spatial preverbs are Goal-oriented, for instance: Slavic *v-* ‘into’, *na-* ‘on’, *pod-* ‘under; close to’, *vz-* ‘up’, *za-* ‘behind; up’, or Lithuanian *į-* ‘into’, *už-* ‘behind’. Others are Source-oriented, for instance: Slavic *vy-* ‘out’, *ot-* ‘from’, *u-* ‘from’, *s-/z-* ‘from above, off’, or Lithuanian *iš-* ‘out’, *nu-* ‘from above, off’. Interestingly, in

accordance with the so-called “Goal bias” (e.g., Stefanowitsch and Rohde 2004), verbs with Source-oriented preverbs can combine with expressions denoting Goals, see (65).

(65) Russian

- a. *vy-pisa-t' slov-o iz slovarj-a*
 APPL-write-INF word-SG.ACC out dictionary-SG.GEN
 ‘copy (lit. out-write) a word from a dictionary’
- b. *vy-pisa-t' slov-o v tetrad'*
 APPL-write-INF word-SG.ACC in notebook[SG.ACC]
 ‘copy (lit. out-write) a word into a notebook’

Those preverbs that can introduce the landmark both as a prepositional phrase and as an accusative object in their spatial functions deserve a special discussion. As mentioned above, the most common of these are the Slavic *pre-/pere-*, Lithuanian *per-*, Latvian *pār-* ‘across, through’, Slavic *pro-/pre-*, Baltic *pra-* ‘passing by, through’ and Slavic *o(b)-*, Baltic *ap(i)-* ‘around’. While with the ‘across’-prefixes the two types of encoding seem to be synonymous, see (50) above, the situation with the other two prefixes is more intricate. With a prepositional complement, the verbs with *ob-/ap-* and *pro-/pra-* express the purely spatial meaning of, respectively, motion around (66a) or past (67a) the landmark, while with an accusative complement, in addition to the same meaning (66b) and (67b), these verbs tend to denote motion covering the whole area of the landmark (66c) or passing through it (67c).²⁶

(66) Russian (RNC)

- a. *My medlenno obo-š-l-i vokrug dom-a.*
 1PL.NOM slowly PVB-go-PST-PL around house-SG.GEN
 ‘We slowly went around the house.’
- b. *My obo-š-l-i dom <. . .>*
 1PL.NOM APPL-go-PST-PL house[SG.ACC]
v nēm okazalas' eščē odna dver'.
 ‘We went around the house . . . and found another door [at the other side].’
- c. *My obo-š-l-i dom.*
 1PL.NOM APPL-go-PST-PL house[SG.ACC]
Xozjain pokazal nam svoi masterskie.
 ‘We passed through the whole house. The landlord showed us his workshops.’

²⁶ Cf. observations about the Croatian *o(b)-* in Šarić and Mikolić (2015: 260–261); on Latgalian *ap-*, cf. Svilans-Dennis (1982: 43–45).

(67) Lithuanian (CCL)

- a. *Mači-au, kaip j-is pra-važiav-o pro mano nam-us.*
 see.PST-1SG how 3-SG.M.NOM PVB-drive-PST.3 by my house-PL.ACC
 'I saw him drive past my house.'
- b. *Stot-į <...> pra-važiav-o <...> karin-is traukin-ys.*
 station-SG.ACC APPL-drive-PST.3 military-SG.M.NOM train-SG.NOM
 'A military train passed the station.'
- c. *Be sustojim-o pra-važiav-o-me Vilni-ų.*
 without stopping-SG.GEN APPL-drive-PST-1PL V-SG.ACC
 'We passed through Vilnius without stopping.'

Most of the non-spatial preverbs functioning as P-applicatives are fairly polysemous; the overview below is based largely on Oertle (2016) for Slavic and Kozhanov (2016) for Lithuanian.

(i) Temporal (perdurative): Slavic *ot-*, Lithuanian *at-* 'spend a period of time V-ing', often with additional nuances such as 'as an obligation' or 'as punishment', for instance: Russian *rabotat* 'work' ~ *otrabotat* 'work for a period of time', *služit* 'serve' ~ *otslužit* 'serve for a period of time (e.g., in the army)', *sidet* 'sit' ~ *otsidet* 'serve a term in prison', Polish *czekać* 'wait' ~ *odczekać* 'wait for some time', Serbian *stajati* 'stand' ~ *odstajati* 'spend time standing', Lithuanian *kalėti* 'stay in prison' ~ *atkalėti* 'serve a term in prison', also *verkti* 'cry' ~ *išverkti* 'spend time crying'. The range of objects such verbs combine with is not limited to temporal periods and by metonymy includes activities that "fill" these periods (68) and even wages or prizes (69).

(68) Serbian (Šarić and Tchizmarova 2013: 25–26)

- Mora-l-i=smo od-sjedi-ti još jedn-o*
 must-PST-PL.M=AUX.PRS.1PL APPL-sit-INF yet one-SG.N.ACC
dosadn-o predavanj-e.
 boring-SG.N.ACC lecture-SG.ACC
 'We had to sit through another boring lecture.'

(69) Russian (RNC)

- On=by ot-rabota-l svoj-u*
 3.SG.M.NOM=SBJV APPL-WORK-PST.SG.M RFL.POSS-SG.F.ACC
Nobel-evsk-uju premij-u
 Nobel-ADJZ-SG.F.ACC prize-SG.ACC
 'He (Barack Obama) would work for his Nobel prize.'

The most productive perdurative preverbs are Russian *pro-*, West and South Slavic *pre-* (see, e.g., Przybylska 2006: 158–161 on Polish; Oertle 2016: 251–252 on Slavic in general), Lithuanian *pra-*, see above.

(ii) Covering and filling: Slavic *o(b)-* and *za-*, Lithuanian *ap-*, *pri-*, *su-* and *už-*, see (70)–(71):

(70) Russian

- a. *On-i stroi-l-i cerkv-i v gorod-e.*
 3-PL.NOM build-PST-PL church-PL.ACC in city-SG.LOC
 ‘They built churches in the city.’
- b. *On-i <...> za-stroi-l-i cerkvj-ami ves’ gorod.*
 3-PL.NOM APPL-build-PST-PL church-PL.INS all[SG.M.ACC] city[SG.ACC]
 ‘They ... built churches all over the city.’ (RNC)

(71) Lithuanian (CCL)

- a. *Lauke snig-o.*
 outside snow-PST.3
 ‘It was snowing outside.’
- b. *[Aš] buv-au su-ly-t-a, su-snig-t-a.*
 1SG.NOM be-PST.1SG APPL-rain-PST.PP-SG.F.NOM APPL-snow-PST.PP-SG.F.NOM
 ‘I have been rained and snowed upon.’

(iii) Distributive, with the AppP denoting a mass or a set of objects: Slavic *o(b)-*, Lithuanian *ap-* (72).

(72) Russian

- a. *Po-zvon-i student-am.*
 PVB-ring-IMP[2SG] student-PL.DAT
 ‘Phone the students.’
- b. *Ob-zvon-i student-ov.*
 APPL-ring-IMP[2SG] student-PL.ACC
 ‘Phone all the students.’

(iv) Overtaking, surpassing and outperforming (compare the English *out*-applicatives in § 2.3): Slavic *pre-/pere-* and less productively *o(b)-*, in Czech and Slovak also *pred-*, Lithuanian *ap-* and *per-*: Russian *igrat* ‘play’ ~ *obygrat* ‘beat in a game’, *kričat* ‘shout’ ~ *perekričat* ‘shout louder than’, Slovak *predbehnúť* ‘overtake while running’, Lithuanian *lošti* ‘play (cards)’ ~ *aplošti* ‘beat in a card game’, *galėti* ‘be able to’ ~ *pergalėti* ‘win, overcome’. In Lithuanian this meaning can also be expressed by *iš-* (e.g., *augti* ‘grow’ ~ *išaugti* ‘outgrow’) and *pra-* (*gyventi* ‘live’ ~ *pragyventi* ‘outlive’). The most productive ‘surpass’-applicative is the South Slavic prefix *nad-*, see Mitkovska and Bužarovska (2012: 145–146), Tchizmarova (2012: 242–244) and Oertle (2016: 179), for instance: Macedonian *nadpee* ‘outsing’, Serbo-Croat *nadglasavati* ‘outvote’, Bulgarian *nadlāža* ‘lie more than’.

(v) Creation of an object: Slavic *vy-*, *iz-*, Lithuanian *iš-*, also *su-*, cf. Russian *vydumat'*, Bulgarian *ižmislja*, Lithuanian *sugalvoti* 'devise, invent', from the base verbs meaning 'think'; Russian *rezat'* 'cut' ~ *vyrezat'* 'carve'; also Slavic *pro-*, Lithuanian *pra-* with the created object being an aperture or way (Russian *rubit'* 'chop' ~ *prorubit'* 'dver' 'cut a door', Lithuanian *minti* 'trod' ~ *praminti taką* 'trod a path'). Besides that, the Slavic preverb *na-*, whose prominent function is cumulative (Filip 2000; Žaucer 2009; Oertle 2016: 169–171), derives creation verbs with the meaning of excessive activity (73).

(73) Russian (RNC)

Von on-a kak ščëk-i na-e-l-a.
 there 3-SG.F.NOM how cheek-PL.ACC APPL-eat-PST-SG.F
 'Look at the cheeks she's got by eating too much.'

(vi) Acquisition of an object (compare the German *er-*applicatives in § 3.2): Slavic *vy-*, *iz-*, *za-*, *na-*, Lithuanian *iš-*, *su-*, *už-*, *pri-*, for instance: Russian *molit'* 'pray' ~ *vymolit'* 'obtain by praying', *rabotat'* 'work' ~ *zarabotat'* 'earn', Czech *ženit* 'marry' ~ *vyženit* 'acquire through marriage', Macedonian *prosi* 'ask' ~ *isprosi* 'get by (repeated) asking', Upper Sorbian *nawajchtarich* 'I have earned (it) as a watchman' (Oertle 2016: 169 quoting Faßke and Michalk 1981: 116), Lithuanian *kovoti* 'fight' ~ *iškovoti* 'conquer', *ieškoti* 'look for' ~ *suieškoti* 'find'²⁷, Lithuanian *prakaituoti* 'sweat' ~ *užprakaituoti* 'earn by hard work' (Kozhanov 2015: 252–253), *gyventi* 'live' ~ *prigyventi* 'obtain during one's lifetime; get a child'. In Slovene this meaning is also productively expressed by *pri-* (Oertle 2016: 46), cf. *prikvartati* 'win in a card game'.

(vii) Elimination of an object: Slavic *vy-*, *iz-*, *s-*, *za-*, Lithuanian *iš-*, *nu-*, *už-*, for instance: Russian *trjasti* 'shake' ~ *vytrjasti* 'remove by shaking', *plakat'* 'cry' ~ *vyplakat'* 'relieve by tears', *teret'* 'rub' ~ *steret'* 'wipe off', *dut'* 'blow' ~ *zadut'* 'blow out', Lithuanian *loti* 'bark' ~ *išloti* 'drive away by barking', *lyti* 'rain' ~ *nulyti* 'wash away (of rain)', *lieti* 'pour liquid' ~ *užlieti* 'extinguish'. The prefixes Slavic *pro-/pre-* and Lithuanian *pra-* create verbs with a meaning of losing something as a result of drinking or gambling, for instance: Russian *pit'* 'drink' ~ *propit'* 'spend on drinking', Lithuanian *kortuoti* 'play cards' ~ *prakortuoti* 'lose by playing cards'. A meaning related to this is the one of missing something, cf. Czech *zaspát* 'miss by sleeping', Russian *progljadet'* 'overlook'.

(viii) Damage to the object as a result of the activity (compare the German verbs with the prefixes *ver-* and *zer-*, see § 3.2): various preverbs whose choice is often determined by the lexical semantics of the verb (see, e.g., Oertle 2016: 189–190, 204). The AppP can be the subject's own body part, cf. Lithuanian *rėkti* 'shout' ~ *prarėkti balsą* 'shout one's voice hoarse', Russian *ležat'* 'lie' ~ *otležat'* 'bok' 'make one's side numb by lying on it', *igrat'* 'play' ~ *pereigrat'* 'ruku' 'overplay one's hand'; or artifacts and persons,

²⁷ In this case the AppP is marked by the accusative, while in the BC it is in the genitive.

cf. Lithuanian *sėdėti* 'sit' ~ *susėdėti suknelę* 'rumple dress by sitting', *vogti* 'steal (an object)' ~ *apvogti* 'rob (a person or a place)', Russian *est'* 'eat' ~ *ob'est* 'eat at somebody's expense', *govorit'* 'speak' ~ *ogovorit'* 'slander', *xlopat'* 'clap' ~ *zaxlopat'* 'clap off (speech or orator)', *sčitat'* 'count' ~ *obsčitat'* 'shortchange'.

(ix) Exhaustion of surface or means: Slavic *iz-*, Lithuanian *iš-*, for instance: Russian *pisat'* 'write' ~ *ispisat'* *stranicu* 'to cover a whole page with writing', *ispisat'* *ručku* 'to exhaust a pen by writing', Lithuanian *piešti* 'draw' ~ *išpiešti* 'cover with drawings, decorate'. See also Section 3.3 for German parallel *be-* and *ver-* verbs, as well as Example (96) from Hungarian.

(x) Object that the activity is directed at without literally affecting it: mainly Slavic *o(b)-*, Baltic *ap-*, for instance: Russian *govorit'* 'speak' ~ *obgovorit'* 'discuss', Polish *plakać* 'cry' ~ *opłakać* 'mourn over'.

(xi) Object affected by speech or magic: Slavic *za-*, Lithuanian *už-*, cf. Russian *boltat'* 'chatter' ~ *zaboltat'* 'overwhelm with one's chatter', *koldovat'* 'perform or practice magic' ~ *zakoldovat'* 'cast spell over an object or person', Lithuanian *kalbėti* 'speak' ~ *užkalbėti* 'cast spell', also *juoktis* 'laugh' (reflexive) ~ *išjuokti* 'deride'.

(xii) Object or person defended: Slavic *za-*, Lithuanian *už-*, Lithuanian *tarti* 'speak' ~ *užtarti* 'intercede, protect by speech', *stoti* 'stand up' ~ *užstoti* 'defend' (74a), which is related to the spatial meaning of 'screening' (74b).

(74) Lithuanian (CCL)

- a. *J-ie* <...> *už-stoj-a* <...> *t-uos*, *kuri-uos* *mėg-sta*.
 3-PL.M.NOM APPL-stand-PRS.3 DEM-PL.M.ACC which-PL.M.ACC like-PRS.3
 'They defend those whom they like.'
- b. *nugar-a* *už-stoj-u* *lang-q*.
 back-SG.INS APPL-stand-PRS.1SG window-SG.ACC
 'I [stand up in front of her and] hide the window with my back.'

(xiii) Object whose consumption is facilitated by the activity: Slavic *za-*, Lithuanian *už-*. The situations described by such verbs are, for instance, those of taking medicines and drinking water immediately afterwards (75b), or eating something after drinking alcohol (76a); metaphorically, such verbs describe eating or drinking something as a means of dealing with emotionally loaded events (76b). The object actually consumed, which would be expressed as the P in the BC (75a), is marked by the instrumental case (75b).

(75) Lithuanian

- a. *Gėri-au* *vanden-į*.
 drink-PST.1SG water-SG.ACC
 'I was drinking water.'

- b. *Tr-is piliul-es už-gèri-au vandeni-u.*
 three-PL.ACC pill-PL.ACC APPL-drink-PST.1SG water-SG.INS
 'I washed down three pills with water.' (CCL)

(76) Russian (RNC)

- a. *za-ed-a-ja vodk-u zelën-ym luk-om*
 APPL-eat-IPFV-CVB vodka-SG.ACC green-SG.INS onion-SG.INS
 'having vodka with spring onions'
- b. *I vy poroj za-jed-aj-ete neudač-u konfet-k-oj. . .*
 and 2PL.NOM sometimes APPL-eat-IPFV-PRS.2PL failure-SG.ACC sweet-DIM-SG.INS
 'You too sometimes soothe your failures by taking a sweet. . .'

Many preverb+verb combinations are polysemous, their exact interpretation being determined by the type of the object, for instance: Russian *igrat* 'play' ~ *razygrat* 'obidu' 'simulate an offence', *razygrat* 'kartu' 'play a card', *razygrat* 'prijatelja' 'to trick a friend'.

As is evident from the list above, the cross-linguistically most common functions of applicatives, namely benefactive, comitative and instrumental, are virtually unattested in Slavic and Baltic (on the very restricted comitative-like use see [55] above).

In those cases where the AppP can be expressed in the BC either as an optional adjunct or an oblique object, the AC always has meanings related to perfectivity and telicity, that is, attainment of the result (77), total affectedness of the object, as in (72) above, or higher intensity (78).

(77) Russian

- a. *My govori-li o srok-ax.*
 1PL.NOM talk-PST-PL about deadline-PL.LOC
 'We were talking about the deadlines.'
- b. *My ob-govori-li srok-i.*
 1PL.NOM APPL-talk-PST-PL deadline-PL.ACC
 'We have discussed the deadlines (and settled them).'

(78) Russian

- a. *On-a sme-ët-sja nado mnoj.*
 3-SG.F.NOM laugh-PRS.3SG-RFL over 1SG.INS
 'She is laughing at me.'
- b. *On-a vy-sme-iva-et menja.*
 3-SG.F.NOM APPL-laugh-IPFV-PRS.3SG 1SG.ACC
 'She derides me.'

4.4 Lookalikes

Since none of the Baltic and Slavic preverbs has applicativization as its primary let alone only function, there is little reason to speak about morphological lookalikes or “*applicativa tantum*” verbs. There are numerous verbs whose argument structure is not affected by the addition of prefixes that in the same or very similar meanings applicativize other verbs, for instance, ‘complete affectedness’ (Russian *rezat* ‘cut’ ~ **zarezat** ‘stab to death’), ‘elimination’ (Russian *gnat* ‘drive’ ~ **prognat** ‘drive away’) or ‘creation’ (Lithuanian *kepti* ‘bake’ ~ **prikepti** ‘bake a lot’). In many cases this lack of applicativization is an effect of the so-called “subsumption” of the semantic contribution of the prefix by the lexical meaning of the verb (see Nübler 1990, Janda et al. 2013 and references therein). There are also cases where prefixation affects the argument structure in different ways with different verbs even when the resulting semantics are similar; cf. Russian *verit* ‘believe’ ~ **uverit** ‘persuade’ (causative) and *govorit* ‘talk’ ~ **ugovorit** ‘persuade, talk into something’ (applicative).

Still, one instance of morphological lookalikes consists in spatial preverbs combining with verbs of displacement. In such cases, the optional landmark adjuncts, which are most often expressed as prepositional phrases (the preposition frequently being related to the preverb), are rendered obligatory oblique arguments by the preverbs without affecting their coding properties, see (79)–(80).

(79) Russian

- a. *Mužčin-a nēs čemodan (v komnat-u).*
 man-SG.NOM carry.PST[SG.M] suitcase[SG.ACC] in room-SG.ACC
 ‘The man was carrying the suitcase (into the room).’
- b. *Mužčin-a v-nēs čemodan v komnat-u.*
 man-SG.NOM PVB-carry.PST[SG.M] suitcase[SG.ACC] in room-SG.ACC
 ‘The man carried the suitcase into the room.’

(80) Lithuanian (CCL)

- a. *Martyn-as létai lip-o laipt-ais.*
 M.-SG.NOM slowly climb-PST.3 stairs-PL.INS
 ‘Martin slowly climbed the stairs [unclear up or down].’
- b. *Zuik-a nu-lip-o nuo dvirači-o.*
 Z.-SG.NOM PVB-climb-PST.3 from bicycle-SG.GEN
 ‘Zuika got off the bicycle.’

With prefixed verbs, such landmark phrases are obligatory and can be omitted only if their referent is given in context, in which case they are understood as either deictically anchored (81a) or definite (81b). By contrast, with unprefixed verbs the absence of a locative phrase does not imply any definite Goal or Source of motion, see (79a) and (80a) above.

(81) Russian

a. *V-xod-i-te.*

PVB-walk-IMP-2PL

'Come in [here where the speaker is].'

b. *Tramvaj dolgo vëz eë odn-u,*

tram[SG.NOM] long.time carry.PST.SG.M 3.SG.F.ACC one-SG.F.ACC

potom vo-š-l-a eščë požil-aja par-a.

then PVB-go-PST-SG.F more elderly-SG.F.NOM couple-SG.NOM

'For a long time she was alone on the tram, then an elderly couple got on [the tram].' (RNC)

The semantic difference between the constructions with simplex and prefixed verbs in these cases is purely aspectual: the former is normally interpreted as progressive and the latter as completive.

Syntactic lookalikes include the productive addition of benefactive (in some languages also malefactive) phrases in the dative without any change to the verb's morphology, see (82)–(83); in the generative literature this phenomenon has been analyzed as applicativization (see, e.g., Gogłóza 2020).

(82) Czech (based on Janda and Townsend 2000: 71)

a. *Babičk-a u-pek-l-a dort.*

grandmother-SG.NOM PVB-bake-PST-SG.F cake[SG.ACC]

'Grandmother baked a cake.'

b. *Babičk-a nám u-pek-l-a dort.*

grandmother-SG.NOM 1PL.DAT PVB-bake-PST-SG.F cake[SG.ACC]

'Grandmother baked us a cake.'

(83) Czech (based on Janda and Townsend 2000: 71)

a. *Záplav-a z-niči-l-a dům.*

flood-SG.NOM PVB-destroy-PST-SG.F house[SG.ACC]

'The flood destroyed the house.'

b. *Záplav-a nám z-niči-l-a dům.*

flood-SG.NOM 1PL.DAT PVB-destroy-PST-SG.F house[SG.ACC]

'The flood destroyed our house (on us).'

Another case of syntactic lookalikes include argument structure alternations of the "spray/load" type, sometimes interacting with prefixation (see, e.g., Lenartaitė 2011 and Sokolova 2012), as shown in (84), where the prefix *na-* in (84a–b) is a "pure perfectivizer" compatible with the same two argument structures that are available to the simplex verb, while the prefix *po-* admits only the location-as-object frame (84c–d).

(84) Russian

- a. *(na-)maza-t'* *masl-o* *na xleb*
 PVB-smear-INF butter-SG.ACC on bread[SG.ACC]
 'to put butter on bread'
- b. *(na-)maza-t'* *xleb* *masl-om*
 PVB-smear-INF bread[SG.ACC] butter-SG.INS
 'to cover bread with butter'
- c. *po-maza-t'* *xleb* *masl-om*
 PVB-smear-INF bread[SG.ACC] butter-SG.INS
 'to cover bread with butter'
- d. **po-maza-t'* *masl-o* *na xleb*
 PVB-smear-INF butter-SG.ACC on bread[SG.ACC]
 'to put butter on bread'

5 Hungarian

5.1 Morphology

Hungarian uses verbal particles (sometimes also called preverbs in the literature) productively, many of which can change the argument structure of verbs in various constructions, as the applicative constructions show in (85b) and (86b) as compared to (85a) and (86a). There are no particles whose only function is applicativization; they all have spatial origins and their directional meaning is often present while they also have a role in determining the aktionsart and the aspectual properties of the verbal expression (Kiefer 1994; É. Kiss 2006). While the verbs in (85a) and (86a) describe unbounded activities, their counterparts with the particles involve a bounded, completed event.²⁸

(85) Hungarian

- a. *Péter nevet-ett* *János-on.* (BC)
 P. laugh-PST.3SG J.-SUP
 'Peter was laughing at John.'
- b. *Péter ki-nevet-t-e* *János-t.* (AC)
 P. APPL-laugh-PST-DEFOBJ.3SG J.-ACC
 'Peter laughed at John.'

²⁸ Hungarian verbs exhibit definiteness agreement with their object (i.e., definite objects trigger different verbal agreement markers than indefinite or bare objects; see, e.g., É. Kiss 2002), but this is orthogonal to applicativization.

(86) Hungarian

- a. *Péter úsz-ott a folyó-ban.* (BC)
 P. swim-PST.3SG the river-INE
 ‘Peter was swimming in the river.’
- b. *Péter át-úsz-t-a a folyó-t.* (AC)
 P. APPL-SWIM-PST-DEFOBJ.3SG the river-ACC
 ‘Peter swam across the river.’

Most Hungarian particles are formally (and functionally) closely related to directional postpositions or case suffixes. Etymologically, they go back to Goal-denoting postpositions or adverbs, which, in turn, originated as case-marked nouns (and some of them have grammaticalized into case suffixes; see Dékány and Hegedűs 2021 for a recent overview). Some particles have started grammaticalizing more recently and are formally identical to postpositions: (86b) and (87a) involve one such particle, namely *át* ‘across, over, through’; (87b) shows *át* occurring as a postposition (the PP is a focused adjunct).

(87) Hungarian

- a. *Péter át-úsz-ott a sziget-re.*
 P. APPL-SWIM-PST.3SG the island-SUBLAT
 ‘Peter swam over to the island.’
- b. *Péter London-on át fog New York-ba repül-ni.*
 P. L.-SUP across FUT[3SG] N.Y.-ILL fly-INF
 ‘It is via London that Peter will fly to New York.’

There is no agreement on the exact number or list of particles in the language. This is mostly due to the fact that some of them are less grammaticalized while others have proceeded further along the grammaticalization; since this has an effect on their productivity, some grammars may include more elements than others. Dékány and Hegedűs (2021) provide a representative list and description. Here, two types of particles are worth pointing out. Group A includes the oldest particles of the language, which are productive in various kinds of valency-changing patterns (see § 5.2); while they are mostly directional, they are not used as postpositions in present-day Hungarian. The particles from this group whose applicativizing function is most prominent are *be* ‘into’, *ki* ‘out’, *le* ‘down’, and *meg* ‘orig. back_{dir}, behind_{dir}’. Group B includes particles like *át* ‘over, through’ in (86)–(87) above, which are also postpositions in present-day Hungarian, and as such they select a case-marked complement. Particles from Group B started grammaticalizing later (from around the 16th century) and often co-occur with obligatory spatial arguments (which usually bear the same case they select when used as postpositions), but they are less prolific as particles, especially when it comes to introducing object arguments (see Hegedűs 2020 for a more detailed discussion). Some of such particles are: *át* ‘over, through’, *túl* ‘over, beyond’, and *végig* ‘to the end, along’.

All these common particles—whose semantics roughly corresponds to that of some of the applicativizing prefixes in German and Baltic-Slavic, see §§ 3.1 and 4.1, respectively—are summarized in Table 8.

Table 8: Main Hungarian applicativizing particles.

| Group A | | Group B | |
|------------|--|--------------|---------------------|
| <i>be</i> | ‘into’ | <i>át</i> | ‘over, through’ |
| <i>ki</i> | ‘out’ | <i>túl</i> | ‘over, beyond’ |
| <i>le</i> | ‘down’ | <i>végig</i> | ‘to the end, along’ |
| <i>meg</i> | < ‘back _{dir} , behind _{dir} ’ | | |

5.2 Syntax

Hungarian applicatives are optional P-applicatives; there is no obligatory marker on the verb for introducing an argument. In neutral declarative-affirmative sentences, particles immediately precede the verb, forming one phonological unit with it.²⁹ By contrast, they occur separated from the verb in negative and interrogative sentences, or in clauses with a focused preverbal constituent.³⁰ Particles can also undergo long distance (contrastive) topicalization, whereby they can even cross clause boundaries. Their syntactic independence is the main reason for treating them as heads of phrases (i.e., they are projecting particles in the sense of Los et al. 2012). Applicative uses of various particles are possible and productive to some extent, depending on lexical factors.

Particles can transitivize verbs that are intransitive in the BC. *Át* ‘over, through’, which we have seen in (86)–(87), is one of the directional particles that also appears with verbs that do not involve (actual or metaphorical) motion. It can appear with regular activity verbs that may optionally take a case-marked non-core argument, but the AC has an obligatory direct object (which takes accusative marking when expressed as an overt NP), see (88)–(89). With speech verbs like *beszél* ‘talk’, the particle *meg* is also possible with the same arguments, with a very small difference in meaning (89).

²⁹ Verbal particles are a subset of so-called verb modifiers (all of which appear immediately before the verb in such neutral sentences). Particles are the most frequent and most lexicalized verb modifiers in the language (Kálmán 1985; É. Kiss 2002, 2006).

³⁰ Contrary to the received opinion, and not unlike some German elements (see § 3.1), preverbal elements like *be* ‘into’, *fel* ‘up’ and *ki* ‘out’ can also occur like prefixes with a limited number of verbs in a special derivational pattern, albeit without any connection to applicativization. See Hegedűs and Dékány (2017) for details.

(88) Hungarian

- a. *Péter dolgoz-ott (a könyv-é-n).* (BC)
 P. work-PST.3SG the book-POSS.3SG-SUP
 'Peter worked (on his book).'
- b. *Péter át-dolgoz-t-a a könyv-é-t.* (AC)
 P. APPL-work-PST-DEFOBJ.3SG the book-POSS.3SG-ACC
 'Peter revised his book.'

(89) Hungarian

- a. *Mari és Anna beszél-t-ek (a problémá-ról).*
 M. and A. talk-PST-3PL the problem-DEL
 'Mary and Anna talked (about the problem).'
- b. *Mari és Anna át-beszél-t-ék a problémá-t.*
 M. and A. APPL-talk-PST-DEFOBJ.3PL the problem-ACC
 'Mary and Anna discussed (all aspects of) the problem.'
- c. *Mari és Anna meg-beszél-t-ék a problémá-t.*
 M. and A. APPL-talk-PST-DEFOBJ.3PL the problem-ACC
 'Mary and Anna discussed the problem.'

Another such particle is *végig* 'to the end, along', which can appear with verbs such as *sír* 'cry' and *nevet* 'laugh', which take an optional oblique; the former verb is illustrated in (90). It can also appear with verbs like *gondol* 'think, consider', which takes an oblique argument when underived (91a) and promotes the argument to an obligatory direct object when applicativized (91b).

(90) Hungarian

- a. *Sír-t-unk (a film-en).*
 cry-PST-1PL the film-SUP
 'We cried (over the film).'
- b. *Végig-sír-t-uk a film-et.*
 APPL-cry-PST-DEFOBJ.1PL the film-ACC
 'We cried the whole time we watched the film.'

(91) Hungarian

- a. *Simon gondol-t egy jó feladat-ra.*
 S. think-PST.3SG a good task-SUBLAT
 'Simon thought of a good task.'
- b. *Simon végig-gondol-t minden feladat-ot.*
 S. APPL-think-PST.3SG every task-ACC
 'Simon considered every task.'

The particle *le* ‘down’ can applicativize verbs like *győz* ‘win (against someone)’, which can have an optional postpositional argument (92a), and also verbs such as *jár* ‘walk’ or *táncol* ‘dance’, as well as other activity verbs with which the particle adds the meaning of wearing down, depleting or using up (93).

(92) Hungarian

- a. *A csapatunk győz-ött (a másik csapat ellen).*
 the team-POSS.1PL win-PST.3SG the other team against
 ‘Our team won (against the other team).’
- b. *A csapat-unk le-győz-t-e a másik csapat-ot.*
 the team-POSS.1PL APPL-win-PST-DEFOBJ.3SG the other team-ACC
 ‘Our team defeated the other team.’

(93) Hungarian

- a. *Le-jár-t-am a cipő-m talp-á-t.*
 APPL-walk-PST-1SG the shoe-POSS.1SG sole-POSS-ACC
 ‘I got the sole of my shoes worn out by walking.’
- b. *Le-táncol-t-am néhány kiló-t.*
 APPL-dance-PST-1SG some kilogram-ACC
 ‘I danced off a few kilos.’
- c. *Le-hullámvasutaz-t-am minden jegy-et.*
 APPL-ride_roller_coaster-PST-1SG every ticket-ACC
 ‘I used up all the tickets riding the roller coaster.’

The particle *ki* ‘out’ can be used with motion verbs, where it merely functions as a directional modifier. In (85) above, however, we saw that *ki* ‘out’ can also change the valency of the verb and introduce an obligatory accusative-marked object with an intransitive verb that can only appear with an optional superessive-marked argument in the BC. Verbs such as *könyörög* ‘beg’, *sír* ‘cry’, *harcol* ‘fight’ can also be applicativized with *ki*; the BC in (94a) features an optional argument in the causal-final case, and the AC in (94b) is actually ditransitive, not only with the base P as direct object but also with an optional dative-marked beneficiary (cf. also Example [24] from German, which could take the reflexive in *sich etwas erkämpfen* ‘get oneself something by fighting’):

(94) Hungarian

- a. *Lili könyörg-ött egy új bicikli-ért.*
 L. beg-PST.3SG a new bicycle-CAU
 ‘Lily begged for a new bicycle.’ (BC)
- b. *Lili ki-könyörg-ött (magá-nak/ Anná-nak) egy új bicikli-t.*
 L. APPL-beg-PST.3SG self-DAT A.-DAT a new bicycle-ACC
 ‘Lily got (herself/Anna) a new bicycle by begging.’ (AC)

Example (95) illustrates the situation with *nő* ‘grow’, which can only take an object that measures out the event when underived, not a regular referential object. *Ki* provides the semantic content of measuring out the event, however, so the object can be a referential argument in (95b).

(95) Hungarian

- a. *A fa nő-tt (egy méter-t / sok-at).*
 the tree grow-PST.3SG one meter-ACC lot-ACC
 ‘The tree has grown (one meter / a lot).’
- b. *Anna ki-nő-tt-e a cipő-jé-t.*
 A. APPL-grow-PST-DEFOBJ.3SG the shoe-POSS.3SG-ACC
 ‘Anna has grown out of her shoes.’

Similarly to what we saw in (46) for Lithuanian, the Hungarian particle *be* ‘into’ can add a new object that refers to a location or area, and the base object of the BC becomes an optional instrumental-marked argument in the AC (96). The particle also indicates that the activity covers the whole area expressed by the new object (see § 3.3 on the German Theme-covers-surface schema).

(96) Hungarian

- a. *János búzá-t vet-ett.* (BC)
 J. wheat-ACC sow-PST.3SG
 ‘John sowed wheat.’
- b. *János be-vet-ett két hektár föld-et (búzá-val).* (AC)
 J. APPL-SOW-PST.3SG two hectare land-ACC wheat-INS
 ‘John sowed two hectares of land with wheat.’

Hungarian has examples similar to the well-known English locative alternation (see also Examples [21]–[22] from German). Most of the time, they involve the particle *meg*, which used to mean ‘back_{dir} behind_{dir}’ but has no productive directional use in present-day Hungarian and is mostly used as a perfectivizer. The most frequent verbs found in the locative alternation are *rak* and *pakol* ‘put, load’, *tölt* ‘fill’, and *szór* ‘sprinkle’. The BC has a direct object (often an indefinite or bare nominal) and an argument in the illative, while the AC has a direct object (generally a specific, often definite, nominal) and an argument in the instrumental (97).

(97) Hungarian

- a. *Péter bor-t tölt az üveg-ek-be.* (BC)
 P. wine-ACC fill[3SG] the bottle-PL-ILL
 ‘Peter fills wine into the bottles.’

- b. Péter **meg**-tölt-i az üveg-ek-et bor-ral. (AC)
 P. APPL-fill-DEFOBJ.3SG the bottle-PL-ACC wine-INS
 'Peter fills the bottles with wine.'

The particle *meg* is also the one used in the few instances of ditransitive verbs. In the BC with *ajándékoz* 'present, gift', for instance, the accusative-marked Theme is generally indefinite or a bare nominal and the Recipient is in the dative (98a); in the AC, the Recipient is the object in the accusative and the Theme takes the instrumental (98b).³¹

(98) Hungarian

- a. Anna könyve-t ajándékoz-ott Tomi-nak. (BC)
 A. book-ACC gift-PST.3SG T.-DAT
 b. Anna **meg**-ajándékoz-t-a Tomi-t egy könyv-vel. (AC)
 A. APPL-gift-PST-DEFOBJ.3SG T.-ACC a book-INS
 Both: 'Anna gave Tommy a book as a gift.'

Finally, there are also instances in which the particle does not introduce an object but a directional argument with a selected case. In (99a), the motion verb *ugrik* 'jump' occurs with various directional arguments, and the form of the PP is not selected; the sentence is grammatical as long as the argument is directional. Nevertheless, when the particle *bele* 'into' is added in (99b), the directional complement must take illative case, which is formally and semantically very closely related to the particle itself.

(99) Hungarian

- a. Pál a medencé-be / az ernyő alá / Anna mellé
 P. the pool-ILL the umbrella under A. next.to
ugr-ott.
 jump-PST.3SG
 'Paul jumped into the pool / under the umbrella / next to Anna.'
 b. Pál **bele**-ugr-ott a medencé-be.
 P. into-jump-PST.3SG the pool-ILL
 'Paul jumped into the pool.'

³¹ Hungarian has a number of "definiteness effect" verbs (É. Kiss 1995) that denote existence, becoming, creating, or appearing in a certain place or in a certain manner (*kap* 'receive, get', *talál* 'find' also belong here). Such verbs do not allow definite NPs in one of their argument positions, a property Szabolcsi (1986) attributes to the fact that their meaning includes 'existence' or 'appearance (on the scene)'. This effect disappears once a particle is added to the verb, or when there is a structural focus in the clause (see É. Kiss 2021 for a descriptive overview).

There are several recently developed particles that show the same pattern: *bele* ‘into’ and illative *-ba/-be*, *hozzá* ‘towards’ and allative *-hoz/-hez/-höz*, *neki* ‘toward’ and dative *-nak/-nek* (originally a general lative case), and *rá* ‘onto’ and sublative *-ra/-re*.

5.3 Semantics

Hungarian particles generally encode either a spatial meaning where the particle lexicalizes the Goal of the event (generally with motion verbs) or a perfectivizing meaning, signaling that the event has reached its endpoint or telos (É. Kiss 2006; see also Dékány and Hegedűs 2021). Unsurprisingly, since Hungarian particles have developed from directional adverbs or adpositions, all the recently developed ones still have such a semantic contribution. Among the oldest particles, only *meg* is no longer productive with motion verbs and cannot express the endpoint of motion anymore; the others are productive both in their original spatial meaning and in their more functional, perfectivizing, function.

Whether the AppP is a prototypical or atypical Patient depends on the lexical meaning of the verb. Whereas the non-subject is marked with a locative or directional case in the BC with verbs of mental activities or speech, it becomes an AppP with the introduction of the particle, and the meaning is—not unlike German with *be*-verbs, see § 3.3—that the totality of this object is involved in the mental activity or speech. When *át* ‘over, through’ is used with an activity verb such as *dolgozik* ‘work’, the AC refers to a complete transformation or thorough change caused by the subject and affecting the AppP.

In ACs with *le* ‘down’, there is a semantic element of destruction or wearing down that applies to the object (cf. also German *ver-* and *zer-*verbs in § 3). At the other end of the scale, when we look at examples like (94), the AppP appears on the scene and becomes the possession of the dative-marked argument as a result of the event.

5.4 Lookalikes

As mentioned earlier, verbal particles do not necessarily change verb valency: neither do all transitive or ditransitive verbs feature a particle nor does a verbal particle automatically transitivize its host verb.

Regarding syntactic lookalikes, Hungarian clauses can accommodate dative-marked NPs without resorting to verbal derivation, as in German and Slavic-Baltic, in order to express several extra-thematic participants, including Beneficiaries/Maleficiaries, External Possessors, etc. (cf. §§ 3.4 and 4.4).

Regarding morphological lookalikes in terms of preverbs introducing no new arguments, consider (100), which illustrates a frequent minimal pair in the language. In the

clause with *ki* ‘out’, there is no obligatory object introduced; the preverb only turns an activity verb into an accomplishment:

(100) Hungarian

- a. *János takarít-ott.*
J. clean-PST.3SG
‘John was cleaning.’
- b. *János ki-takarít-ott.*
J. out-clean-PST.3SG
‘John did the cleaning.’

Other morphological lookalikes are similar to German denominal *be*-verbs but have a slightly more complicated history and morphology (Hegedűs and Dékány 2017).

6 Conclusions

This chapter surveys various types of applicative constructions and some non-applicative uses of applicative morphology attested in English, German, and Hungarian, as well as in Slavic and Baltic languages. According to the questionnaire proposed as a guideline for this volume’s contributions, the constructions presented can be characterized as follows:

Morphology

- Slavic-Baltic applicative markers are verbal prefixes. Hungarian applicatives are preverbal particles. Germanic applicative markers can be either prefixes or particles (postverbal in English, preverbal in German).
- Most markers surveyed occupy the same slot as their spatial-aspectual counterparts in the verbal complex. German Group-I prefixes (e.g., *be-*) occur closer to the verb root.
- German *ent-* and Slavic-Baltic prefixes show some morpho-phonological allomorphy; other applicativizing preverbs are invariable.
- Applicativized verbs do not show any morphological idiosyncrasies, with the exception of the restrictions on the expression of present and/or future tense forms in Slavic related to the perfectivizing function of prefixes and the interaction with the reflexive marker in Lithuanian.
- There are no applicative periphrases or analytic applicative constructions in our sample.

Syntax

- Most of the constructions surveyed are P-applicatives. Baltic and Slavic languages also feature X-applicatives and, rarely, D-applicatives; some preverbs in Latvian and *ent-* in German create D-applicatives as well.
- European preverbal applicativization is typically optional in that the participant expressed by the AppP does not require applicativization to be expressed in a clause. Nevertheless, that participant often has similar, but not identical, semantic roles in the BC and the AC.
- The applicatives surveyed are normally valency-increasing. In some instances in English, German, and Hungarian, they can be valency-neutral (or even valency-reducing, like with some *be*-verbs in German).
- Preverbal applicatives do not appear to show any restrictions in combination with other valency-changing operations (at least passivization and causativization). The reflexivization and reciprocalization of applicatives does not seem to be subject to structural restrictions in Germanic and Hungarian; these morphological processes are lexically restricted in Baltic-Slavic, so there appear to be some important restrictions here, but more research is needed on this issue.

Semantics

- The applied phrase bears a variety of space-related, landmark-like roles in the applicatives surveyed. Notably, German, Slavic, and Baltic show P-applicatives with the meanings ‘through’, ‘across’, and ‘around’. In many cases, these roles can be metaphorically extended and cover an ever wider range of possible participants.
- Cases that arguably represent extensions of spatial roles include the exceeded threshold / surpassed competitor with English *out*-applicatives or South Slavic *nad*-applicatives, the “holistic” Patient of many German *be*-applicatives, and most of the Hungarian applicatives.

Lookalikes

- Some syntactic lookalikes, particularly those due to uncoded polyvalency with A-labile predicates, can be found in Slavic-Baltic and Hungarian. They appear to be less common in German and much more common in English (cf. the locative, benefactive, and dative alternations).
- The most prominent syntactic lookalike to a D-applicative in all the languages surveyed except English consists of simply adding a dative-marked NP to a clause, subject only to semantic and pragmatic restrictions (a so-called extra-thematic dative with several possible semantic roles: Possessor, Beneficiary, Maleficiary, Experiencer, Viewpoint Holder . . .).
- Morphological lookalikes are extremely common in all the languages surveyed. In addition to the same markers having an applicativizing function with some verbs and a spatial-aspectual yield with others (or, in the case of some English particles,

in different contexts with the same verbs), the English prefix *out-* appears to occur comparatively often as an applicative marker. The picture in German is rather varied, especially with Group-I prefixes (and particularly *be-*), which occur on numerous verbs as lexicalized forms, as “*applicativa tantum*”, or as verbs whose applied phrase in the applicative clause bears only an unpredictable and occasionally tenuous semantic relationship to its counterpart in the base clause.

- A special case of morphological lookalike is found in Baltic-Slavic, with verbs of displacement. Here, preverbs turn optional landmark adjuncts into obligatory oblique arguments, a case of oblique registration.

Abbreviations

| | |
|--------|--------------------------|
| AC | applicative construction |
| ACC | accusative |
| ADJZ | adjectivizer |
| AOR | aorist |
| APPL | applicative |
| AppP | applied phrase |
| ART | article |
| AUX | auxiliary verb |
| BC | base construction |
| CAU | causal-final |
| CVB | converb |
| DAT | dative |
| DEF | definite |
| DEFOBJ | definite object |
| DEL | delative |
| DEM | demonstrative |
| DIM | diminutive |
| DOBJ | direct object |
| F | feminine |
| GEN | genitive |
| ILL | illative |
| IMP | imperative |
| INE | inessive |
| INF | infinitive |
| INS | instrumental |
| IOBJ | indirect object |
| IPFV | imperfective |
| LOC | locative |
| M | masculine |
| N | neuter |
| NEG | negation |
| NOM | nominative |
| NP | noun phrase |

| | |
|--------|----------------------|
| OBL | oblique |
| OBLREG | oblique registration |
| OHG | Old High German |
| PFV | perfective |
| PG | Proto-Germanic |
| PIE | Proto-Indo-European |
| PL | plural |
| POSS | possessive |
| PP | passive participle |
| PREP | preposition |
| PRS | present |
| PST | past |
| PVB | preverb |
| REL | relativizer |
| RFL | reflexive |
| SBJ | subject |
| SBJV | subjunctive |
| SG | singular |
| SUBLAT | sublative |
| SUP | superessive |

Online sources

CCL: Corpus of Contemporary Lithuanian, <http://tekstynas.vdu.lt/tekstynas>

CNC: Czech National Corpus, <https://www.korpus.cz/>

RNC: Russian National Corpus, <https://ruscorpora.ru/new/index.html>

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