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Aspectual head/dependent marking in relation to verb/satellite framing

Abstract: The present study tries to set structures into relation, viz. head marking, double marking and dependent marking of aspectual values, with a special eye on stacking, conflation, differential lexicalisation and differential voice marking on verbs of consumption, production and goal-attainment, on the one hand, with verb, satellite and serial framing as well as case and adposition inventories on the other. Both aspect languages and languages with an advanced aspectoid system are analysed. Besides polypersonalism, voice/valency and preverbs turn out to be relevant criteria in correlations; however, aspectual head-marking does not cooccur with verb framing in the present sample.

Keywords: aspectuality, differential lexicalisation, differential voice marking, goal-attainment verbs, lexicalisation patterns

1 Aspect and advanced aspectoid systems

Aspect and aspectuality are most controversial categories in linguistic discussion and have been approached with different frameworks (for an overview cf. Sasse 2002).

The present contribution discusses features beyond aspect and aspectoid markers that may interact with aspectuality in order to find correlations, with a focus on verbs of consumption, production and goal-attainment (typical candidates for the successive-terminative actional class of verbs, cf. Mattissen (2024: 173–175)). Those features are head/double/dependent marking of aspectual values, stacking

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of seemingly contradictory aspectual values, differential lexicalisation, differential voice marking, verb/satellite/serial framing, local and directional case or adposition systems. To this end, languages with different formal systems of encoding aspect or aspectual values have been chosen.

The study is based on the descriptive model established in Mattissen (2024), which is applicable cross-linguistically; it assumes the interaction between lexically-inherent actional classes (on the basis of Breu 1992, 1994, 1996, 1997, 2000, 2007, 2009; currently 13 classes, which may be represented in any language independent of an aspect system), a morphosyntactic and binary aspect opposition (perfective – imperfective) and/or aspectoid markers (such as progressive, completive, habitual etc.). The actional classes differ in their design with respect to lexicalised boundaries (initial, final, intermediate) and phases (static, dynamic, accruing, (non-)interruptible, temporary or permanent). They can only be tested language-specifically, and cannot be predicted, especially not by reasoning (linguistic symbols stand for concepts/notions of extra-linguistic realities only).

In a fully grammaticalised, i.e. binary, aspect system, the perfective forms select the inherent boundaries or the temporariness of a verbal meaning (according to the respective actional class), hence they signal boundary transgression or temporal delimitation and are used for sequential states of affairs, as well as for the intruding state of affairs in the incidency taxis constellation. Imperfective forms select the inherent phase(s), hence signal an existing situation "intra-boundaries" (e.g. action in progress) and are particularly used for states of affairs in simultaneous taxis constellations, the backgrounded state of affairs in the incidency constellation as well as for habitual and generic states of affairs, to give a rough orientation. Arguments and adverbials must be compatible with the inherent valence of the verb and with the manner of affectedness of a participant (e.g. holistic, gradual, partial), both inherent in the verbal meaning. They can activate the inherent (and pre-defined) actional class readings, but do not change the actional class of the VP or other syntagmatic expressions (Mattissen 2024).

Besides fully grammaticalised and obligatory aspect systems, for instance in Romance (e.g. French, Spanish, Romanian), Kartvelian (e.g. Laz, Georgian), Slavic (e.g. Bulgarian, Russian) and Semitic (e.g. Modern Standard Arabic, Maltese) languages, Tagalog (Austronesian), Cayuga (Iroquoian) and Ngan'gityemerri (Southern Daly), there are languages with advanced aspectoid systems which do not (yet) have a binary opposition of perfective and imperfective forms, such as English, Hungarian (Finno-Ugric), Japanese, Turkish (Turkic), Ket (Yeniseian) or Nivkh (Paleosiberian).

Among the languages with a fully grammaticalised, i.e. binary aspect opposition, this opposition is encoded, for instance, by different verb stems or suppletion (e.g. Greek), inflectional endings (e.g. Romance and Kartvelian languages), by

affixes on the verb (e.g. Slavic and Kartvelian languages), by reduplication (e.g. Tagalog, Ngan'gityemerri), light verbs (e.g. Ngan'gityemerri, Basque) or combinations of the above. These languages may also have aspectoid markers that combine with the aspect forms and are at different stages of grammaticalisation, e.g. in Maltese (Stolz and Ammann 2008). Among the languages with an advanced aspectoid system, basically the same range of forms can be observed, but forms are not in a binary opposition.

This contribution proceeds as follows: Section 1 introduces the classification of head, dependent and double marking of aspectual values and elaborates on the stacking of seemingly contradictory aspectual values in contrast to conflation. Section 2 deals with differential lexicalisation and section 3 with goal-attainment verbs. Section 4 discusses the relation of verb, satellite and serial framing to goal-attainment verbs, differential lexicalisation and the inventory of local cases and adpositions in languages and works out whether there are correlations between the structural phenomena presented. Section 5 concludes.

1.1 Head marking and dependent marking of aspectual values

The first concept to be introduced here is the distinction of head and dependent marking of aspectual values. When aspect languages as well as languages with an advanced aspectoid system mark all aspectually relevant material on the verbal head and do not need participants or adverbials to activate one or the other reading of the inherent actional class this is understood to be head marking of aspectual values here. When languages of either type rely on participants, adverbials or copredicates to activate an inherent intra-boundaries reading or boundary-transgression reading, this strategy is called dependent marking here. Dependent marking takes the form of the presence of a participant or adverbial, of quantifying and individuating morphology on participants, including differential object marking (DOM) and articles, and marking of adverbials. Most languages seem to make use of a mixed strategy, which is called double marking here.

Head, dependent and double marking are analysed together with the distinction of full and partial affectedness and effectedness with verbs of consumption and production in this section.

1.2 Dependent marking of aspectual values

Dependent marking of aspectual values may seem an odd concept as "aspect" is a verbal category, represented by binary perfective and imperfective forms. However,

"aspectuality", the notional distinction of a state of affairs presented as an existing phase "intra-boundaries" (e.g. progressive, stative, partial affectedness/effectedness) vs. as a boundary transgression (e.g. ingressive or completive readings) or as a state of affairs *en bloc* (delimitative reading) can be expressed by other means than the verb, in interaction with lexically inherent actional values of verbs.

A candidate for (strong) dependent marking of aspectuality, taking the form of dependents activating the verb-inherent readings, is Finnish (Finno-Ugric). The language has no perfective/imperfective verb forms, but a few (head marking) aspectoid markers (Leinonen 1984: 245; Bridgen 1984: 193; Kiparsky 1998: 293), and no article system, but uses DOM for encoding a binary opposition of aspectual values (Kiparsky 1998:267, 272). The actional class of a verb controls whether DOM is possible or whether the verb governs almost only the partitive or only the accusative case (Heinämäki 1984: 154, 163–165; cf. Kiparsky 1998: 281–282; Larsson 1984: 99). If DOM is possible, partitive is chosen for partial affectedness (1b, d), encoding of ongoing situations (1d, f, h) including backgrounded states of affairs in the incidency constellation (1k), conativity or iterativity/habituality ((1h), depending on the concrete actional class of the verb), i.e. shades of non-transgression of the final boundary; accusative case activates a boundary-transgression reading, in particular full affectedness or effectedness of a participant and goal attainment (1a, c, e, g, i). Compare the following examples:

(1) Finnish (Kiparsky 1998: 267, 272, 273; Leinonen 1984: 246–247, 249; Heinämäki 1984: 154)

a. *ostin* *omen-at*
buy.1SG.PST apple-ACC.PL
'I bought (all) the apples.'

b. *ostin* *omen-oita*
buy.1SG.PST apple-PART.PL
'I bought (some of the) apples.'

c. *hän* *kirjoitti* *kirjee-t*
3SG write.PST.3SG letter-ACC.PL
's/he wrote the letters'

d. *hän* *kirjoitti* *kirje-itä*
3SG write.PST.3SG letter-PART.PL
's/he wrote (some) letters' or 's/he was writing (the) letters when. . .'

e. *kaadoin* *puun*
fell.PST.1SG tree-ACC
'I felled a tree.'

f. *kaadoin puuta*
fell.PST.1SG tree-PART
'I was felling a tree.'
g. *hän avasi ikkuna-n*
3SG open.PST.3SG window-ACC.SG
's/he opened the window'
h. *hän avasi ikkuna-a*
3SG open.PST.3SG window-PART.SG
's/he was opening the window, when. . .', or 's/he opened the window for a while', or 's/he opened the window a bit/partly', or 's/he opened the window again and again'
i. *ammuin karhu-n / karhu-t*
shoot.PST.1SG bear-ACC.SG bear-ACC.PL
'I shot the/a bear / the bears'
j. *ammuin karhu-a / karhu-ja*
shoot.PST.1SG bear-PART.SG bear-PART.PL
'I shot at the/a bear / (the) bears'
k. *Pidin hattu-a käde-ssä-ni*
keep.PST.1SG hat-PART.SG hand-INESS-my
'I kept the hat in my hand . . .' (e.g. when s.o. entered.)

The Finnish partitive case differs in function from partitives in French (partitive article *du, de la, des*) and Russian (see Section 1.4, examples (11), (12)). In these languages the partitive is restricted to mass and plural nouns. In Finnish, count nouns in the singular or plural and even persons' names (Heinämäki 1984: 171) are marked with partitive. It is the affectedness of the participant that plays the crucial role, and affectedness is the effect of the state of affairs on the participant, controlled by the lexically inherent readings of the verb. Said the other way round, it is not the properties of the noun that control DOM, but the actional class and reading of the verb. Nevertheless, affectedness marking is not on the verb, but on its participant, the dependent. I am not aware of further equally strong dependent-marking aspect systems (cf. also Kiparsky 1998: 296).

1.3 Head marking of aspectual values

In contrast to the strategy of having a dependent activate the readings provided for by the actional class of the verb, in pure head-marking aspectual systems dependents are not needed for that activation. Typically, in such languages participants need not be overt and/or marked for definiteness, number/quantification and/or

case (i.e. have individuating or quantifying features). In contrast, in addition to aspect and/or aspectoid markers, predicates tend to have polypersonal and referential inflection (cf. Evans 2002) or inflection for the undergoer (including undergoer oriented voice, as in Tagalog, or other person constellation marking, as in Japanese (Mattissen 2015)), making the presence or absence of an overt nominal participant irrelevant for the aspectual reading.

Aspectually head-marking languages are, for instance, Laz, Tagalog, Ngan'gityemerri, Cayuga and Modern Standard Arabic, as well as Nivkh and Japanese with an advanced aspectoid system.

Laz has fully grammaticalised perfective and imperfective polypersonal verb forms, but no case and referentiality marking on the participants, which need not be overt; number marking is marginal. Its actional classes were discussed in Mattissen (2001, 2003a). Full affectedness or effectedness is additionally signalled by the use of a completive preverb on the perfective form.

(2) Laz (Mattissen 2003a: 263, 2001: 38, 1995: 63)
   a. *(oşǩuri)* *şǩomi*
      apple eat.PFTV.PST.(1>3)SG
      'I ate (an/the apple/(the) apples)'
   b. *(oşǩuri)* *bimxortʼi*
      apple eat.IPFV.PST.(1>3)SG
      'I was eating (an apple/(the) apples).'
   c. *mektubi* *nčaru*
      letter write.PFTV.PST.(3>3)SG
      'S/he wrote a letter/letters.'
   d. *mektubi* *do-nčaru*
      letter CPL-write.PFTV.PST.(3>3)SG
      'S/he wrote (and finished) the letter(s).'

In its sister language Georgian, the overt nominal participant of a perfective verb form does not change its case marking in dependence of the presence or absence of the completive preverb on the perfective form. With verbs of consumption and production, it is the presence of the completive preverb that signals full affectedness or effectedness, its absence partial affectedness.

(3) Georgian (Vogt 1936: 238)
   a. *ṗuri* *v-čame*
      bread 1SG-eat:1SG.PFTV.PST
      'I ate (at the) bread'

b. *ṗuri* *še-v-čame*
bread CPL-1SG-eat:1SG.PFTV.PST
'I ate up the bread'

Ngan'gityemerri, a polysynthetic language, presents a similar picture where participants are concerned. The language has verbs in several actional classes and perfective and imperfective inflection as well as aspectoids (Reid 2011: 176–178, 185–188, 230–232, 240–244). The nominal participants are not marked for any categories.

(4) Ngan'gityemerri (Reid 2011: 177–178)
a. *egeningge* *wubum-da*
goose 3SG.Bash.PFTV-shoot
'he shot a goose'
b. *egeningge* *webe-dada-tye*
goose 3SG.Bash.IPFV-shoot.RED-PST
'he was shooting geese'

The Tagalog aspect system also makes use of reduplication for the imperfective forms. Tagalog verb forms are apersonal, but distinguish two actor voices and three undergoer voices.

(5) Tagalog, extract of the paradigm of 'buy' (cf. Latrouite 2011: 31–32)

actor voice realis	perfective	imperfective
-um-	*bumili*	*bumibili*
undergoer voice realis	"effective voice"	
-in	*binili*	*binibili*
undergoer voice realis	"superficial voice"	
-an	*binilhan*	*binibilhan*
undergoer voice realis	"theme voice"	
i-	*ibinili*	*ibinibili*

The lexical actional class of the verb and the voice affix on the predicate control the affectedness or effectedness of the participant in the *ang*-phrase of a clause. Undergoer voice *-in* signals an effected or totally affected participant or an attained goal, undergoer voice *-an* a superficially or partially affected participant, including path, source and recipient, and undergoer voice *i-* a moved theme, an instrument or beneficiary (cf. Himmelmann 1987: 132–139). Note that the nominal participants are not marked for referentiality or quantification in (6).

(6) Tagalog (Latrouite 2011: 165–166, 158–159)

a. *i-sulat mo ang pangalan*
TV-write 2SG.GEN NOM name
'write your name' (the name is not created by writing)

b. *sulat-in mo ang liham*
write-EV 2SG.GEN NOM letter
'write a/the letter'

c. *sulat-an mo ang papel / ang abogado*
write-SV 2SG.GEN NOM paper NOM lawyer
'write on paper / write to the lawyer'

d. *kain-in mo ang isda.*
eat-EV 2SG NOM fish fully affected
'you eat the fish'

e. *kain-an mo ang isda.*
eat-SV 2SG NOM fish partially affected
'you eat from the fish'

Not just any verb is compatible with all of the voices (Himmelmann 2008: 499, 1987: 129–145). Typically this "differential voice marking" (DVM), as it is called here, is possible for verbs of production (6a–c), consumption (6d–e) and goal-attaining motion (see Section 3, (42)). As such verbs are characterised by an inherent dynamic and incremental phase which can be interrupted at any point, as well as a final boundary, DVM distinguishes a delimitative reading (end of a state of affairs without final boundary transgression) and a completive reading (with final boundary transgression, when the undergoer is fully affected or effected by the state of affairs).

Insofar, Tagalog with its head-marking DVM is the mirror image of Finnish, where affectedness or effectedness is marked on the participant by DOM, i.e. dependent marking.

Cayuga, a polysynthetic language like Ngan'gityemerri, but of the holophrastic type (Mattissen 2017a: 90), operates with predicate forms (Sasse 2000: 238) and does not have nominal participants as such that could activate one or the other reading.

(7) Cayuga (Sasse 2000: 231–232)

imperfective	perfective
aka:trę́:no:t	*akatrę́nó:tę́*
'I am singing' = 'the voice stands on me'	'I sang' = 'I made the voice stand'

Cayuga makes use of voice marking for aspect: the causative forms are perfective, the semireflexive forms are imperfective (intransitive-anticausative, Sasse 2000: 196, 232, 238), as well as of differential lexicalisation (see Section 2) for a finer-grained distinction of actional classes.

Polysynthetic Nivkh with an advanced aspectoid system incorporates the "incremental" participant as well, in the form it has as a free-standing word form.

(8) Nivkh (Mattissen 2012)
a. *ʈʻas ñaqr-ux pitɣə-uru-ɖ*
hour one-LOC book-read-IND/NML
'I read a book for one hour.'
b. *ʈʻas ñaqr-ux pitɣə-uru-ɣər-ʈ*
hour one-LOC book-read-CPL-IND/NML
'I read a book in one hour.'

Another aspectually head-marking language is Russian. In Russian, most aspect pairs of verbs consist of an unmarked imperfective form and a perfective form bearing a grammaticalised preverb (cf. Isačenko 1962). Nominal participants are marked with the same case and number in both aspects. Verbs of consumption and production typically have two perfective forms with two different grammaticalised preverbs, one with a delimitative reading (mostly with the preverb *po-*), signalling that the state of affairs has stopped or ended without transgressing the final boundary, i.e. without fully affecting/effecting the participant ('V-ed for a while/spent some time V-ing'); the other with a completive reading, i.e. signalling the transgression of the final boundary through full affectedness/effectedness of the participant (cf. Mattissen 2024: 174).

(9) Russian (Isačenko 1962: 359, 360, 362, 383, 391–392)

infinitive		3SG.M.CPL.PFTV	3SG.M.DEL.PFTV
est'	'eat'	*s''-e-l*	*po-e-l*
čitat'	'read'	*pro-čita-l*	*po-čita-l*
pisat'	'write'	*na-pisa-l*	*po-pisa-l*
tancevat'	'dance'	*s-tanceva-l*	*po-tanceva-l*

Braginsky and Rothstein (2008: 19, 22–23) note that neither the presence or absence of an overt object nor quantification of the object influence the aspectual effect (definiteness is not marked on a Russian noun/NP) and that the compatibility and reading of Russian verbs with adverbials (e.g. of time span, or *postepenno* 'gradually') does not change between their unprefixed and prefixed forms, between transitive and intransitive verbs, nor for singular and plural objects (as in (10)).

They conclude that this "indicates that the incrementality is inherent in the verb meaning and not derived from a structure imposed on a plurality or from a completive reading dependent on the definiteness of the direct object" (Braginsky and Rothstein 2008: 19), a clear trait of aspectual head-marking.

(10) Russian (Kiparsky 1998: 7; Braginsky and Rothstein 2008: 28)

a. *on* *pisa-l* *pis'm-a*
3SG.M write-PST.M.SG letter-ACC.PL
'he wrote letters'

b. *on* *na-pisa-l* *pis'm-a*
3SG.M CPL-write-PST.M.SG letter-ACC.PL
'he wrote the letters' (completely)

c. *Ivan* *postepenno* *e-l* *syr* */ pirog-i*
I. gradually eat-PST.M.SG cheese / cake-PL
'Ivan gradually used to eat / was eating cheese / cakes'

d. *Ivan* *postepenno* *s''-e-l* *syr* */ pirog-i*
I. gradually CPL-eat-PST.M.SG cheese / cake-PL
'Ivan gradually ate cheese / cakes' (completely)

The phenomena mentioned in this section are head marking insofar as any dependents present do not distinguish readings of the verb, but marking on the verb controls the readings of the verb and participants. Nevertheless, Russian has some DOM which will be taken up in the next section.

1.4 Double marking of aspectual values

Double marking of aspectuality combines aspectual markers on the verb with features marked on overt participants, such as individuation and quantification, or adverbials that activate one of the possible lexically inherent readings according to the actional class of the verb.

In Russian, masculine mass nouns in object function to a perfective verb form are marked either with accusative case for full affectedness or with genitive for partial affectedness (11). As both the verbal head (perfective form) and the dependent (case) interact, this constitutes a niche of double marking. The distinction cannot be made with imperfective verb forms, however (Paducheva 1998); this underlines that it is the verb form which controls affectedness, not the marking of the noun.

(11) Russian (de Hoop and Malchukov 2007: 1652–1653)

a. *on* *vy-pi-l* *vod-y* completive reading
3SG.M CPL-drink-PST.M.SG water-GEN.SG
'he drank up (some) water'

b. *on* *vy-pi-l* *vod-u* completive reading
3SG.M CPL-drink-PST.M.SG water-ACC.SG
'he drank up the water'

c. *on* *po-pi-l* *vod-y* delimitative reading
3SG.M DEL-drink-PST.M.SG water-GEN.SG
'he drank some water (a little bit/for a while)'

d. *on* *po-pi-l* *vod-u* delimitative reading
3SG.M DEL-drink-PST.M.SG water-ACC.SG
'he drank (the) water (a little bit, for a while)'

e. **on* *pi-l* *vod-y* imperfective form
3SG.M drink-PST.M.SG water-GEN.SG
'he was drinking from the water'

Whereas in Russian, a partitive form is not compatible with an imperfective, in French, it is a non-partitive marked mass noun (implying full affectedness/effectedness) that is incompatible with an imperfective form, but fine with a perfective form. Partitive marked mass nouns, signalling partial affectedness/effectedness, are compatible with both perfective and imperfective forms in French ((12), also in contrast to Russian). Again, it is the verb form that controls affectedness/effectedness.

(12) French (Mattissen 2017b)

a. *il* *a* *bu* *du* *vin*
he has drunk [PFTV.PST] ART.PART wine
'he drank (from the/some) wine'

b. *il* *a* *bu* *le* *vin*
he has drunk the wine
'he drank up the wine'

c. *il* *buvait* *du* *vin*
he drink.IPFV.PST.3SG ART.PART wine
'he was drinking/used to drink (from the) wine'

d. **il* *buvait* *le* *vin*
he drink.IPFV.PST.3SG the wine
'he was drinking up the wine'

In the aspect language Spanish, the perfective and imperfective are inflectional forms of the verb; individuation and quantification are marked on the nominal

participant by articles and quantifiers; and full affectedness/effectedness is again marked on the verb by the obligatory reflexive proclitic *se* acting as a completive marker. The completive marker interacts with different types of measuring dependents, including cognate objects (measuring a state of affairs by singling out one instance of it), with physical measures (of space or time), and fully effected products (Mattissen 2024: 179–180, 176), while being incompatible with non-quantified patients (cf. Nishida 1994: 431–432, 439) and with imperfective forms ((13), except when the reading is habitual; Nishida 1994: 446).

(13) Spanish (Mattissen 2017b; Chapado Chorro and García García 1991: 66)

a. *La semana pasada Carmen se pintó un cuadro.*
ART week past C. REFL paint.PFTV.PST.3SG a picture
'Last week, Carmen painted a picture.'

b. *Se comió dos/las manzanas / una/la manzana.*
REFL/CPL eat.PFTV.PST.3SG 2/DEF.PL apples / one/the apple
'S/he ate two/the apples / a/the apple.'

c. *Comió manzanas.*
eat.PFTV.PST.3SG apples
'S/he ate apples.'

d. **Se comió manzanas.*
REFL/CPL eat.PFTV.PST.3SG apples
'S/he ate up apples.'

e. **Comió dos manzanas / la manzana.*
eat.PFTV.PST.3SG 2 apples / the apple
'S/he ate two apples / the apple.'

As *se* is a reflexive marker, i.e. a voice or valency marker, Spanish is able to make a partial vs. full affectedness/effectedness distinction on verbs of consumption, production and goal attainment via valency change in a similar way to Tagalog DVM, whereas French has DOM (although not traditionally acknowledged as such) reminiscent of Finnish.

Bulgarian, similar to the Kartvelian languages, operates with completive preverbs in addition to perfective and imperfective inflection, instead. Like Georgian, Bulgarian usually prefixes the perfective forms; with verbs of consumption and production prefixing is used to distinguish the delimitative reading (without a preverb; the state of affairs ends with partial affectedness/effectedness of the undergoer) from the completive reading (with the preverb; full affectedness/effectedness). In Bulgarian, the perfective form of a transitive verb cannot be used without a direct object (Lindstedt 1985: 185; compare Oltenian-Romanian, Mattissen 2024: 177) and the completive preverb triggers the definite marker on the unquantified nominal

participant, i.e. verb marking and participant marking interact, there is double marking.

(14) Bulgarian (Lindstedt 1985: 185)
a. *jadox* *zaxar*
eat.PFTV.PST.1SG sugar
'I ate some sugar'
b. *iz-jadox* *zaxar-ta*
CPL-eat.PFTV.PST.1SG sugar-DEF
'I ate the sugar'

Tagalog, Georgian, Laz, Spanish, Bulgarian, Russian and Finnish show that in head-marking, double-marking and dependent-marking aspect systems the delimitative (without final boundary transgression) and completive readings of verbs of consumption and production can be distinguished by morphosyntactic means, which are marked on the verbal head in head-marking and double-marking systems.

In Greek, however, the perfective form together with a definite object has a completive reading without additional markers, while in the absence of an object or with a non-definite object the perfective form is neutral with respect to boundary transgression (cf. Stephany 1985: 39–40).

(15) Greek (Stephany 1985: 40; Kiparsky 1998: 263)
a. *i* *María* *ðiávase* *tin* *efimeríða*
ART M. read.PFTV.PST.3SG ART newspaper
'María read the newspaper.'
b. *i* *María* *ðiávase* *efimeríða*
ART M. read.PFTV.PST.3SG newspaper
'María did newspaper-reading.'
c. *eɣrapse* *ta* *ɣrama-ta*
write.PFTV.PST.3SG ART letter-ACC.PL
'S/he wrote the letters.'
d. *eɣrapse* *ɣrama-ta*
write.PFTV.PST.3SG letter-ACC.PL
'S/he wrote letters.'
e. *eɣrafe* *ta* *ɣrama-ta*
write.IPFV.PST.3SG ART letter-ACC.PL
'S/he was writing letters.'
f. *eɣrafe* *ɣrama-ta*
write.IPFV.PST.3SG letter-ACC.PL
'S/he was writing letters.'

Turning to languages with an advanced aspectoid system, English has double marking of aspectual values with a strong tendency towards dependent marking. The grammaticalised progressive and past habitual are marked on the head. Dependent marking is based on the presence, individuation and quantification of nouns (e.g. by articles) as well as on adverbials and copredicates. The readings that are lexically inherent in the actional class of the verb are activated by the properties of a participant so that it acts as an increment, measure, or telos (see (16)). It is especially striking that verbs of consumption, production and goal-attainment are generally valency-labile, i.e. can be used with (transitive) or without an object (intransitive), such as *eat (sth.), draw (sth.)*.

(16) English

delimitative reading	completive reading	
I ate	*I ate an apple*	
I ate apples	*I ate the apples, I ate three apples*	
	I ate up	
I danced	*I danced a dance*	(cognate object)
I ran	*I ran a mile*	(physical measure)
	I ran to the park	(telos)

In the absence of an overt object in the clause or when a plural noun without an article realises the object, the delimitative reading (partial affectedness) is activated. An overt object with an article or quantifier sets a telos to the state of affairs and activates the completive reading. For example, eating ends when stopped deliberately at some point (before the plate is empty), yielding a delimitative reading of *ate*, or when the food is completely consumed (boundary transgression, completive reading as in *ate an apple*). Alternatively, the completive reading can be encoded by an overt telos marker (signalling that there is no more supply), as in *eat up*. In order to be measurable, a state of affairs must have an initial and final boundary. A cognate object measures out a state of affairs by singling out one full entity of it *en bloc* (from beginning to end). A cognate object is therefore incompatible with an "intra-boundaries" reading, such as of a progressive.

(17) **They were dancing a dance when . . .*

In Hungarian with its advanced aspectoid system, full and partial affectedness can be signalled by differential object (dependent) marking on mass nouns, which is in turn mirrored on the verb by (in)definite undergoer marking. Full affectedness/effectedness is marked by accusative and definite article as well as definite undergoer marking on the verb (18) (Knittel and Forintos-Kosten 2002). Partial affected-

ness is encoded by elative on the noun and indefinite undergoer marking on the verb.

(18) Hungarian (Leinonen 1984: 245)
a. *et-te* *a* *sùtemény-t*
eat-3SG.PST.DEF the pastry-ACC
's/he ate the pastry'
b. *ev-ett* *a* *sùtemény-bòl*
eat-3SG.PST.INDEF the pastry-ELA
's/he ate from (some of) the pastry'

Hungarian uses preverbs for the aspectual distinction (Knittel and Forintos-Kosten 2002). They interact with definiteness and indefiniteness of the object, signalled by the definite article, and (in)definite undergoer marking on the verb (19). The indefinite object must be overt, as (19e) shows. When there is a definite object marker on the verb an overt nominal can be optional.

(19) Hungarian (Knittel and Forintos-Kosten 2002: 58, 59, 63–64, 78)
a. *Mari* *ette* *az* *almá-t*
M. eat.3SG.PST.DEF the apple-ACC
'Mari was eating the apple (and may still be eating it).'
b. *Mari* *meg-ette* *az* *almá-t*
M. PFTV-eat.3SG.PST.DEF the apple-ACC
'Mari ate up the apple.'
c. *Mari* *evett* *egy* *almá-t*
M. eat.3SG.PST.INDEF an apple-ACC
'Mari ate an apple.'
d. *Mari* *meg-evett* *egy* *almá-t*
M. PFTV-eat.3SG.PST.INDEF an apple-ACC
'Mari did eat an apple indeed.'
e. **Mari* *meg-evett*
M. PFTV-eat.3SG.PST.INDEF
'Mari ate.'
f. *Mari* *meg-ette*
M. PFTV-eat.3SG.PST.DEF
'Mari ate it.'

Both aspect and advanced aspectoid systems can be head marking or double marking and distinguish marking of partial vs. full affectedness/effectedness as

well as delimitative and completive readings. Valency and preverbs are the most important means in addition to aspect or aspectoid inflection.

1.5 Stacking or conflation?

Besides matching combinations of aspect forms with aspectoids such as imperfective with progressive, aspectual values of the imperfective and the perfective realm can be combined. Typical combinations are habitual sequences of boundary transgressions (perfective in the scope of imperfective) or a temporally extended approach to the final boundary transgression (imperfective in the scope of perfective), e.g. in Bulgarian, Georgian and Spanish. However, not all aspect or advanced aspectoid languages can stack markers in this way, but resort to a conflational strategy instead, as will be shown here. Conflation will be taken up again in the context of verb/satellite framing in Sections 4.1, 4.2 and 4.4.

Turning to Bulgarian and Georgian first, perfective past (*aorist*) forms in these languages usually bear a completive preverb, whereas imperfective forms generally do not (cf. Lindstedt 1985: 169–175; Holisky 1981: 139–141). However, it is possible not to prefix a perfective form (the so-called "imperfective aorist") in order to signal the durativity or temporal extension of a state of affairs in a sequence (20). On the other hand, prefixation of an imperfective form (so-called "perfective imperfect") is possible for a habitual sequence of states of affairs (cf. Lindstedt 1985: 169–171, 189–190).

(20) Bulgarian (Lindstedt 1985: 175, 189)

a. *Toj caruva trijset godini.*
he reign.PFTV.PST.3SG 30 years
'He reigned for thirty years.'

b. *vseki păt, kogato iz-lezexme na poljana,*
every time when CPL-come.out.IPFV.PST.1PL on meadow
viždaxme. . .
see.IPFV.PST.1PL . . .
'Every time we came out onto a meadow, we saw. . .'

Spanish can combine a perfective past form (*indefinido*) and a progressive (*estar* + gerund) as in (21a) (cf. Chapado Chorro and García García 1991: 64–65; Breu 1994: 38) for the expression of a temporal extension of a completed state of affairs. In addition, Spanish can express a temporally stretched approach to the final boundary transgression or immediacy of the final boundary transgression with a progressive imperfective past form combined with the completive marker *se* and a patient

marked as fully affected by the definite article. Example (21b) expresses taking the last forkful of the meal to the mouth. The imperfective is used because the final stage of eating constitutes the backgrounded state of affairs in the incidency taxis constellation. The intruding state of affairs (in the perfective past) is that a shot is heard.

(21) Spanish (Sanz 2000: 87)

a. *Mi hermano estuvo leyendo un libro.*
my brother be.PFTV.PST.3SG read.GER a book
'My brother was reading a book.'

b. *Se estaba comiendo la carne cuando*
REFL/CPL be.IPFV.PST.3SG eat.GER the meat when
oyó un disparo.
hear.PFTV.PST.3SG a shot
'S/he was just eating up the meat dish when s/he heard a shot.'

In Russian, such a temporally stretched approach to the final boundary transgression can be encoded by the so-called secondary imperfective of (usually prefixed) terminative verbs (depending on the inherent actional class), which can also have a habitual or conative (but no progressive) reading (Isačenko 1962: 366).

(22) Russian (Isačenko 1962: 396; Batiukova 2015: 33)
do-pit' 'drink up' *dopivat'* 'to be drinking up'
do-pisa-t' 'write up' *do-pis-yva-t'* 'to be finishing writing'

In polysynthetic Nivkh with its advanced aspectoid system (cf. Mattissen 2003b: 16–18, 2024; Gruzdeva 2012) the completive and the progressive suffix can be stacked on the verb form to encode the stretched approach to the final boundary transgression, e.g. in (23).

(23) Nivkh (Mattissen 2012)
ra-yət-ivu-ŋan. . .
drink-CPL-PROG-CV
'when almost having finished drinking it . . .'

Similar stacking is possible in the polysynthetic aspect language Ngan'gityemerri (Reid 2011: 174–177).

In the aspect languages French and Italian, however, such a stacking is not possible (cf. Bertinetto and Delfitto 2000: 197; Breu 1994: 39). The temporally stretched approach to the final boundary transgression cannot be encoded by combining

an imperfective past form (*imparfait, imperfetto*) or past progressive form with a participant marked for full affectedness (as in (24a–c)). Instead, a different verb featuring an inherent final boundary with a preceding conative phase (gradual terminative actional class, Mattissen 2024: Ch. 2.6.1) has to be used in its imperfective past (progressive) form, viz. *finir* and *finire* 'finish' (as in (24d, e)).

(24) French (Mattissen 2017b)

a. **il buvait le vin quand . . .*
he drink.IPFV.PST.3SG the wine when
'he was drinking up the wine when . . .'

b. **il était en train de boire le vin quand . . .*
he PROG(be.IPFV.PST).3SG drink the wine when
'he was drinking up the wine when . . .'

c. **il fut en train de boire le vin quand . . .*
he PROG(be.PFTV.PST).3SG drink the wine when
'he was drinking up the wine when . . .'

d. *il finissait le vin quand . . .*
he end.IPFV.PST.3SG the wine when
'he was drinking up the wine when . . .'

e. Italian (Haßler 2016: 256)
Francesca stava giusto finendo di scrivere una
F. be.IPFV.PST.3SG just finish.GER of write a
lettera, . . .
letter
'Francesca was just finishing writing a letter,. . .'

The verb *finir* then conflates the manner of consumption or production, e.g. *manger* 'eat' or *boire* 'drink' etc., or has the manner verb as its satellite as Italian *finire*. Conflation of manner reminds of the lexicalisation patterns of path and manner (Talmy 1985, 2000; Slobin 2004), as verb framing construes manner, if at all, as a satellite; one reason for searching for a correlation between aspectual marking and verb/satellite framing in Section 4.

In sum, preverbs are a strategy of distinguishing delimitative and completive readings with verbs of consumption, production and goal-attainment as well as of expressing a stretched approach to final boundary transgression. Languages that do not operate with preverbs may use other forms of stacking, e.g. combinations of aspectoids or of aspect and aspectoid markers. Stacking is possible in both aspectually head-marking and double-marking systems and in aspect and advanced aspectoid systems, especially polysynthetic ones, but not a necessary feature.

Aspect languages that do not allow stacking are, for instance, French and Italian. These languages resort to conflating manner of action by a general boundary transgression verb.

Manner conflation can be seen as a contrasting strategy to differential lexicalisation, to be discussed in the next section.

2 Differential lexicalisation

Differential lexicalisation is understood here in the sense of a finer semantic granularity featured by verbs with respect to valence and actional class. A language with differential lexicalisation tends to have more specific verbs.

With respect to valency, differential lexicalisation means that verbs are not labile, but in all their uses are either atransitive or intransitive or monotransitive or ditransitive etc., with fixed semantic roles of their participants. Further arguments may not be added without overt derivation, and typically, separate verbal lexemes exist for affine concepts with different valencies, in a derivational or suppletive relation.

Laz, a polypersonal aspect language, is a pertinent example. All participants are encoded on the verb by inflection and version (valency) vowel and there are separate verbs formed from the same root by different conjugation class markers, version vowels, preverbs and voice markers (such "building-blocks" are separated by a dot in (25)).

(25) Laz (Mattissen 2003a: 265–266)

intransitive		transitive	
b.i.ncir.am	'I go to bed/to sleep'	*b.o.ncir.am*	'I bring s.o. to bed'
b.i.bir.am	'I play'	*b.u.bir.am*	'I play with sth. of s.o.'

Likewise, Nivkh (with an advanced aspectoid system) clearly distinguishes transitive and intransitive verbs

(26) Nivkh (Mattissen 2003b: 29)

intransitive verb		transitive verb	
ţo-ɖ	'sth. bends'	*zo-ɖ*	's.o. bends sth.'
oz-ɖ	's.o. rises'	*j-ozu-ɖ*	's.o. wakes s.o. up'

Ngan'gityemerri distinguishes single and multiple undergoer verbs.

(27) Ngan'gityemerri (Reid 2011: 187)

single undergoer		multiple undergoers (iteration)	
-tyat-	'place one thing in a position'	*-tyuk-*	'place multiple things in a position'
-ket-	'chop'	*-gerrgirr-*	'chop into multiple parts'

Compare this to languages like English (with an advanced aspectoid system) with its broad range of labile verbs, such as *eat (sth.), draw (sth.), sing (sth.)*.

Differential lexicalisation also yields semantically affine verbs that belong to different actional classes (cf. also Sasse 2000: Ch. 5.3.1, 5.3.2). For motion verbs, for instance, this means that they are fixed as to whether goal-attainment is lexically inherent or not, for telic verbs, whether the resultant state is lexically inherent or not. Compare, for instance, Cayuga (cf. Sasse 2000: 211, 223) and English.

(28) Cayuga (Sasse 2000: 237, 232)

terminative		aterminative	
-ya'k-	'cut' ('sever')	*-hren-*	'cut' ('incise')
-k-	'eat sth., eat sth. up'	*-atekhǫni-*	'eat' ('have a meal', intr.)

In Laz, derivationally related n-tuples pervade the system of verbal lexemes.

(29) Laz (Mattissen 1994–2000, 2003a: 265–266)

aterminative		terminative	
mcar	'I sleep'	*bi.ncir.am*	'I go to bed / go to sleep'
p.xe.r	'I sit'	*dop.xed.ur*	'I sit down'
bi.gza.r	'I walk'	*bi.gzal.am*	'I depart'
ma.zir.en	'I see sth.'	*b.zir.am*	'I find sth.'

Its sister language Georgian derives intransitive aterminative verbs from manner-of-motion-verbs (Holisky 1981: 73–78).

(30) Georgian (Holisky 1981: 74–75)

terminative		aterminative	
goravs	'roll'	*goraobs*	'roll around'
curavs	'swim'	*curaobs*	'swim around'
xṭunavs	'jump'	*xṭunaobs*	'jump around'

In addition, the preverb *da-* derives non-goal-attaining path verbs with meanings such as "motion back and forth, here and there, frequent or regular coming and

going" (Holisky 1981: 78–79). The non-goal-attaining verbs are neither compatible with a goal phrase nor a direct object and they do not take completive preverbs (Holisky 1981: 76–78). On the other hand, ingressive derivations of manner-of-motion verbs add a path component and always have a preverb in their perfective forms (Holisky 1981: 78, 42).

(31) Georgian (Holisky 1981: 78)

ga-gor-d-eba	'roll out'
šemo-gor-d-eba	'roll in'
mi-gor-d-eba	'roll away from speaker'

Himmelmann (2008: Ch. 4.2) describes what classifies as differential lexicalisation for Tagalog. For instance, dynamic and stative verbs derived from the same root belong to different paradigms.

(32) Tagalog (Panganiban 1972)

stative		dynamic	
ma-buo	'become whole/complete'	*buu-in*	'to complete/make whole'
ma-lalim	'deep'	*lalim-an*	'make deep'
ma-itim	'black'	*itim-an*	'wear black clothes'

In Japanese (advanced aspectoid system), differential lexicalisation tends to yield both valence and actional class distinction (cf. Jacobsen 1982: 92).

(33) Japanese (Jacobsen 1982: 93)

a. *Tokei-o* *naoshi-te* *iru.*
clock-ACC repair-CV be.IND
'Someone is fixing the clock.' (*naosu* 'repair' exoactive, progressive form)

b. *Tokei-wa* *naot-te* *iru.*
clock-TOP repair-CV be.IND
'The clock has been fixed.' (*naoru* 'repair' endoactive, resultative form)

In Maltese differential lexicalisation can be observed in the grammaticalisation of specialised continuatives from several different verbs (Stolz and Ammann 2008: 175–175) as well as in the grammaticalisation of verbs of beginning (Stolz and Ammann 2007: 150), which could be in line with the existence of several types of inceptive verbs in Semitic languages (cf. Mattissen 2024: 162).

Results are lexically inherent in verbs in Greek and Romance languages and therefore not overtly expressed (cf. Horrocks and Stavrou 2003) as in (34a–d), but not in English or Finnish as shown in (35a–b), where the result is encoded verb-externally.

(34) a. Greek (Giannakidou and Merchant 1999: 123)
*O Janis skupise to piato tu (*katharo).*
ART J. wipe.PFTV.PST.3SG ART plate his clean
'Janis wiped his plate clean.'

b. French (Clark 2005: 176)
*Il a essuyé la table (*propre).*
he has wiped the table clean
'He wiped the table clean.' (grammatical as 'wiped the clean table')

c. Spanish (Sanz 2000: 101)
*El río se congeló (*solido).*
the river REFL/CPL froze solid
'The river froze solid.'

d. Spanish (Sanz 2000: 102)
*Juan limpió la mesa (*impecable).*
J. cleaned the table flawless
'Juan wiped the table clean.'

(35) English
a. *wipe sth. clean, freeze solid, hammer sth. flat, sing s.o. asleep*
b. Finnish (Heinämäki 1984: 157)
metsästäjä ampui lehmän kuoliaa-ksi
hunter shoot.PST.3SG COW.ACC dead-TRNSL
'the hunter shot the cow dead'

Both English and Finnish are languages that rely heavily on dependent marking of aspectual values and therefore can afford verbs that allow a broader range of readings. The possible readings are then activated by participants, adverbials and copredicates.

Differential lexicalisation comes in handy when nominal participants are not marked for individuation or are not obligatory in a language, which is the case in aspectual head-marking systems. Differential lexicalisation is independent of polypersonalism, however, as apersonal Tagalog and monopersonal Russian show. On the other hand, both Tagalog and Nivkh mark the undergoer on the predicate,

the former by voice, the latter by person marking; Japanese has a more complex system of undergoer encoding (Mattissen 2015). Thus, it is languages with undergoer marking and polypersonal languages in my sample that have non-valency-labile verbs, are aspectually head marking and prefer differential lexicalisation with respect to actional class.

In order to build a bridge to verb/satellite framing, we will now turn to verbs of goal attainment and analyse their properties with respect to head/dependent marking, full vs. partial affectedness, differential lexicalisation, DVM and DOM.

3 Goal-attainment

Besides verbs of consumption and production, a third ontological group of verbs which frequently belong to the same actional class (successive-terminative verbs, see Mattissen 2024: 173–175) are directed motion verbs with a lexically inherent final boundary that is transgressed when the goal is attained (completive reading). They are called goal-attainment verbs here. Nevertheless, goal-attainment verbs also have a lexically inherent dynamic phase of motion leading towards the goal, and that motion can end at any point without attaining the goal (progressive or delimitative readings; cf. Mattissen 2024: 183–184). Motion verbs tend to be differentially lexicalised with respect to goal-attainment in aspectual head-marking languages, and this differential lexicalisation is all the more relevant in the context of goal prominence (cf. Himmelmann and Primus 2015).

Among the head-marking aspect languages, Laz distinguishes between goal-attainment and non-goal-attainment motion verbs by differential lexicalisation. Goal-attainment verbs are only compatible with adverbials in the motative, a case that signals motion to a goal or from a source; non-goal-attainment verbs are not compatible with adverbials in the motative, but only with case-unmarked local nouns. Compare this with English dependent marking (in the right column of (36)), where the delimitative and completive readings of the same less specific motion verb (*walk*) are activated by adverbials encoding a direction or space on the one hand (36f, g) and a goal attained (36e) on the other.

(36) Laz (Mattissen 2003a: 264) English

goal-attaining

a. *noɣa-şa bulur*
market-MOT go.1SG.PRS
'I go to the market'

e. *I walk to the market.*

non-goal-attaining

b. *noɣa go-bulur*
market PRV-go.1SG.PRS
'I go around the market'
counter check

f. *I walk around the market.*

c. **noɣa bulur*
market go.1SG.PRS
'I go to the market'

d. **noɣa-şa go-bulur*
market-MOT PRV-go.1SG.PRS
*'I go around to the market'

g. *I walk in the direction of the market.*

In Russian, a whole range of motion verbs exhibit differential lexicalisation with respect to goal-attainment (cf. Isačenko 1962: 419–424).

(37) Russian (Isačenko 1962: 423–424)

inherently goal-attaining	inherently non-directed or round trip	
idti	*xodit'*	'go'
bežat'	*begat'*	'run'
nesti	*nosit'*	'carry'
letet'	*letat'*	'fly'
plyt'	*plavat'*	'swim'

Ket, a polysynthetic language with a head-marked advanced aspectoid system, has an even finer-grained differential lexicalisation with roots for motion away (38a), goal incorporation (38b), aterminative motion (38c), round trip (38d–g), and specific path verbs oriented at the local system (38h) (cf. Werner 1997: 233–236, 206–210, 227–250; Drossard 2002: 241). The round trip verbs can incorporate goals, too.

(38) Ket (Werner 1997: 200, 233, 235; Drossard 2002: 241)

a. *ɔɣatn'* 'he goes away'
b. *d-igd-ajdaq* 'he goes into the woods' (*-igda-* lexical affix 'wood')
c. *t-tajga* 'he goes around'
d. *du-jaq* 'he runs there and back again for some days/weeks'
e. *d-igda-ksaq* 'he runs to the riverbank and back again for some days/weeks'
f. *d-butsaq* 'he runs there and back again for some hours'
g. *d-igda-butsaq* 'he runs to the riverbank and back again for some hours'
h. *d-aRar-o-l-vet*
1SG.S-go.from.wood.to.river-PST-PERF-do
'I went from the woods (Taiga) to the river'

Nivkh, polysynthetic with a head-marked advanced aspectoid system as well, has a whole system of very specific path verbs oriented at its locational system, among them goal-attaining and non-goal-attaining verbs, intransitive and transitive ones (Krejnovič 1960; Mattissen 2003b: 26–27, 138, 2006: 308).

(39) Nivkh (intransitive) (Krejnovič 1960: 80)

qaɻ 'go downriver'
tuɻ 'go upriver'
qoɻ 'go into the water, go across the river'
mayɻ 'moor on the river bank, go from river bank into the interior'
məyɻ 'go down from the mountain, down to the river bank'
mərɻ 'go up (a mountain)'

On the other hand, in dependent-marking Finnish, as in double-marking English, a general motion verb is compatible with both goal-attaining and non-goal-attaining adverbials.

(40) Finnish

a. https://amara-malik.com/fi/issues/16011-10-examples-of-dialogue-paragraphs
. . . *ja* *meni* *saare-lle*
and go.PST.3SG island-ALL
'. . . and went to the island'
b. https://www.ess.fi/uutissuomalainen/3132187
monenlaista *muuta* *väkeä* *meni* *edestakaisin*
all.sorts.of other public go.PST.3SG back&forth
'all sorts of other people went back and forth'

In advanced aspectoid and double-marking Hungarian, goal-attainment is signalled by the presence and position of a preverb on a motion verb while a participant is not marked for goal-attainment (head marking). Note the expression of the stretched approach to final boundary transgression in (41c), with the completive preverb in postverbal position (with a progressive reading in the incidency constellation, Knittel and Forintos-Kosten 2002: 53–54).

(41) Hungarian (de Groot 1984: 135)
a. *a fiú ment a szobá-ba*
the boy go.3SG.PST.INDEF the room-ILL
'the boy was going toward the room'
b. *a fiú be-ment a szobá-ba*
the boy PFTV-go.3SG.PST.INDEF the room-ILL
'the boy entered the room'
c. *a fiú ment be a szobá-ba amikor. . .*
the boy go.3SG.PST.INDEF PFTV the room-ILL when
'the boy was entering the room when . . .'

Head-marking Tagalog does not rely on differential lexicalisation for goal-attainment, but, again, on voice. Relevant manner-of-motion verbs are compatible with at least two voices, *-in* signals goal-attainment, i.e. boundary transgression, whereas *-an* signals non-attainment (cf. Latrouite 2011: 159–161; see Section 1.3). The pivotal *ang*-phrase is identical in both versions and does not signal goal-attainment on the dependent.

(42) Tagalog (Latrouite 2011: 160)
a. *akyat-in mo ang puno.*
go_up-EV 2SG.GEN NOM tree
'you climb the tree' (on top)
b. *akyat-an mo ang puno.*
go_up-SV 2SG.GEN NOM tree
'you go up on the tree'
c. *Lakar-in mo ang Luneta.*
walk-EV 2SG.GEN NOM Luneta
'Walk up to Luneta.'
d. *Lakar-an mo ang Luneta.*
walk-SV 2SG.GEN NOM Luneta
'Walk in Luneta.'

Signalling of goal-attainment follows the same strategies as signalling of full or partial affectedness and effectedness, another reason for classifying verbs of consumption, production and goal-attainment as one actional class (cf. Mattissen 2024: 169, 185).

Further on, goal-attainment constitutes a relation between aspect/aspectuality and the lexicalisation patterns of verb and satellite framing. Therefore any possible correlations between head/dependent marking of aspectual values and verb/satellite framing will be discussed in the next section.

4 Aspect and verb/satellite/serial framing

Goal attainment is related to the way direction of motion is encoded in a language. The most influential approach in this respect are Talmy's (1985, 2000) and Slobin's (2004) verb-framing and satellite-framing categorisation, even if it has been criticised in many ways (cf. Flecken at al. 2014: 49; Alhamdan et al. 2018 for an overview). Basically, verb-framing languages prefer encoding the direction of motion ("path") in the finite verb if a goal is expressed in the clause, whereas the manner of motion may be encoded as a dependent verb form, the satellite. Satellite-framed languages encode the manner of motion in the finite verb together with a goal expression, and the direction of motion by a satellite, e.g. a preverb (as in German or Slavic languages) or a particle ("postverb", as in English). Further possibilities of encoding are the use of both schemes, serialisation of manner and path (cf. Ameka and Essegbey 2013), as in Chinese (with serial verbs) or Ngan'gityemerri (in a polysynthetic verb form), or completely different structures.

(43) Ngan'gityemerri (Reid 2011: 240)
ninymunggurr *wanniny-pap*
escarpment 3PL.S.go.PERF-climb
'they climbed up onto the escarpment'

Flecken et al. (2014: 53, 71) studied attendance to possible endpoints, both verbally and in eye-tracking experiments using pictures of entities in motion underway to a goal visible afar, and found a correlation to aspect languages (e.g. Arabic, without attention to possible endpoints) and aspectless languages (e.g. German, with attention to possible endpoints), but no clearcut preferences in correlation to path and manner framing (verb and satellite-framed) languages. Motivated by their findings, this section explores whether there are correlations between the framing types and

the way aspectual values are encoded, with a special look at conflation of directional and local cases or adpositions.

4.1 Aspectual head marking and verb/satellite/serial framing

On the basis of the situation in Greek, Horrocks and Stavrou (2007: 625–626, 633) draw the conclusion that (formulated in the terminology used here) in languages with a grammaticalised binary aspect category which is encoded by different perfective and imperfective stems (not preverbs) in a verbal paradigm, verbs are either telic or atelic, i.e. in the terms used here, verbs are differentially lexicalised as to actional class. As a consequence, non-goal-attainment verbs are not compatible with goal PPs. Modern Greek is aspectually head-marking, verb-framed and combines goal phrases with path verbs only. Its prepositions are used for location and goal-marking indiscriminately, e.g. *se* 'in(to)' (44), i.e. only the verbal semantics determine the reading (Horrocks and Stavrou 2007: 620). Therefore, a locational phrase modifying a manner-of-motion verb is interpreted as location, not as direction (Horrocks and Stavrou 2007: 611, 616).

(44) Greek (Horrocks and Stavrou 2007: 611, 617)

a. *O Janis pije sto parko.*
DEF J. go.PFTV.PST.3SG in.the park
'Janis went into the park'

b. *O Orestis kolibise sto nisi.*
ART O. swim.PFTV.PST.3SG in.the island
'Orestes swam on/near the island' *'to the island'

Reformulated in the terms of the present approach the reason for this would be that goal-attainment is lexically inherent in the verb by differential lexicalisation and adverbials are not needed in order to activate that reading. Ancient Greek, on the contrary, used to be satellite-framed, could use manner-of-movement verbs with goal PPs (Horrocks and Stavrou 2007: 613) and had more prepositions that, in addition, distinguished between location and goal marking (Horrocks and Stavrou 2007: 619–620).

In our sample, further languages fit into the scenario set up by Horrocks and Stavrou (2007). Tagalog is aspectually head-marking with reduplication marking the imperfective. It has less specific cases or adpositions, in particular a multifunctional phrase marker *sa* that conflates several peripheral relations, including path, goal, location and even source. The language shows both verb and satellite framedness (see (42) and (45)).

(45) Tagalog (Latrouite 2011: 119)

a. *P<um>asok* *ako* *sa* *bahay.*
<AV>[REAL]enter 1SG.NOM DAT house
'I entered the house.'

b. *L<um>abas* *ako* *sa* *bahay.*
<AV>[REAL]leave 1SG.NOM DAT house
'I left the house.'

c. *Ilang* *beses* *ko* *rin* *sinubukan* *na* *lakar-in* ***ang***
many times 1SG.GEN also try(SV) CMPL walk-EV NOM
kagubatan
forest
at *ma-abot* *ko* ***ang*** *hangganan* *nito.*
and POT-reach(EV) 1SG.GEN NOM border its
'Many times I tried to walk through the forest and actually reached its border.'

In Tagalog, however, a location or goal may also occupy the pivotal *ang*-phrase while being reflected on the predicate by a corresponding undergoer voice affix as in (45c); cf. Latrouite (2011: 11–12). As Tagalog verbs are not generally compatible with all of the actor and undergoer voices but with their individual choice (Latrouite 2011: 39), not just any verb may promote a location and/or goal into the *ang*-phrase.

The aspectually head-marking and serial-framed language Ngan'gityemerri (Reid 2011: 160, 178) is of the composite-stem layout type of polysynthesis (Mattissen 2017a: 90) and has only a few local postpositions and case enclitics (Reid 2011: Ch. 6). It differentiates between perfective and imperfective light verbs, derives atelic verbs by reduplication and uses serialised posture and motion auxiliaries to denote the progressive (Reid 2011: 160, 180, 183), thus aspectual and framing markers are morphologically entangled.

(46) Ngan'gityemerri (Reid 2011: 183, 184)

a. *yerim-fityi-pefi-yaganim*
2SG.S.hands.PRS-roll-THITHER-2SG.S.go.PRS
'you can drive it [the car] away'

b. *a-yaga* *menyirr* *nganimuy-nide*
A-DEM sand loose-LOC
demem-dundem-yenim
3SG.S.hands.DTR.PRS-bury.RED-3SG.S.go.PRS
'that one who always buries himself in the loose sand'

Ngan'gityemerri, as an aspect language, can incorporate goals and sources (the same is true of Nivkh, see below), so there is a structure that does without local cases or adpositions, as in Tagalog.

(47) Ngan'gityemerri (Reid 2011: 190)
a. *dangim-firr-pawal*
3SG.S.Poke.PERF-foot-spear
'he speared him in the foot'
b. *mimenem* *ngerrminy-ba-ket*
billygoat.plum 1PEX.S.Hands.PERF-arm-pick
'we picked plums from the branches'

Cayuga is aspectually head-marking, too, with perfective causative stems and imperfective semireflexive stems, but also polysynthetic of the holophrastic type (Mattissen 2017a: 90), which is equally responsible for its lack of case or adpositions. Cayuga has a dislocative (Sasse 2000: 237) in an originally serial-framing strategy.

In sum, the conflation of direction and location in case/adpositions is borne out to correlate with head marking of aspectual values, not with the framing type.

However, the counter-check yields a more differentiated picture. On the one hand, head-marking and satellite-framed Laz has case marking only for genitive and motative, with the latter case conflating direction and source, and no marking on locational phrases (see also (36)).

(48) Laz (Mattissen 1994–2000)
oxori-şa *gamo-bulur*, *noɣa-şa* *bulur*
house-MOT out-go.1SG.PRS market-MOT go.1SG.PRS
'I leave the house, go to the market'

Russian, on the other hand, is also aspectually head-marking and satellite-framed like the Kartvelian languages Laz and Georgian, but has a considerable inventory of prepositions for either local or directional relations, with only three prepositions (*v* 'in(to)', *na* 'on(to)', *pod* 'under') that distinguish location and direction via case government (prepositional or instrumental case for location, accusative for direction). The difference between Laz and Russian, however, is that in Russian the prepositions are formally identical to aspectual and derivational preverbs in a grammaticalisation relation whereas in Laz, there are no adpositions identical in form to preverbs.

So, among the aspect languages those having preverbs with an aspectual function are also satellite-framed; if there are formally identical adpositions, case/adposition inventories are large (e.g. Slavic languages). In Greek, verbal prefixes are not involved in aspect encoding, in Laz, preverbs are not formally identical to adpositions.

Turning to languages with an advanced aspectoid system, in aspectually head-marking and verb-framing Japanese a directional phrase can only be combined with a manner-of-motion verb in the clause when the latter is in a converb construction with a path verb as the predicate.

(49) Japanese (Horrocks and Stavrou 2007: 610)
**kishi=e oyoi-da → kishi=e oyoi-de it-ta*
shore=to swim-PST shore=to swim-CV go-PST
's/he swam to the shore'

Japanese distinguishes locational and goal-attaining postpositions/case markers, with only *ni* being polyfunctional (cf. Ikegami 1982: 123).

Head-marking, verb-framed and polysynthetic Nivkh uses converb constructions similar to Japanese.

(50) Nivkh (Panfilov 1965: 88; Beffa 1982: 87)
a. *tə-eri maŋ-gu-r ver-la-ʁa ñi řəm-t*
this-river strong-CST-CV:3SG wide-PERM-CV:if 1SG swim-CV:1SG
tozə-jiki-nə-ɖ-ra
cross-cannot-FUT-IND/NML-HILI
'If this river is very wide I will not be able to swim across.'
b. *tʻu-in ʁoñɟi-ror vəɣi-ř məɣ-ɖ.*
sledge-LOC load-ACV:3SG drag-CV:3SG descend-IND/NML
'He loaded it onto the sled and dragged it downhill (dragging it along, descended).'

Nivkh has five local cases and, in addition, incorporates relational morphemes ("postpositions") as well as location, goal or source into transitive verbs according to a secundative scheme (Mattissen 2003b: Ch. 4.2.2–4.2.2.2).

(51) Nivkh (Savel'eva and Taksami 1970: 253; Panfilov 1965: 46–47; Otaina 1978: 34)
a. *pʿ-rəu-oʁla* *parta-řiv-ɖ*
REFL-teach-child desk-sit(down)-IND/NML
'the pupil sits at a desk'
b. *ʈʿo-ŋəŋ-ñivx* *kʿe* *toqo-xro-ɖ*
fish-hunt-person net fence-hang-IND/NML
'the fisherman hung the net over the fence'
c. *objezdʈʿik* *kʿe* *atak-asqam-ɖ*
bay_watcher net grandfather-take_away-IND/NML
'the bay watcher took the net away from grandfather'
(lit. 'away-took grandfather the net')

As both Japanese and Nivkh do not have a binary aspect system, they still fit into Horrocks and Stavrou's (2007) scenario with their differentiation of locational and directional adpositions.

4.2 Aspectual double marking and verb/satellite/serial framing

Aspectual double-marking co-occurs with both verb framing and satellite framing.

In verb-framed and aspectually stacking Spanish, manner-of-motion verbs are not compatible with goal-attainment PPs (cf. Talmy 1985, 2000). Spanish distinguishes the prepositions *a* 'to' and *hasta* 'up to', encoding mostly goal-attainment with path verbs, *hacia* 'in the direction of' that encodes a direction without goal-attainment and can be used with manner-of-motion verbs (52), and *en* 'in' for local relations.

(52) Spanish (Mattissen 2017b)
a. *ir a la isla* *vs.* **nadar a la isla*
'go to the island' 'swim to the island'
b. *nadar en la playa*
'swim at the beach'
c. *nadar hacia la isla*
'swim towards the island'
d. (Sanz 2000: 105)
Fue *a* *la* *costa* *nadando.*
go.PFTV.PST.3SG to the coast swimming
'S/he swam to the coast.'

Verb-framed, aspectually double-marking and non-stacking French, however, has a large inventory of prepositions, e.g. *à, en* 'to, in', *dans* 'in(to)', *devant* 'in front of', *chez* 'at, to', that encode both directional and local relations. So, French is "highly conflating", concerning manner of consumption (instead of stacking, see Section 1.5), manner of motion (verb framing) and the distinction of direction and location in prepositions.

Thus for aspectually double-marking aspect languages, there is no correlation to case/adposition inventories.

Turning to advanced aspectoid systems, double-marking and satellite-framed English is well known for its manner-of-motion verbs being compatible with both goal-attainment and non-goal-attainment adverbials; the degree of conflation in prepositions differs with the variety.

(53) English

non-goal-attaining		goal-attainment
walk, walk in the park,		
walk in the direction of the park	vs.	*walk to the park*
swim		*swim to the island*
swim in the direction of the island		
swim around the island		
swim near the island		

Double-marking and satellite-framed Hungarian is known for its extensive differentiation of locational and directional cases. So again, there is no correlation with case/adposition inventories, but a strong correlation of aspectually relevant preverbs (and English particles) and satellite framing.

4.3 Aspectual dependent marking and verb/satellite/serial framing

Aspectual dependent marking can arguably only describe the Finnish system. As Finnish is satellite-framed, there are no aspectual dependent-marking and verb-framed nor serial-framed languages to my knowledge. Indeed, aspectual dependent-marking and verb-framing do not match in the sense that dependent marking relies on satellites for the activation of the verbal readings, among them direction and goal attainment, whereas direction is expressed by the head verb in verb-framed languages.

(54) Finnish (https://www.helsinginuutiset.fi/paikalliset/1699716)
Kadonnut hevonen oli ilmeisesti uinut saare-lle.
lost horse was apparently swim.PTC island-ALL
'The lost horse had apparently swum to the island.'

In distinction to Laz and Russian, Finnish (as English) motion and transfer verbs are not differentially lexicalised and thus allow their phase and boundary readings to be activated by participants and adverbials. In addition, path verbs like *mennä* 'go' (cf. (40)), *kuljettaa* 'carry' (55a, b) and manner-of-motion verbs (54, 55c, d) can be used with both adverbials encoding a goal and adverbials cancelling the goal-attainment, e.g. by encoding a round trip ('back and forth').

(55) Finnish
a. (https://launokorpi.com/fi/matka/kiertomatka-viron-saarilla-muhu-saarenmaa-hiidenmaa-vormsi)
. . . *joka kuljettaa meidät Muhun saare-lle*
which carry 1PL.ACC M. *island*-ALL
'. . . who takes us to Muhu Island'
b. (https://rtech.fi/rtech/yritys/blogi/miten-aloittaa-tyomatkapyoraily/)
. . . *ettei niitä tarvitse joka päivä kuljettaa*
that.not 3PL.PART need.2SG every day carry
edestakaisin.
back&forth
'so they don't have to be carried back and forth every day'
c. (Heinämäki 1984: 160)
Tiina heitti keihästä
T. throw.PST.3SG javelin.PART
'Tiina threw the javelin.'
d. *Tiina heitti keihään metsään*
T. throw.PST.3SG javelin.ACC forest.ILL
'Tiina threw the javelin into the forest.'

Manner-of-motion verbs are also compatible with physical measures either activating a goal-attainment (completive) reading or a non-goal-attaining progressive/delimitative reading.

(56) Finnish (Heinämäki 1984: 174)

a. *Kirsi ui kilometri-**n***
K. swim.PST.3SG km-**ACC**
'Kirsi swam a kilometer'

b. *Kirsi ui **vielä** kilometri-**ä***
K. swim.PST.3SG **still** km-**PART**
'Kirsi is still swimming a kilometer'

In sum, Finnish constitutes a balanced system in which aspectual values, goal-attainment and path are encoded by dependents, and dependents are marked by a rich inventory of strictly distinguished locational and directional cases. This is also in line with Horrocks and Stavrou's (2007) prediction. Bridgen (1984: 197) formulates a relation between aspectual dependent marking and satellite framing:

There may be some connection between the principally affected argument and the application of a direction satellite in Finnish. Predicates of movement often demand the addition of a direction satellite if the goal is the principally affected argument in the accusative case [. . .].

4.4 Are there correlations?

Among the features analysed here, it is first and foremost polypersonalism or undergoer marking on the predicate that goes hand in hand with aspectual head marking, but this bears no relation to verb/satellite/serial framing. Polypersonal languages (Cayuga, Ngan'gityemerri, Ket) and languages with undergoer marking on the predicate in the form of voice or person marking (Tagalog, Nivkh) do not need overt encoding of nominal participants. The same is true of Japanese with differential lexicalisation as to valency and syntactic encoding of the person constellation (Mattissen 2015). These languages have non-valency-labile verbs and prefer differential lexicalisation with respect to actional class.

As the framing types are more of a preference or a tendency of lexicalisation patterns, there are languages that use both patterns, serialise path and manner or cannot be described in that framework, as well as languages that have local valency, incorporation or pivot promotion of local elements, e.g. Tagalog, Ngan'gityemerri, Ket and Nivkh. Keeping this in mind, in the present sample there are (advanced aspectoid systems underlined)

– aspectually head-marking and verb-framed languages (Nivkh, Japanese, Turkish),
– aspectually head-marking and satellite-framed languages (Laz, Georgian, Russian, Maltese (Stolz and Ammann 2008: 176; Ebert 1995: 770; Ket),

– aspectually head marking and both verb and satellite-framed languages (Tagalog, Modern Standard Arabic, Lezgian (Northeast Caucasian)),
– aspectually head-marking and serial-framed languages (Cayuga, Ngan'gityemerri),
– aspectually double-marking and verb-framed languages (Greek, Spanish, French),
– aspectually double-marking and satellite-framed languages (Bulgarian, Hungarian, English) and
– aspectually dependent-marking and satellite-framed languages (Finnish).

Aspectually dependent-marking and verb-framed languages have not been found, neither among aspect nor among the advanced aspectoid systems. Aspectually double-marking languages seem to be well represented and either verb-framed or satellite-framed. Of course, there are languages of any framing type that do not have an aspect or advanced aspectoid category, e.g. Greenlandic (verb-framed), Ainu (serial-framed) and German (satellite-framed).

What is most striking about the sample is that there are no **aspect** languages that are aspectually head-marking and verb-framed, but only languages with an advanced aspectoid system. This may be due to its non-representativeness, of course. Aspectual head-marking and verb-framing would match insofar as aspectual head-marking operates with inherently goal-attaining verbs that express path. Such verbs do not need the activation of the goal-attainment (boundary transgression) reading by adverbials or overt participants nor differentiated case/adposition inventories. The languages closest to this pattern show properties of both verb and satellite framing (for Modern Standard Arabic cf. Alhamdan et al. 2018; for Lezgian cf. examples in Haspelmath 1993: 94, 192, 376, 378). Advanced aspectoid systems may combine aspectual head-marking and verb framing, but may have case inventories without conflation of direction and location.

On the other hand, aspectual dependent-marking and satellite framing match insofar as a dependent activates the goal-attainment (boundary transgression) reading of less specific or manner-of-motion verbs, for which the dependents need differentiated inventories of case/adpositions. This type is represented only by Finnish here.

The polysynthetic languages are aspectually head marking, and the path component is a non-root bound morpheme in Cayuga and Ket and a bound light verb in Ngan'gityemerri.

The most striking trait are prefixes or preverbs, which are used both for expressing path in satellite-framed languages and for encoding aspect including degree of affectedness, e.g. in Kartvelian, Slavic languages and Hungarian. Those languages are satellite-framed and aspectually head or double marking. Where

the preverbs/particles have been grammaticalised from case/adpositions, as in Slavic, Germanic languages and Lezgian (Haspelmath 1993: 169–170, Ch. 12), the adposition/case inventory is large. In the aspect language Lezgian, however, the preverbs are no longer productive and they do not have aspectual functions (cf. Haspelmath 1993: 167) as in Greek and Ket; the language shows both verb and satellite-framed patterns (compare examples in Haspelmath 1993: 94, 192, 376, 378). A large inventory of local and directional cases and postpositions is also found in Hungarian, although aspectual and path preverbs have only a small intersection.

Double-marking and verb-framed languages without preverbs tend towards direction–location conflation in adpositions (especially Greek and French, but not Spanish). Said the other way round, local and directional case/adposition distinction is low for aspectually double-marking languages without preverbs, and those languages tend to be verb-framed as well.

Vice versa, verb-framed languages seem to prefer head-marking advanced aspectoid systems or double-marking aspect systems, whereas satellite-framed languages tend to be aspectually dependent marking, but are found among all marking types.

In view of the weak co-occurrence preferences, correlations between aspectual systems and framing systems cannot be assumed. However, strong synergies can be observed in the languages that employ preverbs. They are a multifunctional tool for local relations, differential lexicalisation of actional classes, satellite framing, stacking of aspectual values and aspect. On the other hand, valency is used for encoding aspectual values particularly in languages without preverbs (e.g. Cayuga, Tagalog, Spanish, Japanese). Differential lexicalisation with respect to valency is found in aspectually head-marking languages; valence-lability in dependent-marking languages.

5 Conclusion

The present study has a look at structure in the realm of head, double and dependent marking of aspectual values in aspect languages and languages with an advanced aspectoid system, at the stacking of aspectual values, differential lexicalisation, DVM, verb, satellite and serial framing and conflation of local and directional case or adpositions in order to find possible correlations. It underlines the parallels of verbs of consumption, production and goal-attainment in encoding partial vs. full affection; valency is a means of encoding aspectual values particularly in languages without preverbs.

Differential lexicalisation with respect to goal attainment seems to be typical of aspectually head-marking languages, and not typical of dependent-marking languages (e.g. Finnish), as well as less pronounced in verb-framed double-marking languages (e.g. Spanish, French). It is generally independent of the use of aspectual preverbs, as Russian shows, which has differential lexicalisation for goal attainment, but preverbs elsewhere.

A correlation of head/dependent marking of aspectual values and verb/satellite framing is not borne out, but several preferences can be found. In the present sample, it is striking that there are no aspect languages that are aspectually head marking and verb-framed, in particular in view of the fact that aspectual head marking is compatible with the broadest range of framing types.

In French and Italian, we observed a conflation of manner of consumption and production as "replacement" strategy for stacking of aspectual values, and French, as a verb-framed language, conflates manner of motion, as well, in the sense that path verbs can be considered less specific in meaning than verbs which encode manner and path on the same verb form, be they satellite framing or serial framing. However, regarding verb framing as a conflation strategy seems to be in contrast to the use of differential lexicalisation in verb-framed languages, especially when taking into account specific path verbs oriented at the local systems, as in Ket and Nivkh (cf. Mattissen 2006).

Verb-framed Spanish stands out for its stacking strategy in view of most stacking aspect languages (such as Kartvelian and Slavic languages) being satellite-framed.

Abbreviations

ACC	accusative
ACV	anterior converb
ADE	adessive
ALL	allative
ART	article
AV	actor voice
CMPL	complementiser
CPL	completive
CST	causative
CV	converb
DAT	dative
DEF	definite
DEL	delimitative
DEM	demonstrative
DOM	differential object marking

DTR	detransitivised
DVM	differential voice marking
ELA	elative
EV	effective voice
FUT	future
GEN	genitive
GER	gerund
HILI	highlighting focus
ILL	illative
IND	indicative
INDEF	indefinite
INESS	inessive
INS	instrumental
IPFV	imperfective
LOC	locative
M	masculine
MOT	motative
NML	nominalisation
NOM	nominative
NP	nominal phrase
PART	partitive
PERF	perfect
PERM	permanent
PEX	plural exclusive
PFTV	perfective
PL	plural
PP	prepositional phrase
POSS	possessor
POT	potential
PROG	progressive
PRS	present
PRV	preverb
PST	past
PTC	participle
RED	reduplication
REFL	reflexive
S	subject
SG	singular
SM	singular masculine
SV	superficial voice
TOP	topic
TRNSL	translative
TV	theme voice
V	verb
VP	verb phrase

References

Alhamdan, Bandar, Oudah Alenazi & Zouheir A. Maalej. 2018. Motion verbs in Modern Standard Arabic and their implications for Talmy's lexicalization patterns. *Language Sciences* 2018. 1–14.

Ameka, Felix & James Essegbey. 2013. Serialising languages: Satellite-framed, verb-framed or neither. *Linguistics*. DOI: 10.4314/GJL.V2I1.34.

Batiukova, Olga. 2015. Event structure and lexical semantics in a scalar approach to actionality. In Elisa Barrajón López, José Luis Cifuentes Honrubia & Susana Rodríguez Rosique (eds.), *Verb Classes and Aspect*, 21–59. Amsterdam: Benjamins. doi.org/10.1075/ivitra.9.02bat.

Beffa, Marie-Lise. 1982. L'organisation de l'espace et son parcours. *Études mongoles et sibériennes* 13. 117–137.

Bertinetto, Pier Marco & Denis Delfitto. 2000. Aspect vs. Actionality: Why they should be kept apart. In Östen Dahl (ed.), *Tense and Aspect in the Languages of Europe*, 189–225. Berlin: Mouton de Gruyter.

Braginsky, Pavel & Susan Rothstein. 2008. Vendler classes and the Russian aspectual system. *Journal of Slavic Linguistics* 16(1). 3–55.

Breu, Walter. 1992. Zur Frage des Verbalaspekts im Italienischen und Italoalbanischen. In Gabriele Birken-Silverman, & Gerda Rössler (eds.), *Beiträge zur sprachlichen, literarischen und kulturellen Vielfalt in den Philologien,* 158–172. Stuttgart: Steiner.

Breu, Walter. 1994. Interactions between lexical, temporal and aspectual meanings. *Studies in Language* 18. 23–44.

Breu, Walter. 1996. Komponentenmodell der Interaktion von Lexik und Aspect. In Wolfgang Girke (ed.), *Slavistische Linguistik 1995*, 37–73. München: Sagner.

Breu, Walter. 1997. Komplexe aktionale Verbklassen, insbesondere Inchoativa. In Tilman Berger & Jochen Raecke (eds.), *Slavistische Linguistik 1997*, 55–80. München: Sagner.

Breu, Walter. 2000. Zur Position des Slavischen in einer Typologie des Verbalaspekts. In Walter Breu (ed.), *Probleme der Interaktion von Lexik und Aspekt (ILA),* 21–54. Tübingen: Niemeyer.

Breu, Walter. 2007. Der Verbalaspekt im Spannungsfeld zwischen Grammatik und Lexik. *Sprachwissenschaft* 32(2). 123–166.

Breu, Walter. 2009. Verbale Kategorien: Aspekt und Aktionsart. In Sebastian Kempgen, Peter Kosta, Tilman Berger & Karl Gutschmidt (eds.), *Die slavischen Sprachen / The Slavic Languages.* HSK 32.1, Vol. I, 209–225. Berlin: Mouton de Gruyter.

Bridgen, Nigel. 1984. Towards a functional grammar of aspect in Finnish. In Caspar de Groot & Hannu Tommola (eds.), *Aspect Bound: A Voyage into the Realm of Germanic, Slavonic and Finno-Ugrian Aspectology*, 179–198. Dordrecht: Foris.

Chapado Chorro, M. Olga & Luisa García García. 1991. Spanisch. In Hans-Jürgen Sasse (ed.), *Aspektsysteme.* Arbeitspapier Nr. 14 (Neue Folge), 47–68. Köln: Institut für Sprachwissenschaft.

Clark, Eve V. 2005. Resultant states in early language acquisition. In Dorit Ravid & Hava Bat-Zeev Shyldkrot (eds.), *Perspectives on Language and Language Development: Essays in honor of Ruth A. Berman*, 175–190. Berlin: Springer.

de Groot, Caspar. 1984. Totally affected. Aspect and three-place predicates in Hungarian. In Caspar de Groot & Hannu Tommola (eds.), *Aspect Bound: A Voyage into the Realm of Germanic, Slavonic and Finno-Ugrian Aspectology*, 133–151. Dordrecht: Foris.

de Hoop, Helen & Andrej Malchukov. 2007. On fluid differential case marking: A bidirectional OT approach. *Lingua* 117. 1636–1656.

Drossard, Werner. 2002. Paleosiberian Ket as a polysynthetic language (with special reference to complex verbs). In Nicholas Evans & Hans-Jürgen Sasse (eds.), *Problems of Polysynthesis* (STUF Studia Typologica 4), 223–256. Berlin: Akademie.

Ebert, Karen H. 1995. Aspect in Maltese. In Pier Marco Bertinetto, Valentina Bianchi, James Higginbotham & Mario Squartini (eds.), *Temporal Reference, Aspect, and Actionality,* Vol. 2, 753–785. Torino: Rosenberg & Sellier.

Evans, Nicholas. 2002. The true status of grammatical object affixes: evidence from Bininj Gun-wok. In Nicholas Evans & Hans-Jürgen Sasse (eds.), *Problems of Polysynthesis*, 15–50. (STUF Studia Typologica 4). Berlin: Akademie.

Flecken, Monique, Christiane von Stutterheim & Mary Carroll. 2014. Grammatical aspect influences motion event perception: findings from a cross-linguistic non-verbal recognition task. *Language and Cognition* 6(1). 45–78.

Giannakidou, Anastasia & Jason Merchant. 1999. Why Giannis can't scrub his plate clean: On the absence of resultative secondary predication in Greek. In Amalia Moser (ed.), *Greek Linguistics: Proceedings of the 3rd International Conference on Greek Linguistics*, 122–134. Athens: Ellinika Grámmata.

Gruzdeva, Ekatarina Ju. 2012. Aspektual'nye klassy glagolov v nivxskom jazyke. [Aspectual classes in Nivkh language] In Nikolai N. Kazanskij & Vladimir A. Plungjan (eds.), *Tipologija aspektual'nyh sistem i kategorij [Typology of aspectual systems and categories]*, 458–533. Sankt-Peterburg: Nauka.

Haspelmath, Martin. 1993. *A Grammar of Lezgian*. Berlin: De Gruyter Mouton.

Haßler, Gerda. 2016. *Temporalität, Aspektualität und Modalität in romanischen Sprachen.* Berlin: De Gruyter.

Heinämäki, Orvokki. 1984. Aspect in Finnish. In Caspar de Groot & Hannu Tommola (eds.), *Aspect Bound: A Voyage into the Realm of Germanic, Slavonic and Finno-Ugrian Aspectology*, 153–177. Dordrecht: Foris.

Himmelmann, Nikolaus P. 1987. *Morphosyntax und Morphologie. Die Ausrichtungsaffixe im Tagalog.* München: Fink.

Himmelmann, Nikolaus P. 2008. Lexical categories and voice in Tagalog. In Peter Austin & Simon Musgrave (eds.), *Voice and Grammatical Relations in Austronesian Languages*, 247–293. Stanford: CSLI.

Himmelmann, Nikolaus P. & Beatrice Primus. 2015. Prominence Beyond Prosody – A First Approximation. In Amedeo De Dominicis (ed.), *pS-prominenceS: Prominences in Linguistics*. *Proceedings of the International Conference*, 38–58. Viterbo: DISUCOM Press.

Holisky, Dee Ann. 1981. Aspect theory and Georgian aspect. In Philip Tedeschi & Annie Zaenen (eds.), *Syntax and Semantics 14: Tense and Aspect*, 127–144. New York: Academic Press.

Horrocks, Geoffrey & Melita Stavrou. 2003. Actions and their results in Greek and English: The complementarity of morphologically encoded (viewpoint) aspect and syntactic resultative predication. *Journal of Semantics* 20. 297–327.

Horrocks, Geoffrey & Melita Stavrou. 2007. Grammaticalized aspect and spatio-temporal culmination. *Lingua* 117. 605–644.

Ikegami, Yoshihiko. 1982. 'Source' vs. 'Goal': a Case of Linguistic Dissymmetry. In Robert N. St. Clair & Walburga von Raffler-Engel (eds.), *Language and Cognitive Styles: Patterns of Neurolinguistic and Psycholinguistic Development*, 292–308. Lisse: Swets & Zeitlinger.

Isačenko, Alexander V. 1962. *Die russische Sprache der Gegenwart. Teil 1 – Formenlehre*, Halle: Niemeyer.

Jacobsen, Wesley. 1982. *Transitivity in the Japanese verbal system*. Chicago: University of Chicago dissertation.

Kiparsky, Paul. 1998. Partitive case and aspect. In Miriam Butt & Wilhelm Geuder (eds.), *The Projection of Arguments: Lexical and Compositional Factors*, 265–307. Stanford: CSLI Publications.

Knittel, Marie-Laurence & Gyöngyvér Forintos-Kosten. 2002. Préverbes et aspect en Hongrois. In Brenda Laca (ed.), *Temps et Aspect. De la morphologie à l'interprétation*, 49–79. St.-Denis: Presses Universitaires de Vincennes.

Krejnovič, Eruxim A. 1960. Vyraženie prostranstvennoj orientacii v nivxskom jazyke (k istorii orientacii v prostranstve) [The expression of spatial orientation in Nivkh (toward a history of orientation in space)]. *Voprosy Jazykoznanija* 9(1). 78–89.

Larsson, Lars-Gunnar. 1984. The role of Baltic influence in the aspectual system of Finnish. In Caspar de Groot & Hannu Tommola (eds.), *Aspect Bound: A Voyage into the Realm of Germanic, Slavonic and Finno-Ugrian Aspectology*, 97–109. Dordrecht: Foris.

Latrouite, Anja. 2011. *Voice and Case in Tagalog: The coding of prominence and orientation*. Düsseldorf: HHU.

Leinonen, Marja. 1984. Narrative implications of aspect in Russian and in Finnish. In Caspar de Groot & Hannu Tommola (eds.), *Aspect Bound: A Voyage into the Realm of Germanic, Slavonic and Finno-Ugrian Aspectology*, 239–255. Dordrecht: Foris.

Lindstedt, Jouko. 1985. *On the Semantics of Tense and Aspect in Bulgarian*. Helsinki: University of Helsinki Press.

Mattissen, Johanna. 1994–2000. Field data Laz, unpublished field notes from work with native speakers. University of Cologne.

Mattissen, Johanna. 1995. Verbmorphologie. In Silvia Kutscher, Johanna Mattissen, & Anke Wodarg (eds.), *Das Muťafi-Lazische. Arbeitspapier Nr. 24 (Neue Folge)*, 45–81. Köln: Institut für Sprachwissenschaft.

Mattissen, Johanna. 2001. Tense and Aspect in Laz. In Karen H. Ebert & Fernando Zúñiga (eds.), *Arbeiten des Seminars für Allgemeine Sprachwissenschaft (ASAS)* 16: *Aktionsart and Aspectotemporality in Non-European Languages*, 15–48. Zürich: Seminar für Allgemeine Sprachwissenschaft.

Mattissen, Johanna. 2003a. Aktionale Klassen in polypersonalen Aspektsprachen – am Beispiel Lasisch. In Winfried Boeder (ed.), *Kaukasische Sprachprobleme*. 247–274. Oldenburg: Carl-von-Ossietzky-Universität Oldenburg.

Mattissen, Johanna. 2003b. *Dependent-Head Synthesis in Nivkh. A Contribution to a Typology of Polysynthesis*. Amsterdam: Benjamins.

Mattissen, Johanna. 2006. The ontology and diachrony of polysynthesis. In Dieter Wunderlich (ed.), *Advances in the Theory of the Lexicon*, 287–353. Berlin: Mouton de Gruyter.

Mattissen, Johanna. 2012. Field data Nivkh, unpublished field notes from work with native speakers. Sapporo Gakuin University.

Mattissen, Johanna. 2015. Mit Empathie gegen die Ellipse – Wie im Japanischen doch Person markiert wird. In Yoko Nishina (ed.), *Linguistische Berichte, Sonderheft 20: Sprachwissenschaft des Japanischen*, 111–141. Hamburg: Buske.

Mattissen, Johanna. 2017a. Sub-types of polysynthesis. In Nicholas Evans, Marianne Mithun & Michael Fortescue (eds.), *The Oxford Handbook of Polysynthesis*, 70–98. Oxford: Oxford University Press.

Mattissen, Johanna. 2017b. Field data French and Spanish, unpublished field notes from work with native speakers. University of Cologne.

Mattissen, Johanna. 2024. Lexical actional classes in Romance languages in interaction with aspectually relevant material in the clause. In Jakob Egetenmeyer, Sarah Dessì Schmid & Martin G. Becker (eds.), *Tense, Aspect and Discourse Structure*, 153–187. Berlin: De Gruyter. DOI: 10.1515/9783111453897-006.

Nishida, Chiyo. 1994. The Spanish reflexive clitic *se* as an aspectual class marker. *Linguistics* 32. 425–458.
Paducheva, Elena V. 1998. On non-compatibility of partitive and imperfective in Russian. *Theoretical Linguistics* 24(1). 73–82. doi.10.1515/thli.1998.24.1.73.
Panfilov, Vladimir Z. 1965. *Grammatika nivxskogo jazyka [Grammar of Nivkh language]*, Vol. 2. Moscow/Leningrad: Nauka.
Panganiban, José Villa 1972. *Diksyunaryo-Tesauro Pilipino-Ingles*. Lungsod Quezon: Manlapaz.
Reid, Nicholas J. 2011. *Ngan'gityemerri*. München: LINCOM.
Sanz, Montserrat. 2000. *Events and Predication.* Amsterdam: Benjamins.
Sasse, Hans-Jürgen. 2000. Aspektsemantik und Lexikonorganisation im Cayuga. In Walter Breu (ed.), *Probleme der Interaktion von Lexik und Aspekt (ILA)* 193–246. Tübingen: Niemeyer.
Sasse, Hans-Jürgen. 2002. Recent Activity in the Theory of Aspect: Accomplishments, Achievements, or just Non-progressive State?. *Linguistic Typology* 6 (3). 199–271.
Savel'eva, V.N. & Taksami, Č.M. 1970. *Nivxsko-Russkij Slovar*' [Nivkh-Russian dictionary]. Moscow: Sovetskaja Enciklopedija.
Slobin, Dan I. 2004. The many ways to search for a frog: Linguistic typology and the expression of motion events. In Sven Strömqvist & Ludo Verhoeven (eds.), *Relating events in narrative.* Vol. 2 – *Typological and contextual perspectives*, 219–257. Mahwah: Lawrence Erlbaum Associates.
Stephany, Ursula. 1985. *Aspekt, Tempus und Modalität*. Tübingen: Narr.
Stolz, Thomas & Andreas Ammann. 2007. *Beda u Qabad*: The Maltese inchoative/ingressive. *Romano-Arabica* 6/7. 149–158.
Stolz, Thomas & Andreas Ammann. 2008. The Maltese continuative: A grammaticalization borderliner. In Elisabeth Verhoeven, Stavros Skopeteas, Yong-Min Shin, Yoko Nishina & Johannes Helmbrecht (eds.), *Studies on grammaticalization*, 169–184. (Trends in Linguistics 205). Berlin/New York: Mouton de Gruyter.
Talmy, Leonard. 1985. Lexicalization patterns: Semantic structure in lexical forms. In Timothy Shopen (ed.), *Language typology and syntactic description*. Vol. III: *Grammatical categories and the lexicon*, 225–282. Cambridge: Cambridge University Press.
Talmy, Leonard. 2000. *Toward a cognitive semantics*. Vol. II – *Typology and process in concept structuring.* Cambridge: The MIT Press.
Vogt, Hans. 1936. *Esquisse d'une Grammaire du Géorgien Moderne*. Oslo: Brøggers.
Werner, Heinrich. 1997. *Die ketische Sprache*. Wiesbaden: Harrassowitz.