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Partitive accomplishments across languages

<https://doi.org/10.1515/ling-2020-0201>

We very warmly dedicate this volume to the memory of Edit Doron, Anita Mittwoch and Susan Rothstein for their inspiring and outstanding contribution to research on tense, aspect and verb meanings.

Keywords: aspect, telicity, (im)-perfectivity, event non-culmination, crosslinguistic semantics

1 Introduction

This introductory article provides an overview of the central concepts at stake in understanding a striking property of accomplishments widely attested across typologically unrelated languages, and which has received increasing attention and interest in the recent literature (Altshuler 2014; Bar-el 2005; Bar-el et al. 2005; Koenig and Muansuwan 2000; Koenig and Chief 2008; Tatevosov 2008; Tatevosov and Ivanov 2009, among others) – namely, that perfective accomplishments allow so-called *non-culminating* construals. This is an outstanding typological property of accomplishments, since culmination entailments are typically taken to be a diagnostic criterion for defining this aspectual class. We pursue here three correlated objectives. We first seek to understand the scope and limits of this phenomenon and, to this effect, elaborate an exhaustive typology of such construals, crucially discriminating *non-culminating* uses of accomplishments from their *atelic* uses, whilst relying on novel (alongside more commonly found) diagnostics to establish this typology. We seek at the same time to understand the possible sources for this phenomenon, reviewing alternative explanations offered in the literature. Finally, we also aim to ascertain what the phenomenon of non-culminating accomplishment reveals about the meaning, and consequently the theoretical classification, of accomplishments.

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The paper is organized as follows. Section 2 introduces the phenomenon of non-culminating accomplishments to readers. Section 3 presents the typology of non-culminating construals of accomplishments, as identified in the literature. Section 4 tackles the question of what the phenomena of non-culminating accomplishments can teach us about the meaning and theoretical classification of accomplishments. We distinguish, in particular, accomplishments with a complex causative event structure from those with a simplex event structure, in that the former allow a so-called *zero-change* (non-culminating) construal, unlike the latter which only allow a non-culminating construal relative to a manner property. Section 5 outlines the analyses that have been offered in the literature to account for non-culminating, and more generally partitive interpretations for causative event descriptions. Section 6 focuses on the most striking construal in the typology, the zero-change construal, probing the issues of which classes of causatives allow this construal, and in which cases these verbs allow this construal even in the presence of an *in*-adverbial. While the previous sections focus on non-culminating *telic* uses of accomplishments, section 7 extends the typology to other *partitive* uses of accomplishments – namely, accomplishments on their *atelic* use. We argue that these two classes of readings, non-culminating vs. atelic uses of accomplishments, must crucially be discriminated. We conclude by offering a general typology of accomplishments that finely distinguishes the varieties of partitive construals they allow. Section 8 summarizes the contributions to the present special collection.

2 Non-culminating accomplishments: the phenomenon

Sentences built with a telic predicate *P* and a non-progressive tense/aspect marker typically describe an event which is complete with regard to *P*. For instance, *John crossed the street* entails that John performed a complete crossing-the-street event. However, as many authors have noticed for a wide variety of languages, non-progressive accomplishment predicates may also be used to describe only a part of a *P*-event. We, henceforth, refer to such interpretations as partitive interpretations of accomplishments.¹

Non-culminating accomplishments are one of the most widely discussed cases of such partitive interpretations. This volume brings together six contributions

¹ Achievement predicates typically do not have partitive interpretations across languages; see, e.g., Singh (1991, 1994); Altshuler (2014) on Hindi; Koenig and Chief (2008) and Lin (2004) on Mandarin; Bott (2010) on German. This is expected since achievements denote sets of events with no proper parts.

exploring non-culminating accomplishments and other partitive uses of accomplishments in non-progressive sentences, from a wide range of empirical perspectives (e.g., adult vs. child languages, typologically diverse languages: Germanic, Hindi, Korean, Malagasy, Romance, Russian, Tatar) and theoretical frameworks.

As the reader will see, authors crucially differ in their use of the term non-culminating accomplishments. This (partly historical) introduction seeks to set the theoretical basis and context for understanding the use of this term in the literature and the discussion that will unfold throughout the collected papers.

The label “non-culminating accomplishments” appears for the first time in Bar-el et al. (2005). Bar-el et al. mostly look at the counterparts of English simple past accomplishment sentences in two Salish languages, St’át’imcets and Squamish. Their key observation is that while in English, such sentences give rise to a culmination entailment – as illustrated with the contradictions that (1)–(2) yield – their closest St’át’imcets and Squamish equivalents give rise to a culmination implicature (and not an entailment, since it is defeasible) when built with a so-called “control transitivizer” (CTRL-TRZ), as shown in (3)–(4), the Squamish counterparts of (1)–(2).²

(1) #*He fixed the canoe, but he didn’t finish fixing it.*

(2) #*I broke a knife and I’m still breaking it.*

(3) Squamish

na p’ayak-ant-as ta John ta snexwilh-s welh
 RL heal-CTRL-TRZ-3ERG DET John DET canoe-3POSS CONJ
haw k-as i huy-nexw-as.
 NEG IRR-3CNJ PRTC finish-CL.TRZ-3erg

Literally: ‘He fixed his canoe but he didn’t finish [fixing it].’
 (Bar-el 2005)

(4) Squamish

chen xewtl’-an ta lhach’ten i na7-xw chen wa
 1.SG break-CTRL-TRZ DET knife CONJ RL-still 1.SG IMP
xewtl’-an.
 break-CTRL-TRZ

Literally: ‘I broke a knife and I’m still breaking it.’
 (Bar-el 2005)

² Note that contrary to Rothstein (2004), we do not classify non-gradable telic verbs such as *break* as achievement verbs. For instance, although *break* is non-gradable, it behaves as an accomplishment rather than an achievement in many languages (in Mandarin for instance, it is compatible with progressive markers and aspectual verbs, contrary to achievement verbs).

Non-culminating accomplishments have also been identified in a variety of genetically unrelated languages, including Karachay-Balkar (Tatevosov 2008), Mandarin (Chief 2008; Koenig and Chief 2008; Lin 2004; Liu 2018; Zhang 2018 among others), Korean (Park 1993; Beavers and Lee, this issue), Malagasy (Paul et al. 2015, this issue), and, more recently, Indonesian (Sato 2020), Bantu languages such as Xhosa (Crane and Persohn 2019; Savić 2017), Samoan and Daakaka (Hopperdietzel 2020); see Martin (2019) for a more exhaustive list of references. Some examples are provided in (5)–(7). Examples (6)–(8) are natural occurrences, non-culminating accomplishments are thus actively produced by native speakers and not a marginal curiosity for aspectologists.

(5) Karachay-Balkar

kerim ešik-ni ac-xan-di, alaj boša-ma-yan-di.
 Kerim door-ACC open-PFV-3SG but finish-NEG-PFV-3SG
 Literally: ‘Kerim opened the door, but didn’t finish.’
 (Tatevosov 2008, 396)

(6) Korean

khathulinnu-ka ku-lul huntule kkay-wu-ess-ciman ku-nun
 Catherine-NOM he-ACC shaking wake-CAUSE-PST-but he-TOP
kkay-ci anh-ass-ta.
 wake-COMP NEG-PST-DECL
 Literally: ‘Catherine woke him by shaking him, but he did not wake.’
 (Beavers and Lee this issue)

(7) Mandarin

Guān-le, méi guān-shàn.
 close-PFV NEG close-up
 Literally: ‘(She) did close (the door), but has not closed it up [i.e., did not close it successfully].’
 (Liu 2018: 179)

(8) *She ran to her but she could never seem to get any closer.*

What is striking about the examples from Salish, Karachay-Balkar, Korean, Mandarin and English above is that they describe events that do not culminate with respect to a result property encoded by a causative predicate.³ In (3), the breaking event does not culminate into a state of being broken; in (6), the waking event does

³ English directed motion constructions such as (8) have been analyzed as encoding a causal relation between an event and a result state or location by Harley (2005) among others.

not culminate into a state of being awake, etc. Sentences (1)–(2) (which are the literal counterparts of Salish sentences (3)–(4)) yield contradictions in the corresponding Romance or English sentences built with run-of-the-mill causative result verbs.

Non-culminating accomplishments are reminiscent of progressive telic sentences on analyses that take accomplishments to denote predicates P of complete events, to which the progressive can apply to yield a predicate that can be true of an incomplete P -event (Asher 1992; Bonomi 1999; Dowty 1977, 1979; Landman 1992; Varasdi 2014, among others), see (9)).

(9) *Peter was opening the door.*

But while progressive telic sentences are generally taken to be neutral with regard to event culmination in the evaluation world (see, e.g., Bar-el et al. 2005), what all the examples in (5)–(8) have in common is that their first clause implicates event culmination. In the spirit of Bar-el et al.'s (2005) seminal work, we take this inference to be a defining property of non-culminating accomplishments, as stated in (2), from Martin (2019: 3) (P_{tel} stands for telic predicate).

(10) A sentence S built with a NON-CULMINATING accomplishment predicate P_{tel} defeasibly implicates that the described event e culminates with respect to P_{tel} in the evaluation world w_0 , i.e., that $\mathbf{CUL}(e, P_{tel})$ obtains in w_0 .

For instance, the first clause of (7) triggers the inference that the closing-the-door event culminates with respect to the telic predicate *guān (mén)* ‘close (the door)’, and this inference is defeasible, as the felicity of the continuing clause shows. Crucially, given that event culmination (defined as a relation $\mathbf{CUL}(e, P)$ between events e and properties P , see Zucchi 1999) presupposes telicity (Parsons 1990), the definition in (10) presupposes that accomplishment predicates remain telic even under non-culminating construals, as will become clear in Section 7.

We now turn to the varieties of non-culminating construals that have been distinguished in the literature.

3 On the variety of non-culminating uses of accomplishments

Tatevosov (2008) introduces an important distinction between two types of non-culminating uses of accomplishment predicates, which we refer to as “partial

change (-of-state)” versus “zero change(-of-state)” construals (corresponding, respectively, to his partial success vs. failed attempt construals). On the zero-change reading the theme endures no change developing towards a state of the type encoded by the predicate *P*, while on the partial change reading, some such change obtains, but the described event remains incomplete relative to *P*. We will present these two readings in more detail in the next subsections.

3.1 Zero-change versus conative construals

The zero-change reading is often overtly paraphrased, in the literature, with a verb such as *try* or *attempt*, and tellingly often referred to as the failed-attempt or *try*-reading, see, e.g., Tatevosov (2008) on Karachay-Balkar, Jacobs (2011) on Squamish. This line of analysis suggests that a sentence interpreted under a zero-change construal has the same truth-conditions as the counterpart of the same sentence with an overt conative verb. On this view, (11a) would have an underlying conative semantics, expressing an attempted action, just like (11c) does. The availability of the zero-change reading can then readily be explained, since *try to P* does not entail *P* (Karttunen 1971).

- (11) a. Mandarin
Zhāngsān shāo le nèi-liàng wánjù-chē...
 Zhangsan burn PFV that-CL toy-car
 ‘Zhangsan burned that toy car ...’
 ↪ Zhangsan successfully burned that toy car. [implicature]
- b. ...*dàn gēnběn méi shāo-zháo.*
 but at.all NEG.PFV burn-ignite
 ‘...but it didn’t get burnt at all.’
- c. *Zhāngsān chángshì zhe shāo le nèi-liàng wánjù-chē.*
 Zhangsan try DUR burn PFV that-CL toy-car
 ‘Zhangsan tried to burn that toy car.’
 ↪ Zhangsan didn’t burn that toy car. [implicature]

As also pointed out by Beavers and Lee (this issue), there are, however, several arguments for carefully distinguishing zero-change non-culminating construals from conative construals. The first concerns the inference triggered by perfective sentences such as (11a), as opposed to their overtly conative counterparts in (11c). Sentence (11a) triggers a (defeasible) inference of culmination (it implicates that Zhangsan successfully burned the toy), while (11c) triggers the (defeasible)

inference that the attempt to burn the toy was not successful, as does its English counterpart (Karttunen 1971).

A second argument in favor of discriminating zero-change and conative construals comes from their respective truth-conditions. For English, Grano (2011) convincingly shows that *try*-sentences can be true although the outcome likelihood is extremely low, as shown in (12)–(13).

(12) *John was unknowingly paralyzed and tried to raise his arm.*

(13) *John tried to cut a tomato with his mind.*

Grano further observes that a *try*-sentence does not entail that the event started to be actualized in the actual world, as (14a) illustrates.

(14) a. *John tried to raise his arm.*

→ John started raising his arm.

b. Mandarin

Fàxíngshī gěi tā rǎn le tóufa, (kěshì méi
 hair.dresser for 3SG dye PFV hair but NEG.PFV
rǎn-shang).

dye-up

‘The hairdresser dyed her hair (but didn’t manage to dye it).’

(Martin et al. 2020a)

By contrast, in many languages such as Mandarin (Chief 2008; Koenig and Chief 2008) or Korean (Beavers and Lee this issue), non-progressive accomplishment sentences entail the occurrence of at least a proper part of a VP-event, and this even under the zero-change reading, while the counterpart of these sentences built with a conative verb does not carry such an entailment. To spell this argument out more clearly, consider again examples (11a) versus (11c) with the causative SV *shāo* ‘burn’. The culmination inference (11a) triggers is defeasible, as illustrated by the felicitous continuation (11b) denying that the theme has undergone any burning change-of-state whatsoever. The truth conditions of (11a) and (11c) are crucially, however, not the same: example (11c) is true even if Zhangsan only mentally plans to put his toy car into the fire (perhaps he is paralyzed and mentally planning the burning event is all he can do). By contrast, (11a) requires that the burning event at least start – that is, Zhangsan to have acted by say putting his toy car into the fire, even though the latter has failed altogether to be affected by his action (perhaps because it is made of material such as fiberglass that is able to withstand very high temperature). Example (14b) similarly requires a VP-event to start minimally.

This would be the case even in a context where say the agent (a hairdresser in the case at hand) starts preparing the dye, but has not yet applied it to the theme (the client's hair). The punch line here is merely that the constraint that at least a proper part of a VP event occur should not be taken to mean that the starting of the event has led the theme to undergo any change developing towards the result state named by the VP.

In conclusion, even under their zero-change reading, perfective non-culminating accomplishments require more than a try, although much less than a success (Martin 2015): the zero-change reading cannot consist in a pure mental action, and must involve a part of an event satisfying the property encoded by the VP. We henceforth refer to this constraint on non-culminating construals as the “Minimal Part Constraint”.

3.2 Partial-change versus non-maximal uses

The partial-change reading is another subtype of non-culminating interpretation for accomplishments (or partial success in Tatevosov and Ivanov's terminology). A partial-change reading obtains when the theme endures a change developing towards a result state of the type encoded in the meaning of the predicate, but the described event is nevertheless incomplete relative to the property *P* encoded. For instance, (15) is felicitous if the subject's referent burned a very small part of this book, and thus failed to properly burn the book.

(15) Mandarin

Zhāngsān shāo-le nèi-běn shū kě shū méi quán
 Zhangsan burn-PFV that-CL book but book NEG complete
shāo-zháo.
 burn-reach

‘Zhangsan burnt that book, but the book didn't get burnt completely.’

(Martin et al. 2020a)

Importantly, the availability of modification by *not completely* cannot serve as a diagnostic for partial change construals of accomplishments. As Kearns (2007) already observed, if the completive interpretation of an accomplishment sentence is forced by adding a completive adverbial such as *in x time*, it is still nonetheless possible to continue the sentence felicitously with a *non completely* clause, as shown in (16) (see Fleischhauer 2016 and McNally 2017 for related examples).

- (16) a. *The clothes dried in a hour, although they are not completely dry yet.*
 b. *Paul cleaned the kitchen in half an hour, although it is not completely clean yet.*

At first sight, it is tempting to analyze the examples in (16) on a par with the Salish, Mandarin or Korean examples in (3)–(7) above, since the second clause also seems to indicate that the event described in the first clause could have developed further. However, sentences (16) do not meet the criteria for counting as a non-culminating accomplishment as defined in (2), as the contrast between (16) and (17) reveals. Crucially, event culmination cannot be denied in (17), which tells us that the event described in the first clause in (16) counts as a complete event with respect to the clean-the-kitchen or the-clothes-dry VP.

- (17) *Paul cleaned the kitchen, #but he hasn't finished cleaning it.*

But if the cleaning event described in (16b) is indeed taken to have culminated (as the infelicity of (17) establishes), how do we interpret the felicity of (16b)? We take (16b) to convey that although Paul did indeed clean the kitchen (in half an hour), the kitchen is not maximally clean, that is, as clean as it could be. Concretely, we adopt Sassoon and Zevakhina's (2012) proposal that unmodified adjectives (e.g., *be clean, dry*) are interpreted relative to a coarse granularity level g (that is to say, when using statements like *The kitchen is clean*, it is normally appropriate to ignore almost invisible dirt), while modified adjectives (*be completely clean, dry*) are interpreted relative to a fine granularity level g_p .⁴ On this proposal, (16) involves *granularity shifting*: adding *completely* shifts the granularity level from a level g of coarse granularity (as in most ordinary discourse contexts) to a fine, more precise, granularity level g_p . Under g_p , a single speck or dirt renders the kitchen less clean than it could have been, and thus as being not clean. We thus refer to the construal illustrated in (16) as a *non-maximal* construal of the accomplishment. The idea then is that non-maximal construals involve culmination but only relative to a coarse, approximate interpretation of the relevant property (here cleanness) encoded in the meaning of the accomplishment; as stated in (18), from Martin (2019, 12). In contrast, non-culminating accomplishments do not *entail* culmination, even presupposing a level of coarse granularity.

- (18) A sentence S built with an accomplishment predicate P_{tel} on a NON-MAXIMAL reading S entails **CUL**(e, P_{tel}) relative to a coarse granularity level g , but only implicates it relative to a fine granularity level g_p .

⁴ See Lasersohn (1999) for an alternative account in terms of slack regulation, and Sassoon and Zevakhina (2012) for a critical view of such an account when applied to minimizers.

Martin et al. (2020a) highlight a difference in the felicity conditions of (19a) versus (19b) which illustrates the difference between non-culminating vs. non-maximal, “imprecise” accomplishments:

- (19) a. Mandarin
Lùlu shāo le yì-běn shū, kěshì shū méi wánquán shāo-huǐ.
 Lulu burn PFV one-CL book but book NEG.PFV
 completely burn-destroy
 ‘Lulu burned a book, but the book didn’t burn completely.’
 (Martin et al. 2020a)
 [non-culminating accomplishment, partial-change]
- b. Mandarin
Lùlu liǎng fēnzhōng nèi shāo le yì-běn shū, kěshì shū méi wánquán shāo-huǐ.
 Lulu two minute within burn PFV one-CL book but
 book NEG.PFV completely burn-destroy
 ‘Lulu burned a book in two minutes, but the book didn’t burn completely.’
 (Martin et al. 2020a)
 [non-maximal telic use, full-change under coarse granularity level]

If Lulu burned only a very small part of the book, (19a) is true, for all that is required for an accomplishment on a partial-change reading to be true is that part of the change denoted by the VP occurs. The change can be minimal. But in the same context, (19b) is plainly false. This is because the *in*-adverbial requires the described event to have culminated relative to the *burn-the-book* property. This is the case for instance if 90% of every page is burned, but not if only some minimal part of the book is burnt (e.g., only the cover), although in this very same context (where only the cover burns), (19a) remains true.

In summary, non-maximal accomplishments are imprecise accomplishments, entailing event culmination but only relative to a coarse-grained granularity level. In contrast, on their partial-change construal, accomplishment sentences do not entail event culmination since only part of the change named by the predicate obtains.

4 Which accomplishments fail to yield which non-culminating uses?

4.1 Simplex versus complex accomplishments

Having given an overview of the different ways in which non-progressive accomplishments fail to culminate, we now ask what the phenomena of non-culminating accomplishments can teach us about the meaning and theoretical classification of accomplishments.

Non-culminating accomplishments have been mostly discussed for verbs that have clear causative semantics, such as *kill*, *open*, *close*, *burn*, *wake*, etc. Indeed, certain authors such as Beavers and Lee (this issue) take non-culminating readings to arise with causative verbs only:

Non-culmination is an increasingly well studied phenomenon in a variety of languages, whereby a predicate that in principle would be classified as caused change-of-state allows an interpretation in which the final result state named by the predicate is not entailed to obtain. (Beavers and Lee this issue)

Beavers and Lee take causation to involve a causal relation between subevents, a view to which we also subscribe here. Dowty (1979, Chap. 2) famously defended the view that all accomplishments are causative-inchoative predicates, thus assigning accomplishments the event structure template in (20).

(20) [ACTIVITY(*P*)[CAUSE[BECOME(*P'*)]]]

Yet other authors such as Rothstein (2004), and, in her wake, Tatevosov and Ivanov (2009), consider that *all* accomplishments have a complex event structure, while taking the cause relation out of (20), since, in Rothstein's own words: "in John ate the sandwich, there is something very counterintuitive about suggesting that John caused something to happen to the sandwich by eating it" (Rothstein 2004: 103). Rothstein associates all accomplishments with the complex event structure template in (21), even accomplishments derived from verbs of psychological consumption such as *read the book* despite the fact that their theme is not an affected entity (Jackendoff 1990: 234; Rappaport Hovav 2008: 33), leaving causativity as an optional feature.

(21) $\lambda e \exists e_1 \exists e_2 [e = (e_1 \sqcup e_2) \wedge (\text{ACTIVITY}(P))(e_1) \wedge \text{BECOME}(P')(e_2)]$ (Rothstein 2004: 105)

The first question to address then is whether indeed all accomplishments – and if not, which classes of accomplishments – have or do not have a complex (bi- or

tri-eventive) event structure. In particular, what can we learn from the phenomena of non-culminating accomplishments that can help us answer this question?

There is not much controversy over the underlying event structure of clearly causative verbs such as *burn* and *kill*, as well as for activity verbs such as *push* which never yield accomplishment VPs even with quantized objects. In contrast, the event structure of specific classes of verbs, among which we find verbs of physical (*eat*) and psychological (*read*) consumption as well as verbs of creation (*write*, *draw*), and performance verbs (*recite a poem*, a subclass of creation verbs as pointed out by Piñón 2008), is still very much under debate. The relevant point of controversy is precisely whether accomplishment VPs formed with verbs of consumption, performance, creation and destruction have a complex (bi-eventive) or simplex (monoeventive) event structure. There is no consensus on this issue. Scholars such as Beavers (2011) distinguish verbs that clearly take an “affected” object (that is, verbs of physical consumption (*eat*) and verbs of creation), from verbs of psychological consumption (*read*) that entail a change in the (mental) state of the subject’s referent, but no change in the object’s referent (Rappaport Hovav 2008). Beavers takes the former, but not the latter, to have the same underlying complex event structure that change-of-state verbs have (Beavers 2011: 351). Competing analyses, however, consider creation or consumption verbs as simple activity verbs, and accomplishments derived from the latter as associated with a simple event structure, on a par with accomplishments derived from verbs of impact/contact such as *wipe/wash*. In particular, Levin (2000) rejects a complex event analysis of consumption (and creation, see p. 418, fn. 4) predicates, on the basis of the observation that the supposedly ontologically distinct “consuming” subevent and “becoming consumed” (change) subevent necessarily happen exactly at the same time. And thus, for this reason, even if eating events may involve two subevents at the *conceptual* level (an ingesting event and a disappearing event), consumption verbs expressing them do not project a complex event at the level of their lexical semantic representation (see also Levin and Rappaport Hovav 2004, 489). Lexical causatives do not require co-temporaneity between the causing event and the change of state (Beavers 2012; Hovav and Levin 2001; Neeleman and Van de Koot 2012). Levin and Rappaport Hovav (1999), indeed, take the fact that the subevents need not unfold together temporally to be the criterial property of a VP associated with a complex event structure. Rappaport Hovav (2008: 33–34) also explicitly argues against a causative analysis of accomplishment VPs derived from incremental theme verbs of consumption or creation. She proposes that activity consumption or destruction verbs with an incremental theme do not lexicalize any scalar structure and, as such, are labelled non-scalar verbs. When such verbs combine with a quantized direct object, they

yield accomplishment VPs because the object serves to measure out the progress and thus delimits the bounds of the described event, thereby yielding an incremental interpretation of the predicate. This interpretation crucially arises, however, without introducing a further eventuality in the semantic structure associated with the VP (see also Rappaport Hovav 2014).

With this theoretical background in mind, consider now the contrast between (22) and (23) (Mandarin examples (23a/c) are from Hongyuan Sun, p.c.):

- (22) a. Mandarin
Wǒ zuótiān xiě-le gěi Zhangsan de xìn (kěshì
 I yesterday write-PFV to Zhangsan de letter but
méi xiě wán).
 NEG.PFV write finish
 ‘I wrote a letter to Zhangsan yesterday (but I didn’t finish writing it).’
 (Koenig and Muansuwan 2000)
- b. Hindi
maayaa-ne biskuT-ko khaa-yaa par use puuraa nahin
 Maya-ERG cookie-ACC eat-PFV but it-ACC finish not
khaa-yaa.
 eat-PFV
 ‘Maya ate the cookie, but did not finish eating it.’
 (Arunachalam and Kothari 2010)
- (23) a. Mandarin
#Lùlu chī le mǐfàn, dàn yí lì mǐ dōu méi
 Lulu eat PFV rice but one grain rice DOU NEG.PFV
chī-diào.
 eat-drop
 Intended: ‘Lulu ate rice, but not a single grain of rice got eaten.’
- b. Mandarin
#Lùlu xiě le yì-fēng xìn, dàn yí-gè zì dōu
 Lulu write PFV one-CL letter but one-CL character DOU
méi xiě-chūlái
 NEG.PFV write-come.out
 Intended: ‘Lulu wrote a letter, but not a single character got written.’

c. Mandarin

#*Lùlu kàn le yì-běn shū, dàn shū shàng yí-gè*
 Lulu read PFV one-CL book but book on one-CL
zì dōu méi kàn
 character DOU NEG.PFV read

Intended: ‘Lulu read a book, but not a single character got read.’

d. Mari

jivan tide šerš-əm lu minut-šte voz-en.
 Ivan this letter-ACC ten minute write-PST

1. ‘Ivan was involved in writing this letter for ten minutes.’

2. # Ivan tried to write this letter for ten minutes, (but have not written a single word).’

(Tatevosov and Ivanov 2009)

(24) Mandarin

Yuēhàn shāo le tā-de shū, dàn gēnběn méi
 Yuehan burn PFV 3SG-DE book but at.all NEG.PFV
shāo-zháo.
 burn-ignite

Literally: ‘Yuehan burned his book, but it didn’t get burnt at all.’
 (Demirdache and Martin 2015)

Can the infelicity of examples (23) help us decide between the various approaches of accomplishments headed by an incremental theme verb? We take this data to provide a novel argument against a causative analysis of such VPs, though not, however, conclusive evidence to decide between a bi-eventive and mono-eventive analysis.

Recall the Minimal Part Constraint from Section 3.1. Were we to assume a causative analysis of consumption or creation verbs, then this constraint would be satisfied (given that causally related events need not be co-temporal, the activity (e.g., ingesting) subevent could thus start before the change (e.g., disappearing) subevent also starts) and sentences (23) should then in principle be felicitous, contrary to fact.

But the Minimal Part Constraint will account for the infelicity of (22) be it on a bi-eventive analysis *à la* Rothstein, or a mono-eventive analysis *à la* Levin and Rappaport-Hovav. That is, Tatevosov and Ivanov (2009) explain the infelicity of the zero-change reading in (23) on the basis of Rothstein’s assumption that accomplishments necessarily encode a one-to-one incremental relation between parts of the activity and parts of the change. Given this incremental mapping

between the two events, if the activity starts, the change starts automatically too. In contrast, for those who adopt Levin and Rappaport's view that incremental theme accomplishments are associated with a simple event structure, the infelicity of (23) would simply reflect that a VP-event must start for a non-culminating accomplishment sentence to be true (as required by the Minimal Part Constraint).

In the next subsection, we propose a new argument in favor of Levin and Rappaport Hovav's view that accomplishment VPs heading incremental theme verbs have a simple event structure.

4.2 Accomplishments derived from consumption/creation verbs are simplex

Recall that Rappaport Hovav (2008: 33–34) explicitly argues against a causative analysis of accomplishment VPs derived from psychological verbs of consumption (*read the book*). She points out, in particular, that decomposition adverbs (such as, e.g., *again*, see Rapp and von Stechow 1999) do not display the ambiguity they show with causative verbs.⁵ A diagnostic, to our knowledge overlooked in the literature, which nicely distinguishes predicates encoding a result state from those which do not, is provided by the different readings of adverbials of completion (Piñón 2005). With accomplishments such as *clean the kitchen*, associated with a

5 Authors such as Marantz (2007) and Dobler (2008) claim that an ambiguity does indeed arise with such verbs. Dobler (2008) gives the following example to support her claim that verbs of creation have a complex event structure. As she observes, (i) is acceptable in the context provided even under the assumption that the previous mountain was not man-made (and thus that no preceding building event occurred), ensuring that what is repeated is the state that there is a mountain on the island.

- i. Context: On some Pacific island, a mountain basically vanished in the course of a major earthquake. Since the mountain was sacred, the inhabitants of the island were devastated.
Finally, they built a mountain (on the island) again.

Note, however, that most of Dobler's examples illustrating the restitutive reading of *again* involve an implicit or explicit locative PP (such as *on the island* in (i)). This is important, since the addition of a PP to an activity verb is known to yield a change-of-state VP in some cases. For instance, while *jump for ten minutes* only yields an iterative reading, *jump in the water for ten minutes* also yields a result-state reading, because the addition of the locative PP may yield a directed motion reading. It might thus be that it is the addition of the PP in (i) that enables the restitutive reading of *again*, rather than the verb proper. In sum, Dobler's data provide at most weak support for the claim that creation verbs have a complex event structure. On this issue, see also the experimental study by Spathas and Michelioudakis (2019) on the availability of the restitutive reading with additives (*too*) and different classes of verbs (including consumption verbs) in Greek.

complex event structure, modification by *completely* yields the ambiguity in (25b) between two readings, depending on whether it is the whole event (here, of cleaning the kitchen) that is complete, or rather only the ensuing result state (here the kitchen being clean). We refer to these two readings, respectively, as event-related vs. state-related. Crucially, with accomplishments such as *read the book*, associated with a simple event structure, *completely* does not trigger such an ambiguity (25a).

- (25) a. **complete**_{[V-READ [the book]]}
 b. **complete**_{[V-CAUSE **complete**[the kitchen CLEAN]]}

The difference is illustrated through the contrast in (26)–(27). Both contain an incremental theme verb, but while in (26), the verb has a complex event structure, in (27), it would have a simple event structure under Rappaport Hovav's (2008) approach.

(26) Paul cleaned the whole house, but not completely.

(27) Paul read the whole book, #but not completely.

The addition of the maximizer *whole* in these examples entails that the entire theme has been affected. Recall that for Rappaport Hovav (2008, 2014), with accomplishments such as *read the book* in (27) that have a simplex event structure (being derived from non-scalar (manner) verbs), it is the incremental theme that is entirely responsible for their scalar (incremental) construal. The use of the maximizer in (27) thus indicates that the scalar change that the direct object undergoes must reach the maximal degree on the associated scale. Adding a subsequent *but not completely*-clause to VPs with a simplex accomplishment such as (27) thus yields a plain contradiction and is nonsensical.

In contrast, with accomplishments such as *clean the house* in (26) that have a complex event structure encoding a result state, the *but not completely* clause is felicitous. What the *but not completely* clause conveys in example (26) is that the result state predicate is not satisfied because it is understood in its precise, sharp sense, rather than on a vague, imprecise use. Hence the acceptability of (26), despite the fact that the first clause is telic and describes a complete *cleaning* event, and that the adjective *clean* already encodes a scale maximum.

The same line of reasoning nicely explains the contrast in (28). With a causative incremental theme accomplishment such as *clean the house* in (28a), the adverb *completely* can have a state-related reading, and, as such, is not redundant in presence of the maximizer *whole* modifying the internal argument. In contrast, redundancy arises with incremental theme accomplishments such as *read the book* in (28b), since the latter do not encode a result state and consequently do not license the state-related reading of *completely*.

Alternative analyses for Mandarin and other languages have assumed that the locus of event partitivity is a *modal operator* encoded at one of the following levels:

- *At the level of the VP:*
 - by the verb itself: Tatevosov (2008) on Karachay-Balkar, Koenig and Davis (2001) on English
 - by so-called control transitivizers attaching to the root: Bar-el et al. (2005)
- *Above VP and below Asp:*
 - by a voice marker: the “modal” active voice in Korean (Beavers and Lee this issue); the Actor Topic voice and Theme Topic voice in Malagasy (Paul et al. 2015)
 - by an aspectual marker: Tatevosov’s (this issue) PART operator in Russian *po*-fectives, located between *v* and the outer aspect projection (Asp) and spelled-out by the secondary imperfective (see also Ramchand and Minor 2019)
- *At the level of Asp:*
 - by a tense/aspect marker (Koenig and Muansuwan 2000 on Thai; Altshuler 2014 on Hindi; Martin et al. 2020a; Martin and Gyarmathy 2019; Smith 1991; Soh and Gao 2006; Soh and Kuo 2005 on Mandarin)

Martin et al. (2020b) thus assume that in Mandarin, SVs such as *shā* ‘kill’ have exactly the same meaning as their English counterparts (e.g., the English verb *kill*), but derive the partitive use of perfective event descriptions built with these verbs from the perfective marker *-le*, which they take to have the same partitive semantics that Altshuler (2014) assigns to the Hindi perfective.

6 On the variety of causatives with zero-change construals

In English, as well as across Romance languages, non-progressives sentences that take a lexical causative verb as their main predicate entail event culmination (see, e.g., (1)–(2)). It has, however, been repeatedly observed by several authors – Oehrle (1976), Ruwet (1994, 1995), Koenig and Davis (2001), Rappaport Hovav and Levin (2008), Beavers (2010), Martin and Schäfer (2017), Beavers and Koontz-Garboden (2020) among others – that some verbs that have the morphosyntax of causative predicates nevertheless fail to entail the occurrence of a change-of-state in non-progressive sentences, at least when used agentively, as illustrated in (29a). To explain why some verbs do not entail the occurrence of a *P*-state despite encoding it lexically, Koenig and Davis (2001) introduce a covert sub-lexical modal component, which evaluates relations between participants and

eventualities at various world indices, see for instance the paraphrase given in (29b) for (29a).⁶

- (29) a. French
Audrey a expliqué le problème à Moritz, mais il
 Audrey EXPLAIN-PFV.3SG the problem to Moritz but he
ne l'a pas compris.
 NEG it has NEG understood
 ‘Audrey explained the problem to Moritz, but he did not understand it.’
 b. *Audrey caused Moritz to understand the problem in all worlds where the goal of her explanation is achieved.*

On this view, such verbs involve a **cause** relation just as is the case with run-of-the-mill, non-modal causative verbs (e.g., *open*), which we henceforth redub “extensional” causatives.⁷ But contrary to extensional causatives, modal causatives encode a sublexical modal operator (a modal base) scoping over the encoded result. Since the world of evaluation is not necessarily included in the modal base, the result state does not have to take place in the actual world, which is why Martin and Schäfer (2017) call these verbs *defeasible causatives*. In the spirit of Martin and Schäfer (2017) (themselves inspired by Koenig and Davis 2001), the lexical representation for *explain the problem* given in (30) involves a modal base including all causally successful worlds.⁸

- (30) *expliquer le problème à z* ‘explain the problem to z’ \rightsquigarrow
 $\lambda z \lambda e. \mathbf{explain}(e) \wedge \mathbf{theme}(e, \mathbf{the\text{-}problem}) \wedge \mathbf{recipient}(e, z) \wedge$
 $\Box_{\text{causal success}} \exists s (\mathbf{cause})(e, s) \wedge \mathbf{understand}(s) \wedge$
 $\mathbf{theme}(s, \mathbf{the\text{-}problem}) \wedge \mathbf{holder}(s, z)$

⁶ The verb *explain* is not among the verbs explicitly addressed by Koenig and Davis (2001), but their analysis is easily extendable to it.

⁷ Obviously, the hypothesis that the lexicon contains both modal vs. extensional causatives raises tricky questions. In particular, how is this lexical difference acquired? Interestingly, Kazanina et al. (this issue) argue, on the basis of an experimental study of the semantic development of two modal causatives (*send* and *throw*), suggest that modal causatives are challenging for learners, in that the lack of result entailment of these verbs is often misinterpreted by L1 English young children as entailing a successful transfer. A further but not much discussed question is that of exactly which causative predicates have a modal meaning, as Yagi (2019) emphasizes, concluding that all causative predicates have a sublexical component. See also Fiorin and Delfitto (2017) on the related claim that *all* telic predicates create intensional contexts for the evaluation of the achievement of the telos encoded in the meaning of the predicate.

⁸ The truth conditions for \Box_p are standard, with respect to a model M , an assignment function g , and a world w :

(i) $\Box_{\text{causal success}} \varphi^{M,g,w} = 1$ iff for all $w' \in \mathbf{causal\ success}(w)$, $\varphi^{M,g,w'} = 1$.

The verb in (30) has a causative complex event structure involving two subevents: a causing subevent and a result state. The result state is the property of understanding the problem (that hopefully Moritz will hold by the end of the unfolding of the explanation). Importantly, the causing event unfolds along a manner explain-the-problem property. This accurately reflects the morphosyntactic make up of *expliquer* ‘explain’, a bi-morphemic predicate derived from the Latin manner root *plicare* ‘fold’ and the resultative prefix *ex-*. Thus when the causing event *e* is bound by a tense or aspect operator requiring event completion, such as the English simple past, *e* has to unfold completely along this manner dimension. This is a welcome prediction; for instance, (29a) is false if Audrey didn’t finish explaining the problem, and in fact, (31) is contradictory.

- (31) French
Audrey a expliqué le problème à Moritz, #mais elle
 Audrey EXPLAIN-PFV.3SG the problem to Moritz but she
n’a pas fini de le lui expliquer.
 NEG has NEG finished to it him explain
 Intended: ‘Audrey explained the problem to Moritz,
 but she didn’t finish explaining it to him.’

But of course, an event which unfolds completely along the explain-the-problem dimension may nevertheless be unsuccessful, that is, not yield the expected understand-the-problem result state, precisely because the result state encoded by *explain* is in the scope of a modal operator. In other words, a given event *e* may be complete with respect to a manner property encoded by a defeasible causative, while remaining incomplete with respect to a result property encoded by the same predicate (Martin 2020).

Let us now see what happens if we add to (29a) a completive (frame) *in-*adverbial, which indicates that the denoted event reached its endpoint:

- (32) French
Audrey a expliqué le problème à Moritz en dix
 Audrey EXPLAIN-PFV.3SG the problem to Moritz in ten
minutes, mais il ne l’a pas compris.
 minutes but he NEG it has NEG understood
 ‘Audrey explained the problem to Moritz in ten minutes, but he did
 not understand it.’

As (32) shows, it is still felicitous to deny that the described event culminates with respect to the result property. This is, in fact, expected, since on the analysis developed in (30), together with the completion requirement associated with the *in-*adverbial, (32) is true if Audrey completed an explanation of the problem to Moritz such that in all causally successful worlds, Moritz understands it.

It is not the case, however, that the non-culminating reading systematically survives in the presence of a completive adverbial with *all* defeasible causative verbs. Whether it survives or not seems to depend on whether the VP allows for an incremental mapping relation between the causing event and the theme measuring out the event. For VPs such as *explain the problem*, such an incremental relation can be conveyed. That is, the problem can measure out the causing event, thus providing a bound for the denoted event, and this independently of whether this event is successful or not. But for French and German defeasible causatives like *rassurer/beruhigen* ‘reassure/calm’, or *encourager/ermutigen* ‘encourage, cheer up’, the theme does not “measure out” the causing event (it is not the case that to each part of a given calming event corresponds a part of the individual one tries to calm down). And as Martin and Schäfer (2011) observe, for these defeasible causative verbs, the change-of-state gets entailed in the presence of a completive *in*-adverbial:

- (33) German
Hans beruhigte Gustav (#in fünf Minuten), aber er
 Hans TRZ-calm-PST.3SG Gustav in five minutes but he
war weiter unruhig.
 was still NEG-calm
 ‘Hans calmed Gustav (in ten minutes), but he was still not calm.’
 (Martin and Schäfer 2011)

- (34) French
Chaïm l’a encouragée à partir (#en dix
 Chaïm her=has in-courage-PP.3SG.FEM to go in ten
minutes), mais elle ne s’est pas du tout sentie
 minutes but she NEG REFL=IS NEG at all felt
encouragée.
 in-courage-PP.3SG.FEM
 ‘Chaïm encouraged her to go (in ten minutes), but she didn’t feel
 encouraged at all.’
 (Martin and Schäfer 2011)

The culmination entailment with the completive *in*-adverbial can be accounted for as follows. With such VPs, the theme does not measure out the event (as it does in the case of *explain*-verbs), and thus does not provide a final bound for the event denoted. Thus for instance, an event *e* in the denotation of *Gustav beruhigen* ‘calm Gustav’ can in principle take place endlessly: I can continue over and over performing an attempt to calm Gustav. Thus only the obtaining of some result state can signal that the causing events in the denotation of the VP have achieved an endpoint. Therefore, in

the presence of a completive adverbial, the interpreter is forced to assume that the evaluation world is contained in the modal base; hence the result entailment.

It seems that the absence (vs. presence) of an incremental relation between parts of the causing event and parts of the theme systematically correlates with the absence (vs. presence) of a manner property in the representation. We saw that bi-morphemic verbs such as *explain* associate the higher causing event with a manner property. But *beruhigen* ‘calm’ is a deadjectival verb built from the adjective *ruhig* ‘calm’ and the transitivizer morpheme *be-*; the French denominal verb *encourager* ‘encourage’ literally means ‘put into courage’. Most plausibly, these predicates remain silent with regards to the manner property of the higher causing event, see, e.g., the representation below for the deadjectival defeasible causative *beruhigen* ‘calm’ (compare with (30) above):

- (35) *beruhigen* *y* ‘calm *y*’ \rightsquigarrow
 $\lambda y \lambda e. \mathbf{theme}(e, y) \wedge \square_{\text{causal success}} \exists s (\mathbf{cause}(e, s) \wedge \mathbf{calm}(s) \wedge \mathbf{theme}(s, y))$

In summary, we hypothesise that among defeasible causative verbs, (i) only verbs encoding a manner property may yield incremental theme VPs (see (30) vs. (35)), and (ii) only such incremental manner verbs may yield a telic VP (with a quantized object) and still allow a zero-change reading (see (32) vs. (33)–(34)).

Whether the non-culminating reading of accomplishments survives or not in the presence of a completive marker such as an *in*-adverbial has not been very much discussed in the literature. But the issue is interesting in so far as it may reveal a crucial difference between the non-culminating use of English defeasible causatives such as *explain* vs. the non-culminating accomplishments illustrated in (3)–(7). We do not know the facts for Salish or Karachay-Balkar, but for Mandarin, Martin et al. (2020a) point out that, in the presence of a completive adverbial, the zero-change reading (where the theme endures no change at all, see Section 3.1) becomes infelicitous for causative simple verbs such as *shāo* ‘burn’, as the following contrast illustrates:

- (36) a. Mandarin
Yuēhàn shāo le tā-de shū, dàn gēnběn méi
 Yuehan burn PFV 3SG-DE book but at.all NEG.PFV
shāo-zháo.
 burn-ignite
 Literally: ‘Yuehan burned his book, but it didn’t get burnt at all.’
 (Demirdache and Martin 2015)

b. Mandarin

Lùlu liǎng fēnzhōng nèi shāo le yì-běn shū,
 Lulu two minute within burn PFV one-CL book
#dànshì shū gēnbǎn jiù méi shāo-zháo.
 but book at.all JIU NEG.PFV burn-touch
 Intended: ‘Lulu burned a book in two minutes, but the book didn’t
 burn at all.’
 (Martin et al. 2020a)

The contrast is replicated in Korean:

(37) a. Korean

Ku-ka changmwun-ul yel-ess-ta haciman changmwun-i
 he-NOM window-ACC open-PST-DECL but window-NOM
yel-li-ci anh-ass-ta.
 open-pass-comp neg-pst-decl

Literally: ‘He opened the window, but the window was not open.’
 (Beavers and Lee this issue)

b. Korean

Ku-ka changmwun-ul il-pwun-maney yel-ess-ta.
 He-NOM window-ACC one-minute-in open-PST-DECL
#Haciman chanmwun-i yel-i-ci anh-ass-ta.
 but window-NOM open-PASS-COMP NEG-PST-DECL

Intended: ‘He opened the window in a minute, but the window was
 not open.’
 (Jiyoung Choi, p.c.)

In sum, in the presence of a completive marker (i.e., *in*-adverbial), the non-
 culminating “zero-change” reading observed without this marker survives with
 English *explain the problem*, but not with Mandarin *shāo* ‘burn’ or Korean *yel* ‘open’.

Table 1: Subtypes of predicates with zero-change construals across languages.

Interpretation of a non-prog. sentence with	Manner property in the lexicon?	Result property in the lexicon?	Modal scopes over result?
French <i>expliquer</i> ‘explain’	✓	✓	✓ (at the lexical level)
French <i>encourager</i> ‘encourage’	✗	✓	✓ (at the lexical level)
Mandarin <i>shā</i> ‘kill’ (Talmy i.a.)	✓	✗	✗
Mandarin <i>shā</i> ‘kill’ (Martin et al. i.a.)	✗	✓	✓ (at the level of Asp)
Korean <i>yel</i> ‘open’ (Beavers and Lee)	✗	✓	✓ (at the level of Voice)

It remains an open question how such contrast can be accounted for in analyses that locate the source of non-culmination in the lexicon (Talmy 1976, 2000; Koenig and Chief 2008 for Mandarin) or in the voice inflection (Beavers and Lee this issue for Korean). Table 1 summarizes the different views discussed throughout this subsection.

7 Telic versus atelic uses of accomplishments

Until now, we have exclusively focussed on non-culminating uses of accomplishments. Tatevosov (2002, 2008), Tatevosov and Ivanov (2009) and Tatevosov (this issue) discuss two other construals which they subsume under non-culminating construals. We argue that this cannot be the case: these construals instantiate atelic uses of accomplishments and these two classes of readings, non-culminating and atelic, must crucially be discriminated. We conclude by offering a general typology of accomplishments that finely distinguishes the varieties of partitive construals they allow.

The first case discussed by Tatevosov involves accomplishments felicitously modified by durative adverbials. Tatevosov (2002) notes after Bertinetto and Squartini (1995) that such combinations are in fact possible with some English accomplishments (see also Champollion 2013; Deo and Piñango 2011; Kearns 2007; Kennedy 2012; Piñón 2008, 2009; Rappaport Hovav 2008; Smollett 2005; Zucchi 1998), see (38):

- (38) *The tank emptied quickly for a few minutes (but then the flow dwindled to a trickle).*
(Kearns 2007)

Tatevosov argues, however, that they are much more broadly tolerated in his other languages of investigation, namely Bagwalal (North-Caucasian), Mari (Uralic) and Tatar (Turkic), as the following examples illustrate:

- (39) Mari
jivan lu minut tide šereš-əm voz-en.
 Ivan ten minute-INESS this letter-ACC write-PST
 'Ivan wrote this letter for ten minutes.'
 (Tatevosov 2002, 355)

- (40) Tatar
kerim eki minut ešik-ne ač-ti.
 Kerim two minute door-ACC open-PST
 'Kerim spent two minutes trying to open the door' [and gave up.]
 (Tatevosov this issue)

The second type of partitive event descriptions addressed in Tatevosov and Ivanov (2009) is the case of Slavic accomplishment verbal stems prefixed with *po-* on its so-called delimitative use, illustrated in (41) (from Mehlig 2012):

- (41) Russian
Saša po-zapoln-ja-l anket-u [...] [*Sasha po-fill-PART-PST form-ACC*]
 ‘Sasha filled in this form for a short while.’
 (Mehlig 2012, his example (8))

Both the non-progressive sentences in (3)–(8), and those in (39)–(41), have in common that they contain a predicate telic by default used to describe possibly incomplete events. There are, however, important distinctions between these two classes of phenomena, as Tatevosov (this issue) also observes. Firstly, in the Russian example (41), an accomplishment stem is used *atelicly*. In fact, Tatevosov (this issue) argues that in order to be prefixed by *po-* on its delimitative reading, the accomplishment stem has to turn into an activity description in the course of the derivation. Tatevosov takes the secondary imperfective (the morpheme *-ja-* in (41)), analyzed as a partitive operator (PART), to be in charge of this job. Somewhat similarly, in order to be felicitously modifiable by a durative adverbial, an accomplishment predicate has to be turned into an atelic one (alternatively, its atelic interpretation has to be selected), for durative adverbials require cumulativity (Krifka 1989, 1992 among others). For instance, in the English translation of example (39), and presumably in the Mari example (39) as well, the predicate *write the letter*, by default interpreted as an accomplishment, must receive an atelic, cumulative interpretation in order to combine with *for two minutes*. In both (39) and (41), we thus start with a predicate *P* used atelicly (even though *P* may have a default telic meaning), as recapitulated in (42a):

- (42) a. [[*P_{atelic}*] ... *for ten minutes* (ENGLISH)/*po-*(RUSSIAN)...] [(39)–(41)]
 b. [[*P_{telic}*]... CTRL – TRZ(SALISH)/ *-le* (MANDARIN)...] [(3)–(8)]

In contrast, in the examples (3) through (8), the predicates remain by assumption telic ((42b)). Indeed, that Squamish roots forming non-culminating accomplishments are telic is explicitly argued for in Bar-el et al. (2005).

To be sure, if the telic predicate in (42b) combines with an operator that can yield a partitive construal, it may acquire an atelic use and thus become a predicate of variable telicity, as schematized in (43):

(43) $[[P_{tel}] \dots \text{CTRL-TRZ(SALISH)}/-le(\text{MANDARIN}) \dots](a)_{tel}$

For instance, it may be that in the Squamish sentence (4), the transitive predicate *xewtl'-an* 'break-CTRL-TRZ' formed with the telic root *xewtl'* 'break' and the control transitivizer *-an* has both telic and atelic readings. This is in line with Bar-el et al.'s (2005) claim that the control transitivizer "removes telicity" (p. 11). But even so, (3)–(4) differ from (39)–(41) in that the predicate in (3)–(4) *remains telic* when combined with the control transitivizer, while in (39)–(41), the predicate *must be atelic* in order to combine with either a durative adverbial or with *po-*. Furthermore, even if the telic predicate in (42b) is part of a larger predicate of variable telicity *P* as schematized in (43), it might very well be that the preferred interpretation of this larger predicate *P* is still the telic one. In fact, that the first clause of (3)–(7) triggers an inference of event culmination strongly suggests that by default, the larger predicate is interpreted telically.

This leads us to a second and related important difference between (3)–(8) on the one hand, and (39)–(41) on the other, which concerns the inference triggered by these sentences. As just mentioned, the first clause of (3)–(8) triggers an inference of culmination, which is defeasible. In contrast, the Russian example (41) triggers an opposite inference of *non-culmination*. More precisely, (41) suggests that the form was not filled in to the end (Mehlig 2012). Mehlig claims that this inference is also defeasible, as evidenced by the fact that (41) may be felicitously followed by a continuation asserting that the form *did* get completely filled in after all.⁹ The English translations of the examples (39)–(41) are in this respect quite similar: they also trigger an inference of event *non-culmination*, which is also defeasible, as Bott (2010) experimentally established for German. So for instance, the English sentence *Sasha filled in this form for 10 min* can be felicitously continued by the sentence *...and in fact, he finished filling in this form*, which cancels the inference of non-culmination obtained by default.

In summary, there is an important variety of partitive interpretations of accomplishments. The label non-culminating accomplishments is used by Tatevosov (2008, this issue) to cover all of the phenomena illustrated in (3)–(4) and (39)–(41). In contrast, Martin (2019: 6) takes these paradigms to illustrate two distinct subtypes of partitive interpretations of accomplishments: while the first clause in sentences (3) to (8) instantiate partitive non-culminating readings, sentences (39)–(41) and their English translations instantiate partitive atelic readings (incomplete in her terminology), the definition of which is given below.

⁹ By contrast, for Tatevosov (this issue), *po-*fectives necessarily express a *proper* part of the VP-event denoted by the stem; see his definition of the part operator spelled-out by the secondary imperfective.

- (44) A sentence S built with an INCOMPLETEIVE atelic predicate P_{atel} *defeasibly implicates* that the described event e does not culminate with respect to the same predicate used telically P_{tel} , i.e., that $\neg\text{CUL}(e, P_{tel})$ obtains in w_0 .

A compelling reason to discriminate between these two classes of partitive construals of accomplishments across languages – that is, their non-culminating vs. atelic uses – is that the former are typically more constrained than the former. That is, many languages allow atelic construals but not non-culminating construals of accomplishments.¹⁰ For instance, for German, Bott and Hamm (2014) note that the predicate *das Haus errichten* ‘build the house’, which is telic by default, has an atelic use, but no non-culminating telic use, as the following contrast shows:

- (45) a. German
Der Architekt errichtete das Haus zwei Jahre lang.
 The architect built the house for two years long
 Literally: ‘The architect built the house for two years.’
 (Bott and Hamm 2014)
 [atelic use]
- b. German
*Der Architekt errichtete das Haus... #stellte es aber
 nie fertig.*
 The architect built the house put it however
 never finish
 Intended: ‘The architect built the house ... without ever finishing
 building it.’
 (Bott and Hamm 2014)
 [#non-culminating telic use]

Similar observations have been made for Spanish (Arche 2014) and English (Kearns 2007; Martin 2019).

This leads us to formulate the following twofold hypothesis:

- (46) a. Languages that allow partitive non-culminating uses of accomplishments form a proper subset of languages that allow their atelic use.
 b. If an accomplishment predicate allows for a non-culminating use, the same predicate also has an atelic use.

¹⁰ Except for a restricted set of accomplishments whose meaning involves modality, such as, e.g., *explain the problem*, see Section 6.

Why do partitive (incompletive) atelic uses arise more easily than partitive (non-culminating) telic ones? Bott's (2010) insights are useful here. On the basis of his experiments on German, Bott proposes that the default preference for the telic reading of "flexible" accomplishments is more easily overridden *within the VP*, before the clause boundary, by for instance the addition of a durative adverbial, than after this point, where the telic reading tends to get entailed. In other words, the telicity inference triggered by an unmodified flexible accomplishment tends to lose its defeasible character after the clause boundary, though it can be overridden before. The reason for this is that, typically, the interpreter updates the discourse model and discards auxiliary/secondary uses (e.g., the atelic use of flexible accomplishments) at *clause boundaries*, not before. This is why (45b) is more marked than (45a), and, in fact, sounds often contradictory to German speakers. As Bott (2010) and Bott and Hamm (2014) observe, contrasts of this kind suggest that the interpreter does not immediately commit to a particular aspectual interpretation of an ambiguous form. Rather, it seems that the interpreter waits until they come to some decision point, such as a clause boundary.

Let us now come back to the difference between German-like languages, that do not allow non-culminating uses across all classes of accomplishments (see (45b)), and Salish-like languages, that may generate such readings for accomplishments combined with the control transitivizer. If non-culminating uses were obtained by selecting "on second thought" the atelic reading of flexible accomplishments (discarded in the first clause, but "fished out from the trash" in the second clause), this crosslinguistic difference would be blatantly mysterious: why would the atelic, auxiliary reading of accomplishment VPs remain accessible after the clause boundary in Salish-like languages, but not in German-like ones? Why would the Salish interpreter keep the peripheral, atelic reading accessible for a longer time than the German interpreter? It seems very unlikely that the incremental disambiguation of forms showing a similar ambiguity would differ to this extent crosslinguistically. It seems much more plausible that the telic reading tends to be entailed after a clause boundary *across languages*, but that while in German-like languages, non-progressive telic sentences entail event culmination, in Salish languages, they do not if and only if their main verbs is marked by a control transitivizer. And this in turn is most probably the case because of the specific semantics of the control transitivizer (CTRL-TRZ), which has no counterpart in German-like languages. That telicity does not always go hand in hand with event culmination should not come as a surprise: English progressive sentences with telic VPs do not entail culmination either. Indeed Bar-el et al. (2005) attribute to CTRL-TRZ roughly the same meaning as the progressive operator as analyzed by Dowty (1979) (it introduces inertia worlds, applies universal quantification over

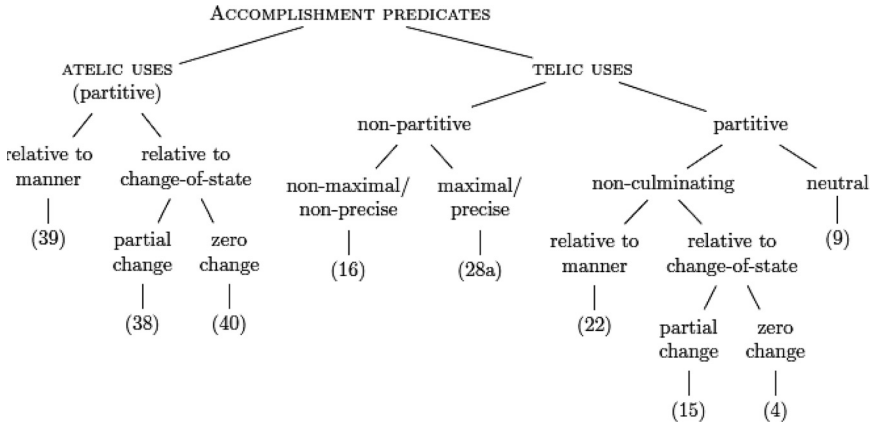


Figure 1: Typology of readings of accomplishment predicates.

these worlds, and asserts that the event existentially quantified over culminates with respect to the predicate within these inertia worlds.)

The typology of partitive readings of accomplishment predicates delineated in the previous sections is summarized in Figure 1. Each of the readings identified in the above typology is associated with a number referring back to a prototypical example.

8 The contributions

The present collection brings together four contributions on adult languages, and two on child languages. Beavers and Lee’s contribution “Intentionality, scalar change, and non-culmination in Korean caused change-of-state predicates” focuses on the zero- vs. partial-change non-culminating readings of causative predicates in adult Korean. The authors argue that zero-change readings require that the subject *intended* the coming about of the result state, while readings in which some change obtains (partially or completely) lack this requirement. As they observe, this supports the weak version of Demirdache and Martin’s (2015) *Agent Control Hypothesis*, according to which agent control is necessary for the zero-change non-culminating use of causative predicates, provided that what counts as “agent control” includes agentivity. However, they show that zero-change interpretations are not reducible to ‘try’-constructions since the former but not the latter require direct causation. They argue that the full set of possible readings arises from the interaction of two factors: a sublexical modality operator over worlds conforming to the agent’s intentions for zero-change readings, which they claim arises via a special active voice inflection in Korean, and a scalar semantics

for partial-change readings of causative verbs, semantically very close to degree achievements under a partial-change use.

Paul et al.'s paper "Culminating and non-culminating accomplishments in Malagasy" investigates the semantics of a specific voice marker in Malagasy, *maha-*, which appears to entail culmination. Importantly, verbs prefixed with *maha-* display a diverse range of interpretations: causative, abilitive, 'manage to', and unintentionality. The authors develop a semantically uniform analysis of the different meanings of this prefix, within a force-theoretic framework for causation (Wolff 2014). Their analysis is grounded in the voice marker's morphological complexity. Each of its components, *ma-* and *ha-*, introduces a prevention relation, *maha* as a whole thus compositionally encodes double prevention, as proposed by Wolf for English predicates such as *enable*. The double prevention configuration is associated with a circumstantial modal base, which interacts with the stativity versus eventivity of the root to give rise to the range of readings attested, nicely predicting culminating readings with the past and future tenses, but not with the present tense.

Tatevosov's contribution "On the temporal structure of non-culminating accomplishments" focuses on data from adult Tatar and Russian. Tatevosov's goal is to account for why non-culminating readings are available for some, but not all accomplishments, in languages which productively allow non-culminating accomplishments. His main empirical finding is that zero-change and partial-change readings are unavailable if contextually relevant parts of the process subevent component of an accomplishment are arranged by the temporal precedence relation in a unique way. This finding leads Tatevosov to define the property of Unique Temporal Arrangement for event predicates (UTA), to explain when partitive event descriptions should be impossible to derive. The generalization he puts forth is that *If the process component of an event description shows UTA, zero-change construals are not licensed* (see his NCA generalization (70)).

Gyarmathy and Altshuler's contribution "(Non-)culmination by abduction" investigates the different ways the culmination inference of perfective non-culminating accomplishments in Hindi on the one hand, and imperfective telic sentences in Russian on the other, has been accounted for by for instance Grønn (2003, 2007), Bohnemeyer and Swift (2004) and Arunachalam and Kothari (2010). They propose an original account that exploits abduction, i.e., the inference to the best explanation. They show how the occurrence of a (non-)culminated event is abducted in the relevant cases based on a semantic analysis which adopts the distinction between *culminated* and *maximal* events (Altshuler 2014), as well as a set of non-defeasible rules encoding general mereological principles. They also raise questions about the nature of (non-)culminating accomplishment inferences, which have previously been taken to be conversational implicatures, and show

how their account can be extended to defeasible causatives in Germanic and Romance languages.

Martin et al.'s contribution "Children's non-adultlike interpretations of telic predicates across languages" provides a comprehensive analysis of child interpretations of telic predicates across languages. As they observe, on the surface, children's non-adultlike interpretations appear to be scattered and even contradictory across languages. They contend that the diversity of non-adultlike interpretations that is found across child languages is incompatible with accounts that rely on cognitive, language-independent principles, but instead is triggered by language specific properties. Their generalization is that child learners across languages have problems with tense-aspect forms with *variable* meanings, in contrast to forms with a one-to-one form/meaning mapping, acquired earlier. While adults master the context-sensitive interpretation of forms with multiple meanings, children have difficulties interpreting such forms. A comprehensive explanation is provided for three non-target patterns identified across languages. The difficulties underlying children's interpretational patterns have different semantic and pragmatic sources, but all rely on children's immature command of pragmatic reasoning (in particular, the abductive reasoning that Gyarmathy and Altshuler assume to underpin the culmination inference of non-culminating accomplishments).

The paper "Actuality bias in verb learning: the case of sublexically modal transfer verbs" by Kazanina et al. is devoted to one of the three specific patterns classified by Martin et al., namely the one under which children are overly restrictive, "over-requiring" event culmination, a pattern also documented in child Mandarin by Chen (2017). In particular, Kazanina et al. investigate the interpretation of sublexically modal verbs of transfer, *throw* and *send*, in English-speaking children. For adults, the sublexical modal meaning of these verbs can be seen in the fact that the transfer subevent of the object to the recipient need not take place in the actual world, e.g., *Mary sent/throw a book to John* does not entail a successful transfer of the book to John. Yet in the two experiments reported by the authors, young English-speaking children often misinterpreted *Mary sent a book to John* as entailing successful transfer. Kazanina et al. show that such non-adultlike interpretations are present despite the children's conceptual ability to entertain possible worlds, and propose that children may initially construct verb meanings on the basis of actual events, positing the modal meaning at a later stage only.

Abbreviations

ACC	accusative
ATEL	atelic

CL	classifier
COMP	complementizer
CONJ	conjunction
CTRL	control
DECL	declarative
DET	determiner
DUR	durative
ERG	ergative
FEM	feminine
IMP	imperfective
INESS	inessive
IRR	irrealis
LC	limited control
PFV	perfective
NEG	Negation
NOM	nominative
PART	partitive
PASS	passive
PP	past participle
PRTC	particle
PST	past
PFV	perfective
REFL	reflexive
RL	realis
SG	singular
SV	simple verb
TEL	telic
TOP	topic
TRZ	transitivizer.

Acknowledgements: We are very grateful to two anonymous reviewers as well as the Editor-in-Chief of *Linguistics* and Sergei Tatevosov for their very constructive feedback on a previous version of this paper. This contribution partly builds on teaching material for a class on non-culminating events that Fabienne Martin co-taught with Zsófia Gyarmathy and Károly Varasdi in the fall of 2016 at the Université Paris Diderot. F. Martin would like to thank them for their valuable input on this teaching material and for a fruitful and dearly remembered collaboration over the years, as well as Florian Schäfer for extensive discussion on event structure and non-culmination. We also wish to thank Hongyuan Sun and Jinhong Liu for all the insights that investigating Mandarin together has uncovered, the anonymous reviewers for *Linguistics*, and the many reviewers who evaluated the contributions before they were submitted to *Linguistics*: Luis Alonso-Ovalle, Rajesh Bhatt, Jiyoung Choi, Francesca Foppolo, Thomas Grano, Atle Grønn, Zsófia Gyarmathy, Henrison Hsieh, Nina Kazanina and Christopher Piñón. We are also grateful to

Johan van der Auwera for welcoming our editorial project with enthusiasm, and, last but not least, to Ann Kelly for her infinite patience and precious editorial work throughout the whole process.

F. Martin's research is supported by the DFG award AL 554/8-1 (Leibniz-Preis 2014) to A. Alexiadou, and H. Demirdache's research by the LLING UMR 6310 (Nantes University/CNRS).

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