Non-culminating accomplishments

Fabienne Martin   *Humboldt-Universität zu Berlin*

Abstract This paper focuses on non-culminating accomplishments and distinguishes them from accomplishments used atelically. It delineates two different sources of event culmination denials after non-progressive accomplishment sentences, namely the perfective, or a modal operator encoded in the VP. Furthermore, it argues that non-culminating accomplishments also differ from non-maximal accomplishments, which entail event culmination relative to a coarse granularity level, but allow culmination denials relative to a finer granularity level, *via* the non-maximal use of the (in-)definite description used to introduce the incremental theme argument.

1   Introduction

Accomplishment predicates (e.g., *build a house*) encode an inherent terminal point, labelled 'telos' by Garey (1957). When the telos is reached, the eventuality is said to be complete, or, following Parsons' (1990) terminology, to culminate.[1] In order to address non-culminating accomplishments, we first have to agree on the notion of event culmination. To illustrate some options, let us take an uninflected accomplishment VP such as Mary-partly-build-a-house, apply a perfective to it, and assume that there is an event e making this perfective accomplishment true (i.e., Mary partly built a house). Is the event e complete or incomplete? The dominant intuition is probably that e

---

is incomplete. But the intuition implemented in event semantics is that *e is complete*, for *e* is a complete Mary-partly-build-a-house event. That is, event culmination is defined as a relation $\mathsf{CUL}(e, P)$ between events *e* and properties *P*, rather than a property of events *per se* (Zucchi 1999). Another classical assumption also adopted here is that (uninflected) predicates denote properties of complete events (see, e.g., Landman 1992). For instance, the predicate *cross the street* has in its denotation complete street-crossings only.

Secondly, we have to agree on the extension of the class of accomplishments. Standard tests include compatibility with temporal *in*-adverbials and incompability with temporal *for*-adverbials (see *break a glass in/#for two minutes*). Activity (atelic) predicates show the opposite pattern. But these tests leave undecided the status of predicates compatible with both *for*- and *in*-adverbials, whose existence has been repeatedly observed across languages. I argue that we have to distinguish two subclasses of such predicates, exemplified by the English VPs *eat the pizza* and *read the Bible* respectively, see (1)-(2).

(1)   Mary ate the pizza for several minutes until she found a bug in it.
       (Wright 2014: 113)   (flexible accomplishment)

(2)   We read the Bible this morning. (Pancheva 2003: 286)   (predicate of
       variable telicity)

I call predicates such as *eat the pizza 'flexible' accomplishments.* Flexible accomplishments have all defining properties of accomplishments, but can have an atelic, cumulative meaning in the appropriate context once modified by a durative adverbial. However, when used without temporal adverbial in a non-progressive sentence, flexible accomplishments trigger like any accomplishment the inference that the telos encoded by the predicate has been reached. So for instance, *Yesterday night, an ant ate my cake* triggers the inference that the telos encoded by the predicate an-ant-eat-my-cake has been reached. I consider the lexical bias towards the telic meaning in absence of temporal modification and the ensuing inference of event culmination as defining properties of accomplishment predicates, together with the other traditional tests (see Dowty 1979 among others).

In absence of temporal modification, predicates such as *read the Bible do not* show a lexical bias for the telic reading, and do not by default trigger the inference that $\mathsf{CUL}(e, P_{tel})$ obtains in a non-progressive sentence. For instance, (2) does not give rise to the inference that the telos encoded by the telic predicate Mary-read-the-Bible has been reached. In fact, as Pancheva (2003) observes, the atelic interpretation is the most natural one in absence of temporal modification with these predicates. As a result, it is not contradictory to assert

2

in a subsequent clause (via *not finish VP*) that $\mathsf{CUL}(e, P_{tel})$ does not obtain, see (3). This is another difference with flexible accomplishments, since with the latter predicates, it is *not* possible to deny $\mathsf{CUL}(e, P_{tel})$ in the subsequent clause via *not finish VP*, see (4).

(3)   Yesterday, I read the Bible, but I didn't finish reading it.

(4)   #Yesterday, I ate the pizza, but I didn't finish eating it.

I call predicates such as *read the Bible predicates of variable telicity*. I will not discuss their properties further (see Kratzer 2004, Filip 2008, Rothstein 2012 for insights on this aspectual class); what matters for my purpose is that they are not accomplishments *stricto sensu*, although they obviously have accomplishment *uses*.

2   Non-culminating accomplishments

We just saw that when used without adverbials, accomplishments trigger an inference of culmination in non-progressive sentences. This inference amounts to an entailment with run-of-the-mill accomplishments in languages such as English, as reflected by the anomaly of (4). Crosslinguistically, however, one finds many accomplishment[2] predicates compatible with an incomplete event interpretation in non-progressive sentences. Non-culminating readings for perfective or aspectually unmarked accomplishment predicates have been documented in Hindi, Tamil, Mandarin Chinese, Korean, Japanese, Thai, Burmese, Salish languages, Wakashan languages, Tagalog, Malagasy, Atayal, Karachay-Balkar or Abui. They also have been observed to arise for a more restricted set of accomplishments in Germanic or Romance languages such English, German, and French.[3] Sentences (5)-(8) are examples of non-culminating accomplishments in Mandarin, Hindi, Squamish and French.

---

2 Cross-linguistically, achievement verbs are as a rule odd in contexts forcing an incomplete event interpretation (see, e.g., Singh 1991, 1994, Altshuler 2014 on Hindi, Koenig & Chief 2008 and Lin 2004 on Mandarin, Bott 2010 on German). Given that achievement predicates denote a set of events with no proper parts (Piñón 1997), this is unsurprising. On the intricate case of achievements combined with the progressive, see Kearns (2003), Gyarmathy (2015).

3 See Singh (1991, 1994, 1998), Arunachalam & Kothari (2010), Altshuler (2014) on Hindi; Paramasivam (1979) and Pederson (2008) on Tamil; Smith (1997), Koenig & Muansuwan (2000), Klein, Li & Hendriks (2000), Lin (2004), Soh & Kuo (2005), Chief (2008), Koenig & Chief (2008), Chen (2016), Zhang (2018a) on Mandarin; Park (1993) and Beavers & Lee (forthcoming) on Korean; Koenig & Muansuwan (2000) on Thai, Ikegami (1985), Tsujimura (2003), Kiyota (2008), Aoki & Nakatani (2013), Zhang (2018b) on Japanese; Kato (2014) on Burmese; Bar-el (2005), Bar-el, Davis & Matthewson (2005), Kiyota (2008), Jacobs (2011)

(5) *Wǒ zuótiān xiě-le gěi Zhangsan de xìn (kěshì méi*
I yesterday write-PFV to Zhangsan DE letter but NEG
xiě wán). (MANDARIN, Koenig & Muansuwan 2000)
write finish
'I wrote a letter to Zhangsan yesterday (but I didn't finish writing it).'

(6) *maayaa-ne biskuT-ko khaa-yaa par use puuraa nahiin*
Maya-ERG cookie-ACC eat-PFV but it-ACC finish not
khaa-yaa. (HINDI, Arunachalam & Kothari 2010)
eat-PFV
'Maya ate the cookie, but did not finish eating it.'

(7) *na p'ayak-ant-as ta John ta snexwilh-s welh*
RL heal-TR.CTRL-3ERG DET John DET canoe-3POSS CONJ
haw k-as i huy-nexw-as. (SQUAMISH, Bar-el 2005)
NEG IRR-3CNJ PART finish-TR.LC-3ERG
'He fixed his canoe but he didn't finish [fixing it].'

(8) *Pierre lui a expliqué le problème (mais elle n'a*
Pierre her explain-PFV-3SG the problem but she NEG has
rien compris du tout).(FRENCH)
nothing understood at all
'Pierre explained the problem to her (but she didn't understand it at all).'

Non-culminating interpretations of accomplishment VPs have at least two different sources across languages and across predicates in a given language. Firstly, they can originate in the semantics of the tense/aspect morphology. For instance, in (5)-(6), the Mandarin or Hindi perfective does not require event *completion* like the standard perfective, but rather *event maximality*. That is, the event described must either be a complete VP-event, or must cease to develop towards such a VP-event, see section 5.1 (cf. Filip 1999, Koenig & Muansuwan 2000, Altshuler 2014, 2016 a.o.). Secondly, non-culmination can also be licensed by a modal operator encoded by the verbal root or a morpheme entering the composition of the VP, as in (7) and (8) (section 5.2, Koenig &

on Salish languages; Greene (2013), Sardinha (2017) on Wakashan languages; Dell (1983) and Alonso-Ovalle & Hsieh (2018) on Tagalog; Travis (2010), Paul, Ralalaoherivony & de Swart (2015, 2016, forthcoming) on Malagasy; Chen (2017) on Atayal; Tatevosov (2008) on Karachay-Balkar; Kratochvíl & Delpada (2015) on Abui; Oehrle (1976), Koenig & Davis (2001), Beavers (2010), Kazanina, Baker & Seddon (forthcoming) on English; Martin & Schäfer (2012, 2017) on French and German.

Davis 2001, Bar-el et al. 2005, Tatevosov 2008, Beavers 2010, Beavers & Lee forthcoming, Martin & Schäfer 2012, 2017, Paul et al. 2015).

These non-culminating interpretations of telic sentences are all partitive. That is, they classify event fragments in terms of predicates of complete events. In this respect, these sentences are cousins of progressive telic sentences (Dowty 1977, 1979, Asher 1992, Landman 1992, Bonomi 1999, Varasdi 2014 a.o.). There are, however, differences between these two types of partitive interpretations. One of them is that non-culminating accomplishments trigger in a default context the inference that the event fully culminated (e.g., in (8), that the agent reached his goal), as is the case in the first part of the examples (5)-(8). The felicitous continuation of these examples shows that this inference is defeasible. In the spirit of Bar-el et al.'s 2005 seminal work, I take this inference to be a defining property of non-culminating accomplishments, see the definition (9).[4]

(9)   A sentence S built with a NON-CULMINATING accomplishment predicate P_{tel} *defeasibly implies* that the event described e culminates with respect to P_{tel} in the evaluation world w_0.

In contrast, progressive telic sentences (*I was mowing the lawn*), are generally taken to be neutral with regard to event culmination in the evaluation world, see, e.g., Bar-el et al. (2005).

3   Non-maximal accomplishments

Let us now turn to the English data in (10) and (11). Differently from the predicates used in (7)-(8), those in (10)-(11) do not encode modal operators.

(10) I mowed the lawn (but not all of it). (Rappaport Hovav 2008: 27)

(11)   a. Mary ate the sandwich, but as usual she left a few bites. (Hay, Kennedy & Levin 1999: 140)

          b. Mary ate the pizza in five minutes (although not completely).

At first sight, it is tempting to analyse these examples on a par with the previous ones, since the second clause also indicates that the event described in the first clause could have developed further. However, in (10)-(11), the

---

4 Gyarmathy & Altshuler (forthcoming) summarize the different ways this culmination inference has been accounted for by a.o. Grønn (2003, 2007), Bohnemeyer & Swift (2004) and Arunachalam & Kothari (2010) and propose an original account that exploits abduction, i.e., the inference to the best explanation.

event nevertheless counts as complete with respect to the relevant VP, at least when the definite description it contains is interpreted imprecisely, vaguely, or relative to a coarse granularity level. That the event described in the first clause counts as a complete VP-event relative to such uses of *the N* explains why event culmination cannot be denied in the subsequent clause via *not finish VP* (recall (4) repeated below).

(4)   #Yesterday, I ate the pizza, but I didn't finish eating it.

I name accomplishments such as (10)-(11) *non-maximal accomplishments.* In section 6, adopting Sassoon & Zevakhina's 2012 analysis of maximizers such as *whole* or *complete(ly)* in terms of granularity shift, I argue that this use of accomplishments is an artefact of the non-maximal use of the (in-)definite description that introduces the incremental theme (Kennedy & Levin 2008: 164, Martin, Demirdache, García del Real, van Hout & Kazanina forthcoming). Relatedly, I argue that non-maximal accomplishments *entail* $\mathsf{CUL}(e, P_{tel})$ relative to a coarse granularity level g, although not relative to a finer granularity level g_p. In contrast, non-culminating accomplishments in (5)-(8) *defeasibly imply* event culmination, no matter the level of granularity adopted.

This paper is structured as follows. Section 4 is dedicated to flexible accomplishments used atelically (remember the example (1) *Mary ate the pizza for several minutes*), and distinguishes them both from non-culminating accomplishments and from non-maximal ones. Section 5 spells out the two different sources of non-culminating readings addressed in this paper, namely the perfective (5.1), or a modal operator encoded in the VP (5.2). Section (6) shows that the (in-)definite description used within the VP is the source of the non-maximal reading of accomplishments, and distinguish non-maximal accomplishments from non-culminating accomplishments.

4   Incompletive atelic predicates

4.1   Introduction

Accomplishments are also interpreted partitively when felicitously modified by durative adverbials measuring the event duration.[5] Although this combination is standardly assumed not to be felicitous, it has been repeatedly observed—including through experiments—that a subset of accomplishment VPs is, in fact, quite acceptable with these adverbials with an appropriate contextual support

---

5 Note that the 'result-state' related reading of the *for*-adverbial, through which *for*-adverbials modify the result state (Piñón 1999), is irrelevant to the discussion, as is its iterative reading.

(see Bertinetto & Squartini 1995, Zucchi 1998, Smollett 2005, Rappaport Hovav 2008, Piñón 2008, 2009, Deo & Piñango 2011, Kennedy 2012, Champollion 2013 for English; Bott 2010, Bott & Hamm 2014 for German; Arche 2014 for Spanish; Tatevosov 2002 for Mari; Martin, Falk, Köper, Springorum, Schulte im Walde & Stein 2019a for French and German), cf. the English examples (12)-(13). Note that although most examples provided in the literature contain incremental theme verbs, non-incremental theme predicates are also compatible with durative adverbials, as long as they are gradable. For instance, for German *das Fenster öffnen* 'open the window', Dölling (2003) also admits a partitive reading with appropriate contextual support.

(12) John built a sand castle/ baked a cake for an hour. (Deo & Piñango 2011)

(13) The sky cleared for an hour. (Kearns 2007)

Sentences like (12)-(13) imply that the reported event is *not* completed, as Bott (2010) also established experimentally for their German counterparts. This inference of *non*-culmination triggered by (12)-(13) is defeasible; for instance, (13) may be continued by *…And he built/baked it completely, in fact*, without generating any contradiction (see Bott 2010: 84 for the same observation on German data). I come back to this inference of non-culmination below.

There are two answers to the question of how the VP in (12)-(13) should be analyzed aspectually once modified by the durative adverbial. One widespread view is that the accomplishment is reinterpreted through coercion into an activity. This approach faces two difficulties. Firstly, it does not account for the fact that these 'activity' predicates are compatible with adverbials of completion (see (14)). Genuine activity predicates are not compatible with such adverbials (see (15)).

(14) John ate a pizza for ten minutes—although not completely/and completely, in fact.

(15) #John ate applesauce for ten minutes—although not completely/and completely, in fact.

Secondly, as noted by Zucchi (1998), this account does not straightforwardly explain the differences (observed, e.g., by Tenny 1994, van den Wyngaerd 2001, Roßdeutscher 2012) between 'flexible' accomplishments, easily reinterpreted into activity predicates, and 'rigid' accomplishments, that resist this reinterpretation process. Among rigid accomplishments, one finds verbs combined with what

Smollett (2005) calls 'true delimiters', like particles (*eat up*) or resultatives (*polish to a shine*), as well as ungradable accomplishment VPs, like *pick the flower*, see, e.g., (16).

(16)   #John picked the flower for two seconds.

A second way of analysing sentences like (12)-(13) solves the two problems just mentioned. Accounts along this line all enrich verbal meanings with degree arguments or scales (Kennedy & Levin 2008, Piñón 2008, 2009, Kennedy 2012). (Here I present in informal terms the formal analysis developed in Piñón, but its main ingredients are shared with other degree- or scale-based analyses). The generalization these authors point to is that flexible accomplishments are *gradable* predicates (while rigid accomplishments and underived activities are ungradable, see, e.g., *pick the flower/eat applesauce #partly/#completely*; see also (15)). The degree argument d of gradable predicates measures a change in the extent to which an individual x qua type O has a certain gradable property. In the case of *eat the apple*, for instance, d measures the degree to which an individual x as an individual qua type O (here: *the apple*) is eaten in e. As explained in more details below, the VP gets a telic or atelic reading depending on whether the degree argument d is bound by the *degree maximizing operator* (a telic reading must obtain), or the *positive binding operator* (an atelic reading may obtain). Thus the degree approach captures the aspectual flexibility of gradable predicates without assuming an ambiguity at the lexical level, since the ambiguity comes from the existence of the two operators.

The degree maximizing operator sets the value of d to the maximum ($d=1$); in that case, the apple is eaten to degree 1 in e. The VP *eat the apple* gets then a telic and anti-cumulative interpretation, for the sum of two events in which the apple is eaten to degree 1 is not an event in which the apple is eaten to degree 1. But d can also be existentially quantified over by the positive degree binding operator, that restricts its value to be greater than 0 ($d>0$). In this case, the VP *eat the apple* may get an atelic and cumulative interpretation *provided* its denotation is contextually restricted to events in which the apple is partly eaten (remember that the modification of flexible accomplishments with *for*-adverbials requires some contextual support to be felicitous). Indeed, the sum of two events in which the apple is partly eaten is again an event in which that apple is partly eaten. Importantly, however, the atelic use of gradable VPs such as *eat the apple does not exclude event culmination*, for *partly* is used in the sense of improper part in the paraphrase above; thus, a partial eating of an apple is compatible with a complete eating of it. Thus, one can obtain a cumulative interpretation for gradable predicates without

Partitive interpretations of accomplishment (ACC) predicates		
Non-culminating	**Incompletive**	**Neutral**
e.g., bare PFV ACCs (in, e.g., Hindi)	e.g., PFV ACCs with *for*-adverbials	e.g., progressive ACCs
telic use	atelic use	telic use
culmination inference	inference of non-culmination	no inference w.r.t. culmination

Table 1   Typology of partitive interpretations for accomplishments

excluding event culmination (and this is in fact an attractive result, since as we have seen above, the inference of non-culmination triggered by examples such as *John ate the apple for two minutes* is defeasible). Nevertheless, when the speaker opts for the atelic meaning of an accomplishment P rather than the telic meaning *via* an *in*-adverbial (which is a stronger meaning, since d is then fixed to 1), she implies that P is not satisfied under the telic use P_{tel}, and that the degree d measuring the change in the extent to which the theme has the encoded property is strictly inferior to 1 ($1>d>0$).

By their defeasible inference of *non*-culmination, gradable predicates used atelically thus differ from non-culminating accomplishments, which defeasibly trigger the *opposite* inference of event *culmination*. In order to avoid confusion between the two uses, I call *incompletive atelic predicates* VPs composed of a flexible accomplishment P modified by a durative adverbial; see (17).

(17)   A sentence S built with an INCOMPLETIVE atelic predicate P_{atel} *defeasibly implies* that the described event e does not culminate with respect to the same predicate used telically P_{tel}.

Note that under this definition, predicates P forming incompletive atelics cannot be activity predicates, for (17) presupposes that P can be used telically, which is not the case of activities. Table 1 summarizes the typology of partitive interpretations of accomplishment predicates in terms of the inference and aspectual use they are associated with.

An advantage of the degree-based approach is that the subclass of accomplishments felicitously modifiable by durative adverbials is defined. Since variation in the degree of change is needed to obtain cumulativity, flexible accomplishments compatible with durative adverbials are expected to be all gradable, and therefore compatible with adverbials of completion. This class of verbs therefore excludes ungradable accomplishments (e.g., *pick the flower*,

see (16)), or accomplishments fixing the value of *d* to 1 (e.g., *eat up the apple*). Another advantage of the degree-based approach is that it explicitly distinguishes incompletive atelics from activities (remember the contrast in (15)-(16)). The former are gradable, while with activities, degrees of change cannot be reasonably distinguished.

A question that Piñón (2008) and other scale-based analyses have to answer is why, as observed in the introduction, flexible accomplishment verbs get a telic reading when not modified by durative adverbials. Kennedy & Levin (2008), Piñón (2008) and Kennedy (2012) explain this preference for the telic reading by a Gricean principle of informativeness. The idea is that the telic reading asymetrically entails the atelic reading (if d=1, then d>0; but if d>0, it is not necessarily the case that d=1). The telic reading therefore by default preferred as the strongest meaning. But this account predicts an *overrideable preference* of unmodified accomplishment VPs for the telic reading. However, the culmination inference is not always defeasible, see for instance (4) and (18b):

(18)   a. *Il   a mangé   le   sandwich   pendant   dix   minutes,   mais*
          he   eat.PFV.3SG   the   sandwich   for   ten   minutes   but

          n'a   pas   fini   de le manger. (FRENCH)
          NEG has   NEG   finished   to it eat

          'He ate the sandwich for ten minutes, but did not finish eating it.'

       b. *#Il   a mangé   le   sandwich,   mais   n'a   pas*
          he   eat.PFV.3SG   the   sandwich   but   NEG has   NEG

          fini   de le manger.
          finished   to it eat

          '#He ate the sandwich, but did not finish eating it.'

The contrast in (18) rather suggests that the choice between the telic or atelic reading is completely open *only before the clause boundary*; see Bott 2010: 81-84, 149-151, who tested the real time processing of German accomplishments using the moving window technique. Bott captures the data better when he claims that if the preference for the telic reading is not overriden (e.g., by the durative adverbial) *within the VP*, before the clause boundary, as in (18a), the preferred telic reading is much more difficult to cancel and tends to get *entailed* after this point (rather than defeasibly implied, as assumed by, e.g., Hay et al. 1999); see (18b). In other words, the telicity inference triggered by an unmodified accomplishment is *not* defeasible anymore after the clause boundary.

In summary, we have seen that some accomplishments can have both telic and atelic uses, depending on the operator binding the degree argument d. In the next section, I show that accomplishments used atelically have to be distinguished from non-maximal accomplishments.

4.2 Incompletive atelics vs. non-maximal accomplishments

Some authors explicitly identify incomplete atelic predicates (as in (1) and (12) repeated below) with non-maximal accomplishments (as the first part of examples (10) and (11)). For instance, Hay et al. (1999) claim that in the example (11a), the telic interpretation that arises through implicature is overtly cancelled in the second clause, so that the atelic interpretation is finally selected (in the first clause).

(1)　Mary ate the pizza for several minutes until she found a bug in it. (Wright 2014: 113)

(12)　John built a sand castle/ baked a cake for an hour. (Deo & Piñango 2011)

(10)　I mowed the lawn (but not all of it). (Rappaport Hovav 2008: 27)

(11)　　a. Mary ate the sandwich, but as usual she left a few bites. (Hay et al. 1999: 140)

　　　　b. Mary ate the pizza in five minutes (although not completely).

There are good reasons, however, to keep incomplete atelic predicates distinct from non-maximal accomplishments. Firstly, (10) and (11) are arguably still felicitous in presence of an *in*-adverbial, which indicates a telic interpretation. Secondly, they typically only tolerate situations where a subtantial part of the event is realized (a substantial part of the pizza or the sandwich has to be eaten in (11)). In contrast, incompletive atelics (1) and (12) are also true of very minimal event fragments; for instance, (1) can be true of a situation where Mary ate 5% of the pizza only. The non-maximal reading in (10)-(11) therefore has another source than atelicity, responsible for this contextual restriction (discussed in section 6). A third and crucial difference concerns the possibility of denying event culmination in the subsequent discourse through the aspectual verb *finish* embedding a VP. As the contrast in (18) illustrates, denying $\mathsf{CUL}(e, P_{tel})$ is possible after an incomplete atelic predicate, but not after an unmodified accomplishment VP. Similar contrasts have been observed for German (Bott 2010) and Spanish (Arche 2014). It is hard to see how these

contrasts can be accounted for if the VP is assumed to be used as an atelic predicate in both cases. Rather, in (18a) (*He ate the sandwich for ten minutes, but did not finish eating it*), *eat the sandwich* has its atelic (incompletive) use in the first clause, and thus implies event *non*-culmination. Event culmination can therefore be easily denied in the second clause. In contrast, in (18b) (*He ate the sandwich, #but did not finish eating it*), the telic reading of *eat the sandwich* is entailed at the clause boundary (Bott 2010); consequently, the event described must be a *complete* eat-the-pizza event, and event culmination cannot be denied in the subsequent clause via *not finish VP*. However, the coarse interpretation of the definite description in the VP leaves room for a negligible piece of the pizza not to be eaten, which is at the source of the event culmination denial *presupposing fine granularity level* in (11) (e.g., *Mary ate the sandwich, but as usual she left a few bites*); see section 6.

5   Sources of the non-culminating use

In this section, I review in turn two sources of non-culminating uses of accomplishments, namely a weak perfective, or a modal operator encoded by the VP.

5.1   The meaning of the perfective

According to its standard definition, the perfective operator PFV entails that the event e it existentially quantified over falls under the respective predicate P, and since predicates denote properties of complete events, e is complete with respect to P, see the definition in (19), where C stands for 'complete' (the neo-Kleinian relation between the topic time and the event time, not relevant for our purposes, is here ignored; see Altshuler 2016 for a comparison between Kleinian and non-Kleinian approaches of (im-)perfectivity).

(19) $[\![\mathsf{PFV}_C]\!] = \lambda P \exists e[P(e)]$, where P is a variable for an eventuality predicate.

Koenig & Muansuwan (2000) and Altshuler (2014) after them suggested that a definition of perfectivity along these lines is not appropriate for many South and East Asian languages. They propose instead to distinguish two types of perfective operators. What I call *weak* perfective markers, found in Thai, Hindi and Mandarin, entail *event maximality*, but not event completion. Weak perfectives are partitive operators (Altshuler 2014), for they require improper event parts in the extension of the VP. Their maximality requirement is satisfied

Perfective operator	Requires completion?	Requires max.?	Semantics
Weak (Hindi, Mandarin)	No	Yes	$[\![\mathsf{PFV}_M]\!]$
Standard (French)	Yes	No	$[\![\mathsf{PFV}_C]\!]$
Strong (French, English, Russian)	Yes	Yes	$[\![\mathsf{PFV}_{C+M}]\!]$

Table 2   A typology of perfective operators (Martin & Gyarmathy forthcoming).

$[\![\mathsf{PFV}_M]\!] = \lambda P \exists e[\mathsf{MAX}(e, P)]$, while
$[\![\mathsf{PFV}_{C+M}]\!] = \lambda P \exists e[\mathsf{MAX}(e, P) \wedge P(e)]$.

when an eventuality is a complete VP-eventuality or ceases to develop further towards a VP-eventuality in the actual world. So for instance, event maximality is violated in the Mandarin example (20) (from Martin, Sun, Demirdache & Liu 2019), since the second clause indicates that the door-opening event is still ongoing at utterance time, which explains why it is infelicitous (see also Soh & Gao 2006 for the same observation with other predicates). The fact that the Mandarin perfective does not require event culmination accounts for why (21) from Talmy (2000: 272) (or (5) in the introduction) is not contradictory.

(20)   *#Lùlu kāi-le   nà-shàn mén, érqiě hái zài   kai.*
     Lulu   open-PFV that-CL   door   and   still PROG open
     Intended: 'Lulu opened that door, and she is still opening it.'

(21)   *Lùlu kāi-le   nà-shàn mén, dànshì mén gēnběn méi kāi.*
     Lulu   open-PFV that-CL   door   but   door at all   not   open
     'Lulu opened that door, but it didn't open at all.'

Altshuler (2014) offers a modal definition of event maximality. Simplifying things, Altshuler's 2014 definition is as follows (his definition is more elaborate, and also uses Landman's 1992 stages, not just event parts):

(22) $\mathsf{MAX}(e, P)$ iff

       a. e is a (proper or improper) part of a possible P-event and

b. it is not a proper part of any actual event that is part of a
   possible *P*-event.

Altshuler shows that the Hindi perfective also encodes event maximality but not
event culmination. In contrast, French and Russian perfectives are *strong* in that
they all encode event completion. So is the English simple past for the authors
who analyse it as a perfective (e.g., Smith 1997, Bar-el 2005). On the basis of
data involving stative predicates, Martin & Gyarmathy (forthcoming) argue
that in the latter languages, event completion does not *replace* event maximality,
but has to be combined with it (although with stative predicates only in the
case of French; with event predicates, the standard perfective (19) is selected).
Similarly, Altshuler & Filip (2014) claim that the completion requirement has to
be combined with the maximality requirement for the Russian perfective. Table
2 summarizes the crosslinguistic typology of perfective operators emerging from
these works.

5.2 A modal operator encoded in the VP

Non-culmination can also be licensed by a modal operator encoded by the
verbal root (section 5.2.1) or a morpheme adjoined to the root (a transitivizer
or a Voice head, section 5.2.2), and responsible for relegating event culmination
to a not necessarily actual world; see Bar-el (2005) and Bar-el et al. (2005)
for Salish languages, Koenig & Muansuwan (2000) for Thai, Beavers & Lee
(forthcoming) for Korean, Paul et al. (2016) for Malagasy, Koenig & Davis
(2001) and Beavers (2010) for English, Martin & Schäfer (2012, 2017) for
German and French.

5.2.1 Sublexical modal verbs

Sublexical modality has been mostly discussed in the context of causative
predicates, in particular those compatible with the so-called 'failed-attempt' or
'zero-change' reading we have in (8) and (23), under which the occurrence of a
result state of the type encoded by the predicate is entirely denied.

(23) *Le service technique a réparé mon iPhone, mais il*
     the service technical repair.PFV.3SG my iPhone but it
     ne fonctionne toujours pas du tout!
     NEG works still NEG at all

     'The technical department repaired my iPhone, but it still isn't
     working at all!'

Verbs like *send*, *offer*, or *teach* in Germanic and Romance languages are other examples of verbs that imply rather than entail the occurrence of the lexical result state in the world of evaluation in a non-progressive sentence (see Oehrle 1976, Koenig & Davis 2001, Beavers 2010, Martin & Schäfer 2012, 2017). Despite the lack of result entailment, they have the argument and event structures characteristic of causative predicates (Koenig & Davis 2001, Martin & Schäfer 2013). This is why Martin & Schäfer call them 'defeasible causatives'. Building on Koenig & Davis (2001), Martin & Schäfer (2017) and Martin (2019) propose that the modal base encoded by these verbs contains all 'causally successful' worlds; see, e.g., (24) for *réparer* 'repair', from Martin (2019).

(24) $[_{\text{VP}}$ réparer$] \rightsquigarrow$
$\lambda y \lambda e[\textbf{repair}(e) \wedge \textbf{theme}(e, y) \wedge$
$\Box_{causal\_success} \exists s (\textbf{cause}(e, s) \wedge \textbf{be-working}(s) \wedge \textbf{theme}(s, y))]$

The representation ensures that in all uses, *réparer* entails the occurrence of an event which is a repair and has y as its theme in the evaluation world. But since the caused 'be-working' state is within the scope of the modal operator, it takes place only in those worlds in the modal base, which does not have to include the evaluation world.

In (24), the causing event is outside the scope of the modal operator. When the verb is used in a perfective sentence, this event is existentially bound by the perfective aspect, and must therefore be complete with respect to the 'manner' predicate (**repair** in (24)) if the perfective is strong. This is a welcome prediction; for instance, in a context such as repairing an iPhone involves ten technical operations, (23) is false if the technical department performs three of them only. In other words, the event performed in the evaluation world has to be completed with respect to the *manner* predicate **repair-my-iPhone**, even if it may be an unsuccessful repair, and thus incomplete with respect to the *result* predicate **my-iPhone-be-working**. Similarly, in (8), the explanation must be a complete explanation, even if it may not succeed in triggering the target mental state in the explainee.[6]

The *incomplete attempt* interpretation is hardly discussed in the literature, but it is interesting because it is another source of cross-linguistic variation. In languages with a weak perfective, the incomplete attempt interpretation reading should in principle be available, for a weak perfective only requires

---

6 Note that *ré-parer* and *ex-pliquer* are bimorphemic; therefore, (24) does not violate the principle of Manner/Result Complementarity, which requires *monomorphemic* verbs to lexicalize only one of the manner and result meaning components (Rappaport Hovav & Levin 2010).

that there be a proper part of a VP-event in the world of evaluation, and does not specify how large this initial part should be. And this is indeed the case in Mandarin. For instance, although *xiū* 'repair' has the same meaning (24) as its French counterpart and thus encodes a manner predicate of attempt (Martin et al. 2019), the Mandarin sentence (25) is true in a situation where Lu didn't complete the *attempt* to repair the car to the end (and performed 3 of the 10 routine operations only).

(25) *Lu   xiū   le   nèi   liàng   chē,   dàn   hái   méi*
   Lu   fix   PFV   that   CL   car   but   still NEG
   xiū-wán.(MANDARIN)
   repair-finish
   'Lu fixed the car, but she didn't finish fixing it.'

5.2.2   Modal morphemes

The modal operator responsible for relegating culmination to a not necessarily actual world is not always encoded in the verbal root itself. For Salish languages, Bar-el et al. (2005) encode it within the so-called control transitivizer, also responsible for the introduction of an agent 'in control' of the event; see for instance the Squamish example (7). Bar-el et al. attribute to this morpheme a meaning roughly similar to the one of the progressive operator as analysed by Dowty (1979): it introduces inertia worlds, applies universal quantification over these worlds, and asserts that the event existentially quantified over culminates with respect to the predicate within these inertia worlds. But in addition to that, the control transitivizer CTRL-TR adds a subevent (the action) to the event projected by the unaccusative root. For instance, when applied to the unaccusative root *mays* 'get fixed' denoting a getting-fixed event e', the control transitivizer says that an agent performs an action e which in inertia worlds causes a getting-fixed event e' of the theme. Crucially, differently from defeasible causatives such as French *réparer* 'fix' or Mandarin *xiū* 'fix', Squamish control causatives do not predicate a manner property of the action e performed by the agent; e.g., *máys-en* 'get.fixed-CTRL-TR' does not specify that the action performed by the subject is a repair. Thus, a sentence like (7) should be judged appropriate as long as an agent performs an action e which in the normal course of events would lead to the canoe getting fixed, even when e is not a (complete or incomplete) repair. And according to Peter Jacobs (p.c.), it is even acceptable in a context where I am only making *preparations* to repair the canoe, while I haven't touched it yet. This is in sharp contrast with Mandarin, where at least an incomplete repair has to be performed for

(25) to be true.

In summary, we observed quite a lot of variation in the availability of zero-change and incomplete attempt uses of causative predicates, depending on a) the meaning of the perfective, b) the encoding of a manner property by the VP and c) the encoding of a modal operator in the VP.

6   Source of the non-maximal use

As we saw, the standard view is that languages such as English (or French) do not have non-culminating uses for accomplishments such as *eat the pizza*, that do not encode a sublexical modal operator, remember (4) repeated above.

(4)   #Yesterday, I ate the pizza, but I didn't finish eating it.

Surprisingly however, many experimental works report a high degree of acceptability among English speakers in a situation where the event described is incomplete for simple past telic sentences with incremental theme VPs built with an (in-)definite description (e.g., *John ate the pizza*); see Arunachalam & Kothari (2011), van Hout (1998), van Hout, Gagarina & Dressler (2010), Ogiela, Schmitt & Casby (2014) and Wright (2014). The tendency is especially strong with consumption verbs. For instance, 75% of the English-speaking adults tested by van Hout (1998) judged simple past telic sentences with consumption verbs as true in an incomplete event situation.This high level of acceptability has raised the question of whether the English perfective really encodes event completion. For instance, Arunachalam & Kothari (2011: 36) speculate that available data 'cast doubt on a theory in which English perfective verbs entail event completion, while Hindi simple verbs [with a perfective] do not.'

A closer comparison of languages like English and those like Hindi reveals that these similarities are superficial. In this section, I argue that felicitous culmination denials after incremental theme accomplishments find their source in the non-maximal interpretation of the (in-)definite description introducing the theme argument, and that non-maximal accomplishments are therefore a distinct phenomenon than non-culminating accomplishments in languages such as Hindi or Mandarin.

Under a non-maximal reading, definite descriptions can be used to refer to a proper subpart of the relevant entity.[7] This reading can be expressed in

---

7 The non-maximal reading has mostly been studied for plural definites (Brisson 1998, Lasersohn 1999, a.o.). Under this reading, not all entities within the salient set of Ns satisfy the predicate. For instance, Yoon (1996) notes that a sentence like *The glasses are dirty* is judged true in a situation such that only 3 out of 6 glasses are dirty. But non-maximal readings have also been observed for singular definites (cf., e.g., Križ 2016: 23).

the semantics (Magri 2014, Piñón 2008). Various pragmatic accounts also have been developed. Lasersohn (1999) analyses the non-maximality effect of definite descriptions as an example of imprecise language, 'true enough' for the purposes of the conversation, although *stricto sensu* false. For others such as for instance Burnett (2012), non-maximal definite descriptions display the core properties of vague language. Still another option is the analysis in terms of granularity shift developed by Sassoon & Zevakhina (2012) in the adjectival domain, that one could extend to the DP domain as follows. Unmodified DPs such as *the N* and *a N* are interpreted relative to a *coarse* granularity level g. For instance, when using statements such as *Peter ate the pizza*, it is normally appropriate to ignore some subpart of the pizza for the predication. In contrast, in presence of maximizing modifiers such as *whole*, *all* or *complete*, these DPs are interpreted relative to a fine granularity level g_p. Since g_p is finer than g, it follows that g_p assigns fewer entities to the same predicate. As a consequence, the interpretation of the (in-)definite description shrinks: it becomes harder for an object to count as, for instance, a/the pizza. Thus when using statements such as *Peter ate the whole pizza*, we indicate through the maximizer *whole* that every single subpart of the pizza is relevant in judging the predication. I propose to characterize accomplishments such as the first clause of (10) and (11) repeated below along this line; see the definition in (26).

(11) a. Mary ate the sandwich, but as usual she left a few bites. (Hay et al. 1999: 140)

   b. Mary ate the pizza in five minutes (although not completely).

(26) 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 implies it relative to a fine granularity level
   g_p.

On this view, the second clause in (10) and (11) triggers a shift in granularity, and signals that the event is not complete *presupposing finer granularity*. The *but not completely*-clause in these examples does not deny event completion *presupposing coarse granularity level*. In this respect, non-maximal accomplishments crucially differ from non-culminating accomplishments, which *defeasibly imply* culmination, no matters what is the granularity level adopted.
Since non-maximal uses of accomplishments find their source in non-maximality at the DP level, these uses are blocked in presence of maximizers such as *whole*, *complete* or *all* in the (in-)definite description within the VP. For instance, (11b) becomes obviously infelicitous if *the pizza* is replaced by *the whole pizza*.

The same idea contributes to explain why non-maximal accomplishments are virtually absent from Slavic languages, see for instance (27), from Martin et al. (forthcoming). Experimental studies indeed show that when the event witnessed by the subjects tested is not accomplished until its very end, Russian (and Polish) adult speakers reject perfective sentences with telic verbs much more than adult speakers of Germanic or Romance languages do (see van Hout et al. 2010, Martin et al. forthcoming and references therein). This is because Slavic languages do not have (in-)definite DPs, by hypothesis at the source of non-maximal uses for perfective incremental theme accomplishments.

(27) *#Ivan s'el   buterbrod, no   kusochek ostavil.*
      Ivan   eat.PFV.PST sandwich,   but piece   left
      'Ivan ate (all of) the/a sandwich, but left a piece.'

In sections 6.1-6.2, I present two arguments that support the idea that non-maximal uses of accomplishments find their source in non-maximality at the DP level, as well as the related view that non-maximal accomplishments entail $\mathsf{CUL}(e, P_{tel})$ relative to a coarse granularity level g, differently from non-culminating accomplishments in languages such as Mandarin or Hindi.

6.1   Small event fragments

The weak perfective as defined with the MAX operator in (22) only requires that there be a proper part of a VP-event in the world of evaluation, and do not specify how large this part should be, just like with progressive sentences. This is why Hindi and Mandarin perfective sentences can be true of incomplete events in which only a very small part of a whole VP-event has been realised. For instance, the Hindi sentences (28) or (29) are judged true even if John only cut 10% of a big crop, or erased 10% of a drawing (R. Bhatt, p.c.); similarly, the Mandarin sentence (5) is true as long as Lulu started the letter, even minimally—writing the date on the sheet of paper suffices (Martin et al. 2019).

(28) *John-ne   fasal kaaT-ii.*   (HINDI)
      John-ERG   crop   cut-PFV.SG
      'John cut the crop.'

(29) *John-ne   draing   miTaa-yii.*(HINDI)
      John-ERG   drawing erase-PFV.SG
      'John erased the drawing.'

In contrast, the English and French perfective counterparts of (28)-(29) typically cannot be made true by event parts that correspond to only 10% of the whole event. This follows from the pragmatic constraints bearing on the non-maximal use of determiners: the non-maximal use often only tolerates *slight* deviation from strict maximality (see, e.g., Križ 2016), which accounts for the non-availability of 10%-only readings.

Some authors have observed that a stronger deviation is in some cases tolerated, however (see, e.g., Malamud 2012). Malamud also shows that the choice between maximal or non-maximal readings of a definite is heavily driven by contextual parameters, and depends on speaker and hearer goals. This may explain the variation across speakers in the acceptability of non-maximal accomplishments. Furthermore, the tendency of English speakers (documented for instance by Ogiela et al. 2014) to endorse incomplete event interpretations more easily for consumption verbs than for verbs of creation of predicates such as *build the house* may be linked to these parameters: whether a consumption (e.g., pizza-eating) event is performed to the core is generally not highly relevant for speaker and hearer goals—what generally counts is whether the meal is finished or not. On the other hand, whether a house has been *completely* built is generally highly relevant for speaker and hearer goals. The same considerations are probably at the source of the difference of acceptability reported by Rappaport Hovav (2008) between (10) and (30), that she judges more marked (a list typically has to be memorized *in toto* to be counted as memorized).

(10) I mowed the lawn (but not all of it).

(30) ??I memorized the list, but not all of it.

6.2   Non-incremental theme verbs

Singh (1994: 38) mentions that for some Hindi non-incremental theme predicates, e.g., *tangnaa* 'hang', a zero-change interpretation is possible; see Hopper & Traugott (2003: 112) for another example built with the predicate *diye* 'give'.

(31) *miiraa   ne   kamiiz Taangii   par   wo   Tangii   nahĩ̃i.* (HINDI)
      Mira   ERG   shirt   hang.PFV   but   it   hang   NEG
      'Mira hung a shirt but it wasn't hung.'

Similarly, in Mandarin, some non-incremental theme simple verbs, including *kāi* 'open' (see (21)) or *shāo* 'burn', allow for zero-change readings when used in a perfective sentence (cf. Talmy 2000, Chief 2008, Koenig & Chief 2008,

Liu 2018, Martin et al. 2019, Martin 2019). This is expected: the perfective in Hindi or Mandarin only requires a proper part of a VP-event in the evaluation world, which may consist in a causally inert part of an attempt. In the case of *kāi* 'open', for instance, this part may be an action of trying to introduce one's key in the lock of the door (which may be performed while the door doesn't start opening yet).

Such zero-change readings are not available in Romance or Germanic languages with non-progressive non-incremental theme predicates (e.g., *open the door*), as also experimentally shown in van Hout et al. (2010). The reason for this is that such verbs, there is no one-to-one mapping between subparts e' of the event e and subparts x' of the theme x; correlatively, with these verbs, non-maximal uses of the nominal description in the theme position cannot be a locus of event non-culmination. Thus, non-incremental theme verbs do not derive felicitous non-maximal accomplishments in languages with a strong perfective.

In summary, we have seen that non-maximal accomplishments such as *Peter ate the pizza* do well and truly entail event culmination. What a felicitous subsequent *but not completely*-clause signals after this type of sentences is that event culmination is not obtained once one shifts to a *fine* granularity level g_p.

7   Conclusions

This paper argued for a three-way distinction between non-culminating accomplishments, incompletive atelics and non-maximal accomplishments. It also showed that several different subtypes of incomplete events are relevant for the study of telicity, while experimental work (on adult and child languages) often simply distinguishes between complete vs. incomplete event situations. Beyond Tatevosov & Ivanov's 2009 classical distinction between failed-attempts and partial-results, it is important when describing data to distinguish small from substantial event fragments, and complete vs. incomplete attempt interpretations.

   This paper mainly focused on two sources of non-culmination: lexical (inner) aspect and grammatical (outer) aspect. Another source of partitive uses of accomplishments is what Zwarts (2005) calls prepositional aspect. For instance, Martin, Grant & Schäfer (2019b) experimentally test the culmination inference of sentences built with a manner of motion verb combined with path-denoting PPs with telic reference such as *zu*-PPs in German and *to*-PPs in English (e.g., *Mary walked to the school*). Their results suggest that such sentences in fact defeasibly implicate that the motion event they describe culminates, but do not entail it (contra, e.g., Smith 1991), and that the preposition used (*to* or *zu*) is responsible for the defeasibility of the culmination inference. The way

prepositional aspect may lead to partitive uses of accomplishments remains to be investigated cross-linguistically.

Also, while we mainly focused on the endpoint of events encoded by telic predicates, further research remains to be done on their *starting point* and the related question of when an event has to *start* for a (telic or atelic) sentence to be true. The question is in fact not so trivial. For instance, Dowty (1977: 67) observes that a progressive sentence such as *John is drawing a circle* may be uttered in certain contexts when no portion of a circle exists yet, while John is merely observed to be making preparations to draw (assembling paper and pencils, etc) and his intentions are known. P. Jacobs' intuition reported above suggests that the same is true of non-progressive control predicates in Salish languages. It still remains to be seen in which languages, with which aspect markers and in which contexts this extension of the temporal duration of an accomplishment backwards in time to include the preparations for the accomplishment proper is possible. A related question is raised by activities. Research has suggested that in some languages such as Burmese (Kato 2014) or Indonesian (Y. Sato, p.c.), it is possible to continue a non-progressive activity sentence by a denial that an activity proper has taken place in the next clause without generating contradiction, as long as the preparations to the activity have been performed, see (32). The scope and the source of this use of activity predicates also largely remains to be explored across languages.

(32) ɁeiɁ=tɛ̀.   dà=bèmɛ̂   ɁeiɁ=lô   mǎ-yâ=bú
      sleep=REAL   this=though   sleep=LO   NEG-get=NEG
      '(I) slept. But (I) couldn't sleep.' (Kato 2014: 9)
      Situation: I lay down in bed, but I could not get to sleep.

References

Alonso-Ovalle, Luis & Henrison Hsieh. 2018. Overcoming the unexpected: The Tagalog ability/involuntary action form. In Wm. G. Bennett, Lindsay Hracs & Dennis Ryan Storoshenko (eds.), *Proceedings of the 35th West Coast Conference on Formal Linguistics (WCCFL)*, 59–68. Sommerville, MA: Cascadilla Proceedings Project.

Altshuler, Daniel. 2014. A typology of partitive aspectual operators. *Natural Language & Linguistic Theory* 32(3). 735–775.

Altshuler, Daniel. 2016. *Events, States and Times. An Essay on Narrartive Discourse in English.* Berlin: De Gruyter.

Altshuler, Daniel & Hana Filip. 2014. Perfectivity as maximization over event

stages, Talk presented at the *11th International Conference on Actionality, Tense, Aspect, Modality/Evidentiality (Chronos)*, Pisa.

Aoki, Natsuno & Kentaro Nakatani. 2013. Process, telicity, and event cancellability in Japanese: A questionnaire study. *Journal of the English Linguistic Society of Japan* 30. 257–263.

Arche, María. 2014. The construction of viewpoint aspect: The imperfective revisited. *Natural language & linguistic theory* 32(3). 791–831.

Arunachalam, Sudha & Anubha Kothari. 2010. Telicity and event culmination in Hindi perfectives. In P. M. Bertinetto, A. Korhonen, A. Lenci, A. Melinger, Sabine Schulte im Walde & A. Villavicencio (eds.), *Proceedings of Verb 2010, Interdisciplinary Workshop on Verbs: The Identification and Representation of Verb Features*, 16–19.

Arunachalam, Sudha & Anubha Kothari. 2011. An experimental study of Hindi and English perfective interpretation. *Journal of South Asian Linguistics* 4(1). 27–42.

Asher, Nicholas. 1992. A default, truth conditional semantics for the progressive. *Linguistics & Philosophy* 15. 463–508.

Bar-el, Leora. 2005. *Aspectual Distinctions in Skwxwú7mesh*: The University of British Columbia dissertation.

Bar-el, Leora, Henry Davis & Lisa Matthewson. 2005. On non-culminating accomplishments. In Leah Bateman & Cherlon Ussery (eds.), *Proceedings of the 35th annual meeting of the North East Linguistics Society (NELS)*, 87–102.

Beavers, John. 2010. Aspectual analysis of ditransitive verbs of caused possession in English. *Journal of Semantics* 28. 1–54.

Beavers, John & Juwon Lee. forthcoming. Non-culmination in Korean caused change-of-state predicates. *Linguistics* .

Bertinetto, Pier Marco & Mario Squartini. 1995. An attempt at defining the class of 'gradual completion verbs'. In Pier Marco Bertinetto, Valentina Bianchi, James Higginbotham & Mario Squartini (eds.), *Temporal Reference, Aspect and Actionality. Volume 1: Semantic and Syntactic Perspectives*, 11–26. Torino: Rosenberg and Sellier.

Bohnemeyer, Jürgen & Mary Swift. 2004. Event realization and default aspect. *Linguistics & Philosophy* 27(3). 263–296.

Bonomi, Andrea. 1999. The progressive and the structure of events. *Journal of Semantics* 14. 173–205.

Bott, Oliver. 2010. *The Processing of Events*. Benjamins: John Benjamins.

Bott, Oliver & Fritz Hamm. 2014. Cross-linguistic variation in the processing of aspect. In Barbara Hemforth, B. Mertins & Cathrine Fabricius-Hansen (eds.), *Psycholinguistic approaches to meaning and understanding across*

languages, 83–109. Springer.

Brisson, Christine. 1998. *Distributivity, Maximality, and Floating Quantifiers*: Rutgers University dissertation.

Burnett, Heather. 2012. Vague determiner phrases and distributive predication, 175–194. Amsterdam: Springer.

Champollion, Lucas. 2013. The scope and processing of *for*-adverbials: A reply to Deo and Piñango. In *Proceedings of Semantics and Linguistic Theory (SALT) 23*, 432–452.

Chen, Jidong. 2016. When transparency doesn't mean ease: Learning the meaning of resultative verb compounds in Mandarin Chinese. *Journal of child language* 1–24.

Chen, Sihwei. 2017. Initial stages of events: The Atayal unmarked predicates. In *34th West Coast Conference on Formal Linguistics*, 107–114. Cascadilla Proceedings Project.

Chief, Liancheng. 2008. *Scalarity and Incomplete Event Descriptions in Mandarin Chinese*: State University of New York dissertation.

Dell, François. 1983. An aspectual distinction in Tagalog. *Oceanic Linguistics* 22(1/2). 175–206.

Deo, Ashwini Sharad & Maria Mercedes Piñango. 2011. Quantification and context in measure adverbs. In *Proceedings of Semantics and Linguistic Theory (SALT) 21*, 295–312.

Dölling, Johannes. 2003. Flexibility in adverbal modification: Reinterpretation as contextual enrichment. In Ewald Lang, Claudia Maienborn & Cathrine Fabricius-Hansen (eds.), *Modifying adjuncts*, Berlin/New York: Mouton de Gruyter.

Dowty, David. 1977. Toward a semantic analysis of verb aspect and the English 'imperfective' progressive. *Linguistics & Philosophy* 1/1. 45–77.

Dowty, David R. 1979. *Word Meaning and Montague Grammar*. Dordrecht: D. Reidel.

Filip, Hana. 1999. *Aspect, Eventuality Types, and Nominal Reference*. New York: Routledge.

Filip, Hana. 2008. Events and maximalization: The case of telicity and perfectivity. In Susan D. Rothstein (ed.), *Theoretical and Crosslinguistic Approaches to the Semantics of Aspect*, 217–256. John Benjamins.

Garey, Howard B. 1957. Verbal aspects in French. *Language* 33. 91–110.

Greene, Hannah. 2013. Verb classes in Kwakwala. Vancouver, BC: University of British Columbia MA thesis.

Grønn, Atle. 2003. *The Semantics and Pragmatics of the Russian Factual Imperfective*. Oslo: University of Oslo dissertation.

Grønn, Atle. 2007. Horn strategies and optimization in Russian aspect. In Anton

Benz, Christian Ebert & Rob van Rooij (eds.), *Proceedings of Language, Games, and Evolution, ESSLI workshop*, .

Gyarmathy, Zsófia. 2015. *Achievements, durativity and scales.* Logos Verlag Berlin.

Gyarmathy, Zsófia & Daniel Altshuler. forthcoming. (Non-)culmination by abduction. *Linguistics* .

Hay, Jennifer, Christopher Kennedy & Beth Levin. 1999. Scalar structure underlies telicity in degree achievements. In Tanya Mathews & Devon Strolovich (eds.), *Proceedings of Semantics and Linguistics Theory (SALT) 9*, 127–144. Ithaca: CLC Publications.

Hopper, Paul & Elizabeth Traugott. 2003. *Grammaticalization.* Cambridge: Cambridge University Press.

van Hout, Angeliek. 1998. On the role of direct objects and particles in learning telicity in Dutch and English. In A. Greenhill, M. Hughes, H. Littlefield & H. Walsh (eds.), *Proceedings of the 22nd Boston University Conference on Language Development 2*, 398–408. Somerville: Cascadilla Press.

van Hout, Angeliek, Natalia Gagarina & Wolfgang Dressler. 2010. Learning to understand aspect across languages. Talk given to *BUCLD 2010*.

Ikegami, Yoshihiko. 1985. Activity – accomplishment – achievement – A language that can't say 'I burned it but it did not burn' and one that can. In A. Makkai & A. K. Melby (eds.), *Linguistics and philosophy: Essays in honor of Rulon S. Wells*, 265–304. Benjamins.

Jacobs, Peter. 2011. *Control in Skwxwú7mesh*: University of British Columbia dissertation.

Kato, Atsuhiko. 2014. Event cancellation in Burmese. Paper presented to the 24th Meeting of the Southeast Asian Linguistics Society, Yangon.

Kazanina, Nina, Sara Baker & Hayley Seddon. forthcoming. Actuality bias in verb learning: The case of sublexically modal transfer verbs. *Linguistics* .

Kearns, Kate. 2003. Durative achievements and individual-level predicates on events. *Linguistics and Philosophy* 26/5. 595–636.

Kearns, Kate. 2007. Telic sense of deadjectival verbs. *Lingua* 117. 26–66.

Kennedy, Chris. 2012. The composition of incremental change. In Violeta Demonte & Louise McNally (eds.), *Telicity, change, state: A cross-categorical view of event structure*, 103–121. Oxford: Oxford University Press.

Kennedy, Christopher & Beth Levin. 2008. Measure of change: The adjectival core of verbs of variable telicity. In Louise McNally & Christopher Kennedy (eds.), *Adjectives and Adverbs: Syntax, Semantics, and Discourse*, 156–182. Oxford: Oxford University Press.

Kiyota, Masaru. 2008. *Situation Aspect and Viewpoint Aspect: From Salish to Japanese*: The University of British Columbia dissertation.

Klein, Wolfgang, Ping Li & Henriëtte Hendriks. 2000. Aspect and assertion in Mandarin Chinese. *Natural Language & Linguistic Theory* 18(4). 723–770.

Koenig, Jean-Pierre & Lian-Cheng Chief. 2008. Scalarity and state-changes in Mandarin (and other languages). In *Empirical issues in syntax and semantics*, vol. 7, 241–262.

Koenig, Jean-Pierre & Anthony R. Davis. 2001. Sublexical modality and the structure of lexical semantic representations. *Linguistics & Philosophy* 24(1). 71–124.

Koenig, Jean-Pierre & Nuttannart Muansuwan. 2000. How to end without ever finishing: Thai semi-perfectivity. *Journal of Semantics* 17(2). 147–182. doi:10.1093/jos/17.2.147.

Kratochvíl, Frantisek & Benidiktus Delpada. 2015. Degrees of affectedness and verbal prefixation in Abui (Papuan). In Stefan Müller (ed.), *Singapore Proceedings of the 22nd International Conference on Head-Driven Phrase Structure Grammar*, 216–233. Stanford: CSLI Publications.

Kratzer, Angelika. 2004. Telicity and the meaning of objective case. In Jacqueline Guéron & Jacqueline Lecarme (eds.), *The Syntax of Time*, 389–423. Cambridge, MA: MIT Press.

Križ, Manuel. 2016. Homogeneity, non-maximality and *all. Journal of Semantics* 33. 493–539.

Landman, Fred. 1992. The progressive. *Natural Language Semantics* 1. 1–32.

Lasersohn, Peter. 1999. Pragmatic halos. *Language* 75(3). 522–551.

Lin, Jimmy. 2004. *Event Structure and the Encoding of Arguments: The Syntax of the Mandarin and English Verb Phrase*: MIT dissertation.

Liu, Jinhong. 2018. Non-Culminating Accomplishments in Child and Adult Chinese. Doctoral Dissertation, Université de Nantes.

Magri, Giorgio. 2014. An account for the homogeneity effects triggered by plural definites and conjunction based on double strengthening. In *Pragmatics, semantics and the case of scalar implicatures*, 99–145. Hampshire: Palgrave.

Malamud, Sophia. 2012. The meaning of plural definites: A decision-theoretic approach. *Semantics & Pragmatics* 5. 1–58.

Martin, Fabienne. 2019. Aspectual differences between agentive and non-agentive uses of causative predicates. Manuscript under revision, Humboldt-Universität zu Berlin.

Martin, Fabienne, Hamida Demirdache, Isabel García del Real, Angeliek van Hout & Nina Kazanina. forthcoming. Children's non-adultike interpretations of telic predicates across languages. *Linguistics* .

Martin, Fabienne, Ingrid Falk, Maximilian Köper, Sylvia Springorum, Sabine Schulte im Walde & Achim Stein. 2019a. Cross-Linguistic Interplay of Lexical Aspect and (Non-)Literalness. In Anja Gattnar, Robin Hörnig &

Melanie Störzer (eds.), *Linguistic Evidence 2018: Experimental Data drives Linguistic Theory*, Tübingen: Tübingen Universität.

Martin, Fabienne, Margaret Grant & Florian Schäfer. 2019b. Weakly telic prepositional phrases in German and English. Poster presentation at *XPRAG* 2019, University of Edinburgh.

Martin, Fabienne & Zsófia Gyarmathy. forthcoming. A more fined-grained typology of perfective operators. In Christopher Piñón (ed.), *Empirical issues in syntax and semantics*, vol. 12, .

Martin, Fabienne & Florian Schäfer. 2012. The modality of 'offer' and other defeasible causative verbs. In Nathan Arnett & Ryan Bennett (eds.), *West Coast Conference on Formal Linguistics (WCCFL) 30*, 248–258. Somerville, MA: Cascadilla Press.

Martin, Fabienne & Florian Schäfer. 2013. On the argument structure of verbs with bi- and mono-eventive uses. In Stefan Keine & Shayne Sloggett (eds.), *Proceedings of North East Linguistics Society (NELS) 42*, 297–308. Amherst: GLSA Publications.

Martin, Fabienne & Florian Schäfer. 2017. Sublexical modality in defeasible causative verbs. In *Modality across Syntactic Categories*, 87–108. Oxford University Press.

Martin, Fabienne, Hongyuan Sun, Hamida Demirdache & Jinhong Liu. 2019. Monomorphemic verbs in Mandarin Chinese: Lexical aspect, event structure and non-culminating uses. Manuscript, Université de Nantes and Humboldt-Universität zu Berlin.

Oehrle, Richard. 1976. *The Grammatical Status of the English Dative Alternation*: MIT dissertation.

Ogiela, Diane, Cristina Schmitt & Michael Casby. 2014. Interpretation of verb phrase telicity: Sensitivity to verb type and determiner type. *Journal of Speech, Language, and Hearing Research* 3(57). 865–875.

Pancheva, Roumyana. 2003. The aspectual makeup of perfect participles and the interpretation of the perfect. In Artemis Alexiadou, Monika Rathert & Arnim von Stechow (eds.), *Perfect Explorations*, 277–306. Berlin/ New York: De Gruyter.

Paramasivam, K. 1979. *Effectivity and Causativity in Tamil*. Vanchiyoor, Trivandrun: Dravidian Linguistics Association. Tolkaappiyar Hall Kerala Paanini Buildings.

Park, Ki-Seong. 1993. *Korean Causatives in Role and Reference Grammar*. Buffalo University at Buffalo MA thesis.

Parsons, Terence. 1990. *Events in the semantics of English : A Study in Subatomic Semantics*. Cambridge, Mass.: MIT Press.

Paul, Ileana, Baholisoa Simone Ralalaoherivony & Henriëtte de Swart. 2015.

Aspect and modality in Malagasy *maha*. In *Proceedings of the 2015 Annual Conference of the Canadian Linguistic Association*, Ottawa: Canadian Linguistic Association.

Paul, Ileana, Baholisoa Simone Ralalaoherivony & Henriëtte de Swart. 2016. Malagasy *maha* at the crossroads of voice, causation and modality. In Emily Clem, Virginia Dawson, Alice Shen, Amalia Skilton, Geoff Bacon, Andrew Cheng & Erik Maier (eds.), *Proceedings of the 42d Meeting of the Berkeley Linguistics Society*, 353–368. Berkeley: Berkeley Linguistics Society.

Paul, Ileana, Baholisoa Simone Ralalaoherivony & Henriëtte de Swart. forthcoming. Culminating and non-culminating accomplishments in Malagasy. *Linguistics* .

Pederson, Eric. 2008. Event realisation in Tamil. In Melissa Bowerman & Penelope Brown (eds.), *Crosslinguistic Perspectives on Argument Structure. Implications for Learnability*, 331–356. London: Routledge (Taylor and Francis).

Piñón, Christopher. 1997. Achievements in an event semantics. In Aaron Lawson & Eun Cho (eds.), *Semantics & Linguistic Theory (SALT) 7*, 273–296. Ithaca, New-York: CLC Publications, Cornell University.

Piñón, Christopher. 1999. Durative adverbials for result states. In *Proceedings of the 18th West Coast Conference in Formal Linguistics*, 420–433. Somerville, MA: Cascadilla Press.

Piñón, Christopher. 2008. Aspectual composition with degrees. In Louise McNally & Christopher Kennedy (eds.), *Adjectives and Adverbs: Syntax, Semantics, and Discourse*, 183–219. Oxford: Oxford University Press.

Piñón, Christopher. 2009. Incrementality by degrees, Plenary talk presented at the Chronos Conference, Paris Diderot.

Rappaport Hovav, Malka. 2008. Lexicalized meaning and the internal temporal structure of events. In Susan Rothstein (ed.), *Theoretical and Crosslinguistic Approaches to the Semantics of Aspect*, 13–42. Amsterdam: John Benjamins.

Rappaport Hovav, Malka & Beth Levin. 2010. Reflections on manner/result complementarity. In Edit Doron, Malka Rappaport Hovav & Ivy Sichel (eds.), *Syntax, Lexical Semantics, and Event Structure*, 21–38. Oxford University Press: Oxford.

Roßdeutscher, Antje. 2012. Hidden quantification in prefix-and particle verbs. In Grégoire Winterstein Emmanuel Chemla, Vincent Homer (ed.), *Proceedings of Sinn und Bedeutung*, vol. 16, 513–526.

Rothstein, Susan. 2012. Another look at accomplishments and incrementality. In Violeta Demonte & Louise McNally (eds.), *Telicity, Change and State*, 60–120. Oxford: Oxford University Press.

Sardinha, Katherine. 2017. *The Semantics of Kwakwala Object Case*: UC

Berkeley dissertation.

Sassoon, Galit Weidman & Natalia Zevakhina. 2012. Granularity shifting: Experimental evidence from degree modificationers. In *Proceedings of Semantics and Linguistics Theory (SALT) 22*, 226–246.

Singh, Mona. 1991. The perfective paradox: Or how to eat your cake and have it too. In Laurel Sutton, Christopher Johnson & Ruth Shields (eds.), *Proceedings of the Seventeenth Annual Meeting of the Berkeley Linguistics Society*, 469–479.

Singh, Mona. 1994. *Perfectivity, Definiteness, and Specificity: A Classification of Verbal Predicates in Hindi*: University of Texas at Austin dissertation.

Singh, Mona. 1998. On the semantics of the perfective aspect. *Natural Language Semantics* 6(2). 171–199.

Smith, Carlota. 1991. *The Parameter of Aspect*. Dordrecht: Kluwer.

Smith, Carlota. 1997. *The Parameter of Aspect*. Dordrecht: Kluwer.

Smollett, Rebecca. 2005. Quantized direct object don't delimit after all. In Henk Verkuyl, Henriëtte de Swart & Angeliek van Hout (eds.), *Perspectives on Aspect*, 41–60. Dordrecht: Kluwer.

Soh, Hooi Ling & Mei Jia Gao. 2006. Perfective aspect and transition in Mandarin Chinese: An analysis of double *-le* sentences. In Pascal Denis, E. McCready, Alexis Palmer & Brian Reese (eds.), *Proceedings of the 2004 Texas Linguistics Society Conference*, 107–122. Somerville: Cascadilla Proceedings Project.

Soh, Hooi Ling & Jenny Yi-Chun Kuo. 2005. Perfective aspect and accomplishment situations in Mandarin Chinese. In Henk Verkuyl, Henriëtte de Swart & Angeliek van Hout (eds.), *Perspectives on Aspect*, 199–216. Dordrecht: Kluwer.

Talmy, Leonard. 2000. *Toward a Cognitive Semantics. Volume II: Typology and Process in Concept Structuring*. Cambridge (Mass.): MIT Press.

Tatevosov, Sergei. 2002. The Parameter of Actionality. *Linguistic Typology* 6. 317–401.

Tatevosov, Sergei. 2008. Subevental structure and non-culmination. In Olivier Bonami & Patricia Cabredo Hofherr (eds.), *Empirical Issues in Syntax and Semantics 7*, 393–422.

Tatevosov, Sergei & Mihail Ivanov. 2009. Event structure of non-culminating accomplishments. In Helen de Hoop Hogeweg, Lotte & Andrej Malchukov (eds.), *Cross-linguistic Semantics of Tense, Aspect, and Modality*, 83–130. The Hague: Benjamins.

Tenny, Carol. 1994. *Aspectual Roles and the Syntax-Semantics Interface*. Dordrecht: Kluwer.

Travis, Lisa. 2010. *Inner Aspect. The Articulation of VP*. Amsterdam: Springer.

Tsujimura, Natsuko. 2003. Event cancellation and telicity. In *Japanese/Korean Linguistics 12*, 388–399.

Varasdi, Károly. 2014. Making progressives: Necessary conditions are sufficient. *Journal of Semantics* 31. 179–207.

Wright, Tony Allen. 2014. *Strict vs. Flexible Accomplishment Predicates*: University of Texas at Austin dissertation.

van den Wyngaerd, Guido. 2001. Measuring events. *Language* 77(1). 61–90.

Yoon, Yae Il. 1996. Total and partial predicates and the weak strong interpretations. *Natural Language Semantics* 4. 217–236.

Zhang, Anqi. 2018a. *On non-culminating accomplishments in Mandarin*: The University of Chicago dissertation.

Zhang, Anqi. 2018b. Transitive-intransitive alternations in Japanese. Talk given to the 54th Annual Meeting of the Chicago Linguistic Society (CLS).

Zucchi, Sandro. 1998. Aspect shift. In Susan Rothstein (ed.), *Events and Grammar*, 349–370. Dordrecht: Kluwer.

Zucchi, Sandro. 1999. Incomplete events, intensionality and imperfective aspect. *Natural Language Semantics* 7. 179–215.

Zwarts, Joost. 2005. Prepositional aspect and the algebra of paths. *Linguistics and Philosophy* 28/6. 739–779.

Fabienne Martin
Unter den Linden, 6
Humboldt-Universität zu Berlin
10099 Berlin
fabienne.martin@hu-berlin.de