

Resultative and goal phrases in Polish and English: Interaction with aspect

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ABSTRACT The article examines the interaction of resultative and goal phrases with aspect in Polish and English. The first research problem concerns the ability of resultative and goal phrases to aspectually delimit (telicize) an atelic predicate. Data from English shows that resultative and goal phrases systematically make an atelic predicate telic in non-progressive sentences, but they fail to do so in progressive constructions. In Polish, imperfective (atelic) constructions can never be aspectually delimited by such phrases. It is argued that resultative and goal phrases lose their telicizing potential when in the scope of an aspectual functional head Asp specified as [-telic]. This is the case in English progressive and Polish imperfective sentences. The Asp head is able to override the telicity specification established compositionally within VP. The Asp head in Polish is obligatory and the value of its telicity feature ([+telic] for perfective and [-telic] for imperfective) is responsible for the interpretation of the VP selected by Asp as a complement. In English such projection is optional. When it is absent, the telicity of a predicate can be computed from the default aspectual type of the lexical verb combined with other elements inside VP, including resultative and goal phrases. A related problem also addressed in the article concerns the meaning of progressive / imperfective resultative and goal constructions. The problem is presented as part of a larger task of finding a proper analysis for accomplishment predicates combined with a progressive / imperfective operator. The proposed solution is based on the notion of directionality. It is suggested that resultative and goal constructions denote a process of some entity changing in the ‘direction’ of a new state. When the process is understood as having a culmination, the ‘direction’ of the transition indicates a new state actually holding of the entity undergoing transition. When a progressive / imperfective operator is introduced, it can remove the culmination leaving just the directed-transition process. A formalization of this analysis is provided.

Keywords: resultative phrase, goal phrase, aspect, telicity, directed transition, progressive, imperfective, perfective, accomplishment

1 Introduction

English sentences like those in (1) are known as resultative constructions. They have close formal and semantic equivalents in Polish,¹ as illustrated in (2).

- (1) a. Mary painted the door; red_j.
b. John wiped the plate; dry_j.

¹ There is a difference between Polish and English with respect to the category of the resultative phrase. Whereas in Polish resultative phrases can only be PPs, in English they can be PPs, AdjPs, or (rarely) NPs.

- (2) a. Maria po-malowała² drzwi na czerwono.
Mary PERF-painted door on red
- b. Janek wy-tarł talerz do sucha.
John PERF-rubbed plate to dry

This article discusses the ways in which resultative and goal phrases interact with aspectual structure in Polish and English. It addresses two research questions:

- (i) Why do resultative and goal phrases turn atelic³ activities into telic accomplishments in non-progressive English sentences, whereas they cannot do so in progressive English sentences and imperfective Polish sentences?
- (ii) What is the meaning of resultative and goal constructions with imperfective (Polish) and progressive (English) aspect?

2 Resultative phrases and goal phrases: Definitions

Defining the resultative construction, I loosely adopt the approach of Levin and Rappaport Hovav (1995, p. 34), where a resultative construction is identified by the presence of an extra bit of structure, a resultative phrase. The relevant definitions are given below:

- (3) Resultative Construction
 A clause consisting minimally of a verb with at least one argument and a resultative phrase.
- (4) Resultative Phrase
 An XP expressing a new property of the main verb's subject or object⁴ resulting from the action denoted by the verb.

In both Polish and English, there is a class of constructions closely related to resultative phrases as defined in (4). I will refer to them as goal phrases.

- (5) Goal Phrase
 An XP expressing a new location of the main verb's subject or object resulting from the action denoted by the verb.

As can be seen by comparing (4) with (5), there are significant similarities between the two phrase types, to the extent that both are sometimes analysed as resultative phrases (Goldberg and Jackendoff (2004, p. 537) propose to use the names *property resultatives* and *spatial resultatives*).

² For clarity, I will separate perfective prefixes from the rest of the verb with a hyphen, although this is not a convention of Polish orthography.

³ I limit the analysis to episodic atelic predicates only. Iterative or habitual predicates exhibit different properties that are outside the scope of this article.

⁴ Argument orientation is represented in examples by indexation.

3 Aspectual behaviour of resultative and goal phrases in English and in Polish

3.1 Resultative and goal phrases in Polish

One of the common diagnostics for telicity is acceptability with completive adverbials (e.g., *in an hour*) or durative adverbials (e.g., *for an hour*) – telic predicates are compatible with the former and incompatible with the latter and the opposite is true for atelic predicates. The test applied to resultative phrases in Polish shows that they can never aspectually delimit the eventuality when combined with an atelic (imperfective) construction.⁵

- (6) a. Malarz malował dom przez godzinę / *w godzinę. (atelic)
painter painted house for hour / in hour
 ‘The painter was painting the house for an hour.’
- b. Malarz malował dom_j na czerwono_j przez godzinę / *w godzinę. (atelic)
painter painted house on red for hour / in hour
 ‘The painter was painting the house red for an hour.’

Polish goal phrases pattern in many respects with resultative phrases, particularly, in their inability to delimit an atelic eventuality:

- (7) a. Statek płynął przez tydzień / *w tydzień. (atelic)
ship sailed for week / in week
- b. Statek_j płynął do Ameryki_j przez tydzień / *w tydzień. (atelic)
ship sailed to America for week / in week

Additional tests can be employed to confirm the lack of a telicizing potential of Polish resultative and goal phrases in imperfective clauses. Negating the culmination or endpoint of an eventuality is one such diagnostic. Notice how the potential conclusion of an imperfective

⁵ There is a class of Polish expressions telicizing a predicate, which resemble resultative phrases, e.g., *do wyczerpania* (‘to exhaustion’), *do zachrypnięcia* (‘to hoarseness’), *do nieprzytomności* (‘to unconsciousness’); cf. (i). However, a closer analysis shows that they are in fact temporal adverbials with a resultative reading added by a pragmatic mechanism; cf. (ii).

- (i) a. Malarz pracował w czwartek i w piątek.
painter worked on Thursday and on Friday
 ‘The painter was working on Thursday and on Friday.’
 (1 event or 2 events = atelic) (see the main text below; cf. (10) and (11))
- b. Malarz_j pracował do wyczerpania_j w czwartek i w piątek.
painter worked to exhaustion on Thursday and on Friday
 ‘The painter worked himself to exhaustion on Thursday and on Friday.’
 (2 events = telic)
- (ii) Q: Jak długo malarz malował dom?
how long painter painted house
 ‘How long was the painter painting the house?’
- A: Do wyczerpania.
to exhaustion
 (Malarz_j malował dom do wyczerpania_j.
painter painted house to exhaustion)
- A’: #Na czerwono.
on red
 (#Malarz malował dom_j na czerwono_j.
painter painted house on red)

predicate in (8) can easily be negated, whereas this is not possible when the predicate is perfective.

- (8) a. Malarz malował dom, ale dom nie został pomalowany. (atelic)
painter painted house but house NEG PASS-AUX painted
 ‘The painter was painting the house, but the house was not painted.’
- b. #Malarz po-malował dom, ale dom nie został pomalowany. (telic)
painter PERF-painted house but house NEG PASS-AUX painted

When a resultative or goal phrase is added in Polish to an imperfective predicate, negating the outcome of the activity is still possible. This shows that phrases like *na czerwono* or *do Ameryki* cannot introduce any actual conclusion in such constructions.

- (9) a. Malarz malował dom; na czerwono, ale dom nie stał się (cały) czerwony.
painter painted house on red but house NEG became REFL (all) red
 ‘The painter was painting the house red, but the house did not become (completely) red.’
- b. Statek; płynął do Ameryki, ale nie dotarł do Ameryki.
ship sailed to America but NEG came to America
 ‘The ship was sailing to America, but it did not reach America.’

Another commonly used test for (a)telicity involves conjoined adverbials. When the predicate is atelic, as in (10a), adding conjoined adverbials gives rise to an ambiguity. The sentence can denote either a single event, or two separate ones. With a telic predicate, as in (10b), a two-event reading is the only possibility.

- (10) a. Malarz malował dom w czwartek i w piątek. (atelic)
painter painted house on Thursday and on Friday
 ‘The painter was painting the house on Thursday and on Friday.’
 (1 event or 2 events)
- b. Malarz po-malował dom w czwartek i w piątek. (telic)
painter PERF-painted house on Thursday and on Friday
 ‘The painter painted the house on Thursday and on Friday.’
 (2 events)

Applied to sentences in (11), the test shows that adding a resultative or goal phrase preserves the atelic character of the predicate.

- (11) a. Malarz malował dom; na czerwono; w czwartek i w piątek.
painter painted house on red on Thursday and on Friday
 ‘The painter was painting the house red on Thursday and on Friday.’
 (1 event or 2 events)
- b. Statek; płynął do Ameryki; w maju i w czerwcu.
ship sailed to America in May and in June
 ‘The ship was sailing to America in May and in June.’
 (1 event or 2 events)

3.2 Resultative and goal phrases in English

It is commonly observed (e.g., Cornilescu, 2004, p. 20; Ettliger, 2008, p. 4; Folli and Ramchand, 2005, p. 85; Fontanals, 2000, p. 74; Levin and Rappaport Hovav, 1995, p. 57; Mezhevich, 2003, p. 168; Tenny, 1994, p. 37) that adding a resultative predicate to a non-progressive atelic clause in English systematically makes it telic, or, to put it Vendlerian terms, English resultative phrases derive accomplishments from activities. The following examples are from Mezhevich (2003).

- (12) a. Suzan hammered the metal *in an hour. (atelic)
 b. Suzan hammered the metal; smooth_i in an hour. (telic)

As in Polish, English goal phrases resemble resultative phrases in their telicizing role in aspectual composition. This property is reported by, among others, Folli and Ramchand (2005), who observe that “[r]esultatatives and goal of motion constructions are alike in that they add a ‘telos’ to an otherwise unbounded predicate” (p. 85). The same claim can be found in Mezhevich (2003, p. 168) or in Nam (2005, p. 311), who illustrates it with the following examples:

- (13) a. Mary ran *in ten minutes / for ten minutes. (atelic)
 b. Mary_i ran to the store_j in ten minutes / *for ten minutes. (telic)

The behaviour described above applies, however, only to non-progressive constructions. The picture changes when the verb appears in a progressive form (which could be associated with the presence of a progressive operator in the structure), in which case resultative and goal phrases lose their telicizing potential.

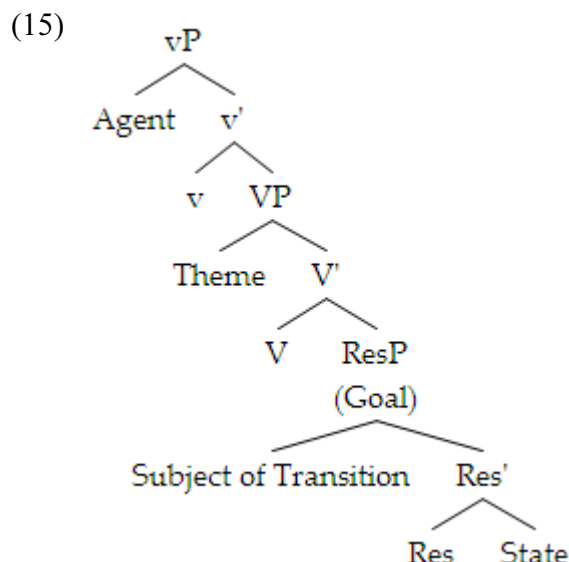
- (14) a. Suzan was hammering the metal for an hour / *in an hour.
 b. Suzan was hammering the metal; flat_i for an hour / *in an hour.

3.3 Summary

In English, resultative and goal phrases typically make atelic predicates aspectually delimited (telic) if the predicate is non-progressive. However, if the atelic interpretation of a predicate is due to the progressive form of its verb, resultative and goal phrases cannot change the aspectual properties of the construction. In Polish, resultative and goal phrases do not show any telicizing potential. An imperfective (atelic) predicate combined with a resultative or goal phrase results in a structure which is still atelic.

4 Syntax of resultative and goal phrases

As far as the position and status of resultative and goal phrases in the clause structure is concerned, I am going to assume (following the syntactic accounts of English resultatives by, e.g., Bowers, 2003, p. 325; Folli and Ramchand, 2005) that the entire ResP projection is merged as a complement of V. The projection forms a secondary predicate (small clause)



The low structural position of such phrases in Polish is indicated by the fact that, in a sentence where a resultative phrase co-occurs with an adverbial, the former is closer to the verb under a neutral reading (with no topicalization / scrambling). This is expected if the resultative or goal phrase is a complement of the verb and the adverbial modifier is adjoined to a higher structural position.

- (16) *Malarz_k [_{VP} t_k [_{v'} malował₁ [_{VP} t₁ drzwi na czerwono]] do wieczora / pędzlem]].*
painter painted door on red until evening / brush.INSTR

5 Resultative and goal phrases in the aspectual systems of English and Polish

5.1 Aspect in natural languages

Aspect is an area of intensive research, many controversies and conflicting theories. If there is one thing that seems to be commonly accepted in aspectual studies, it is that aspect is one of two systems used by natural languages to encode temporal information, the other system being tense. Tenses allow languages to situate entire eventualities in time with respect to some distinguished moments or intervals. In contrast, languages employ aspectual notions to describe the internal temporal structure of an eventuality. A much more contentious part is the division between lexical aspect (Aktionsart) and outer aspect (viewpoint aspect). Aktionsart is associated with notions like culmination, whereas viewpoint aspect allows the representation of an eventuality as a part (imperfective) or a whole (perfective) (for an overview see, for instance, Borik, 2006; Filip, 2003). However, this distinction can be understood differently by different researchers so that the general picture is rather unclear. I am going to assume that an eventuality can be presented as delimited (telic) or non-delimited (atelic), which can be revealed by standard tests for delimitedness (like the ones used in section 3). I assume further that these categories can be encoded or computed compositionally at different levels in the derivation. Typological research reveals that languages can differ significantly with respect to the way they convey aspectual information (particularly regarding (a)telicity). Cross-linguistically attested ways include lexicalizing relevant notions in verbs, utilizing semantic properties of arguments, using adverbials, aspectual particles, auxiliary verbs, dedicated morphemes or case (Łazarczyk, 2010, p. 72, 103; Filip, 2003, p. 55).

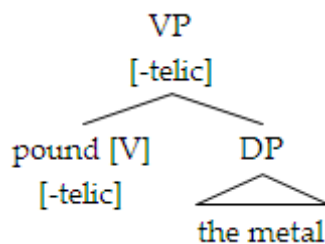
5.2 Resultative and goal phrases in aspectual composition in English

5.2.1 English resultative and goal phrases in non-progressive clauses

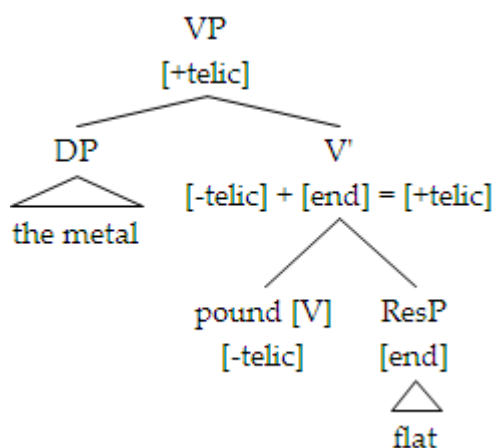
In non-progressive English clauses, the category of (a)telicity seems to be encoded by a system where properties of different sub-constituents of VP (internal arguments, particles, resultative and goal phrases) all contribute to compositional computation of the aspectuality of the whole construction (see, for instance, Verkuyl, 1996). It can be assumed that some verbs are strongly lexically specified for a default aspectual type (possibly based on the most frequent contextual environments of the verb; see Bott, 2010).

As an example take the verb *to pound*. To the extent that it is lexically an activity, it can be seen as carrying a feature [-telic]. Suppose that certain complements of a verb can be interpreted as delimiting the verbal eventuality. These are, for example, goal or resultative phrases. Their delimiting properties can be represented by a feature [end]. In the examples below, when *to pound* combines with a direct object, the resulting predicate is still atelic, like in (17). When a resultative phrase is attached to the new predicate, it becomes telic, like in (18). Aspectual computation within a VP proceeds in a straightforward compositional way.

- (17) Suzan pounded the metal for an hour / *in an hour. (atelic)



- (18) Suzan pounded the metal flat *for an hour / in an hour. (telic)

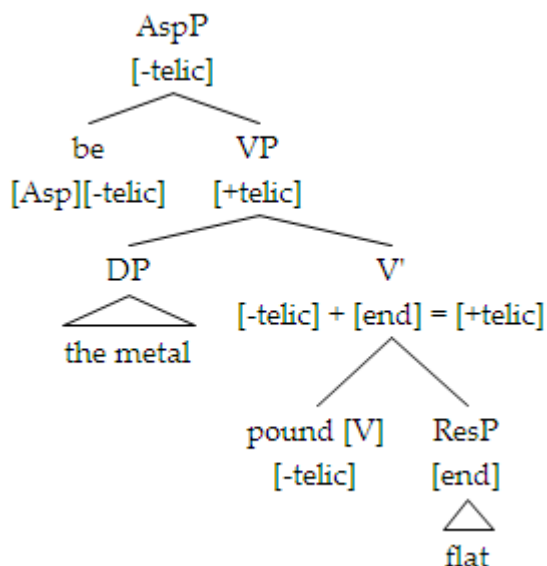


5.2.2 English resultative and goal phrases in progressive clauses

If a resultative or goal phrase is able to delimit the verbal eventuality in non-progressive atelic clauses, why can it not do so in a progressive atelic construction? The answer to this question presented here is based on the syntactic analysis of goal and resultative phrases described in section 4 and the assumption that the progressive operator responsible for the atelic

interpretation of this construction is situated above the level of VP.⁶ The progressive operator can be treated as an aspect-encoding functional head *Asp* carrying a feature [-telic]. This functional head is occupied by the auxiliary verb *be*. The process denoted by the verbal predicate selected by a progressive *Asp* head as a complement cannot be interpreted as actually ending in a culmination (an atelic eventuality does not have any endpoint). The telicity value on the *Asp* head can override any aspectual specification within the VP, including the aspectual contribution of resultative and goal phrases.

(19) Suzan was pounding the metal_j flat_j.



The whole predicate can still be delimited by something located above the *AspP* level, like an endpoint adverbial (although adverbials may introduce a different kind of delimitation than VP internal elements); cf. (20).

- (20) a. Suzan was pounding the metal_j flat_j **until 4 pm** on Thursday and on Friday.
(2 events)
- b. Suzan was pounding the metal_j flat_j on Thursday and on Friday.
(1 event or 2 events)

5.3 Resultative and goal phrases in aspectual composition in Polish

5.3.1 Aspectual function of verbal prefixes in Polish

Because of a system of verbal prefixes in Polish (and other Slavic languages) it is common to describe Polish verbs as obligatorily either perfective or imperfective. The data discussed in Łazorczyk (2010) indicates that verbs with perfective prefixes in Polish generally denote telic eventualities, so the job of (at least some) prefixes is to encode this aspectual category. Conversely, imperfective forms are typically atelic.⁷ Łazorczyk postulates the presence of a functional projection in syntax whose head hosts the feature [+telic] (and other semantic

⁶ For an analysis of progressive aspect in terms of an operator, see, for instance, de Swart (2000).

⁷ Borik (2006) and Filip (2003) problematize the relation between morphological (im)perfectiveness and (a)telicity using examples from Russian and Czech. Łazorczyk (2010) addresses and refutes such arguments. In any case, there seems to be a strong correlation between telicity (as indicated by standard tests) and verbal morphology in Polish, even if the link is not absolute.

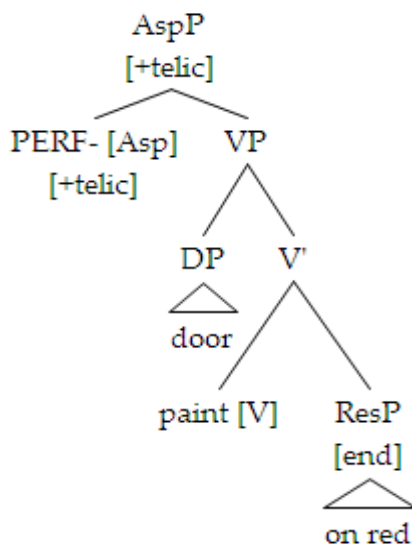
features for morphemes that are not purely aspectual). The head is spelled-out as a perfective prefix on the verb.⁸ She equates atelicity with the lack of such projection.

I am going to assume that an aspectual projection (AspP) is always required by Polish syntax above the VP. In imperfective clauses the (phonologically null) head is specified as [-telic], much like the progressive Asp head in English. It is likely that before the introduction of the Asp head, the system does not evaluate the telicity of the verbal predicate at all. There is therefore no reason to assume that Polish verbal roots are lexically specified as telic or atelic by default. A similar idea can be found in Slabakova (2005): “The bulk of Slavic roots are neutral with respect to telicity in the lexicon, that is, they are [α telic] roots. Whenever a telicizing derivational morpheme is merged in the template (an internal prefix), the lexical aspect value is calculated as perfective” (p. 11). Because of the obligatory presence of this aspectual projection, internal arguments of Polish verbs can never have any influence on the telicity of the whole verbal predicate and cannot change the interpretation of a sentence from an activity to an accomplishment, unlike in English where in some sentences there is no Asp projection determining the telicity. As a result, Polish verbal morphology forces a telic or atelic reading on virtually every verbal predicate, regardless of its internal composition.

5.3.2 Polish resultative and goal phrases in perfective clauses

A resultative or goal phrase in a perfective sentence is in the scope of a [+telic] feature on the Asp head (manifested as a perfective prefix). The feature itself determines a delimited reading of the main eventuality. The new state denoted by a resultative or goal phrase is equated by the interpretive mechanisms with the endpoint of the whole eventuality.

- (21) Malarz po-malował drzwij na czerwono; *przez godzinę / w godzinę. (telic)
 painter PERF-painted door on red for hour / in hour



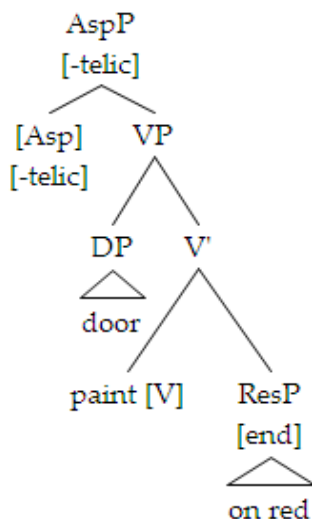
5.3.3 Polish resultative and goal phrases in imperfective clauses

In Polish imperfective clauses, just like in English progressive clauses, resultative and goal phrases are unable to telicize the verbal eventuality: being trapped below Asp [-telic] as a

⁸ In the case of ‘bare perfectives’ (telic verbs with no prefix), Łazarczyk (2010) proposes to analyse the Asp [+telic] head as having a morpho-phonologically null realization.

complement of the verb, they cannot take active part in the computation of aspectual structure.

- (22) Malarz malował drzwi_i na czerwono_j przez godzinę / *w godzinę. (atelic)
painter painted door on red for hour / in hour



5.4 Interim conclusion

The similar behavior of resultative and goal phrases in Polish imperfective constructions and English progressive constructions in terms of aspectual contribution provides more evidence for imperfective and progressive aspects being closely related. They can both be seen as involving the aspectual head Asp [-telic] whose telicity value overrides the aspectuality specification of the VP. The difference between the two languages is that whereas in Polish the aspectual projection (valued as [+telic] or [-telic]) is obligatory, in English sentences are possible that have no syntactic aspectual projection whatsoever.

6 Meaning of resultative and goal phrases in imperfective / progressive constructions

Being in the scope of an Asp [-telic] head removes the telicizing potential of a resultative or goal phrase. But what is the meaning of an imperfective / progressive resultative construction and can it be derived from its perfective / non-progressive equivalent? This question is part of a wider problem – one of finding a proper analysis for accomplishment predicates in general (predicates referring to some sort of culmination preceded by a preparatory process) combined with a progressive / imperfective operator. Many studies have been dedicated to this task and it would be impossible to fully describe the proposed solutions here. I will briefly discuss some of them emphasizing the elements of the problem most pertinent for the topic of resultative and goal phrases.

6.1 Progressive / imperfective aspect: semantic accounts

One of the earliest approaches to the semantics of progressive predicates as related to their non-progressive equivalents is the interval-based analysis given by Bennett and Partee (1972).

They proposed that a predicate combined with a progressive operator – $\text{PROG}(p)$ – is true at interval t_1 iff the non-progressive predicate p is true at interval t_2 such that t_1 is part of t_2 . This account was later modified by Dowty (1979), who introduced some modal concepts in the form of inertia worlds (a set of worlds identical to some world w up to moment t and developing from t onwards in a way most compatible with the history of w prior to t). In his account, $\text{PROG}(p)$ is true at time t_1 in world w iff predicate p is true at time t_2 (such that t_1 is part of t_2) in every inertia world of world w . However, such accounts face what Engelberg (2002) calls the interruption problem when applied to progressivized accomplishment predicates.

- (23) a. Mary was crossing the street.
b. Mary crossed the street.

Sentence (23a) can be uttered truthfully about time t_1 even if an accident occurring a moment later at time t_1+5 seconds prevents Mary from actually reaching the other side of the street, in which case there is no event holding at time t_2 of which t_1 is part that can be truthfully described by (23b).

Engelberg (2002) in his overview of the topic presents other notions reported as relevant for the semantics of progressive aspect in the literature. For instance, Landman (1992) stresses the influence of a reasonable chance of culmination on the truth conditions of a progressive equivalent of an accomplishment. Naumann and Piñón (1997) observe that the agent of a progressive predicate must be physically able to accomplish the action and should not intend not to complete it. However, it is not clear whether these effects are in fact semantic or pragmatic in nature.

6.2 Resultative and goal constructions as a means for deriving accomplishments

Before moving on to the meaning of resultative and goal constructions containing an Asp [-telic] head, it seems useful to consider the exact semantic contribution of resultative and goal phrases to a construction with no aspectual operator. This can be done by contrasting the meanings of non-progressive English constructions that differ only in the presence of such a phrase. Take the English verb *to scrub*. It is classified by Rappaport Hovav and Levin (2010) as a manner verb. When used in a simple clause, like in (24a), it denotes little more than an event of somebody acting in a specific manner on some object. The event is an atelic activity – it has no endpoint. The meaning can be formalized as in (24b).

- (24) a. The waiter scrubbed the table.
b. $\text{scrub}(\text{waiter}, \text{table}, e)$ ⁹

Now, adding a resultative phrase changes the message quite substantially. As was observed by, for example, Folli and Ramchand (2005) or Rappaport Hovav and Levin (2001), the enriched predicate denotes a kind of complex eventuality. As a first approximation, it can be assumed that the meaning of the new sentence is the activity of the waiter acting on the table

⁹ I adopt here a semantic theory in which certain predicates introduce eventuality variables, as proposed in Davidson (1967) and subsequently developed by other researchers (see, for instance, Lasnik, 2006 for an overview). I assume that all free event and state variables are at some point in the derivation bound by an existential quantifier, which is not represented in the examples (for some ideas regarding the binding of event variables, see, for instance, Maienborn, 1996).

in a ‘scrubbing’ manner and a new state occurring as a result. The whole construction is a telic accomplishment.

- (25) a. The waiter scrubbed the table_j clean_i.
 b. scrub(waiter, table, e) \wedge clean(table, s) \wedge cause(e, s)

6.3 Directed-transition event in resultative and goal constructions

So a resultative phrase can change an activity into an accomplishment and alter the event structure of a predicate by introducing a new eventuality of its own. But is this new eventuality simply a state connected with the verbal event by causation? It might be enough to account for perfective / non-progressive resultative constructions but an alternative account might prove more useful for analysing the semantics of progressive constructions. Take, for instance, the progressive sentence below:

- (26) The waiter was scrubbing the table_j clean_i.

The sentence does not assert that the table was actually in the state of being clean at any point in the relevant time interval. Neither does it assert, as has been discussed earlier, that the state will actually be achieved, as the process can be interrupted. One possible way of capturing this meaning is to explicitly introduce a notion of directional change to the semantics of resultative or goal constructions. What such constructions denote is a process of changing in the ‘direction’ of a new property. It can be assumed then that the semantic notions added by a resultative or goal phrase to any verbal predicate are a transition process directed at a new state, the culmination of this process (the state holding of the object undergoing transition at the end of the event) and the relation of causation binding the change event with another event, the two events forming one complex eventuality.¹⁰ The schematic semantics of a resultative phrase is given below.¹¹

- (27) $[[\text{ResP}]] = \lambda e_1\langle\text{ev}\rangle. \exists E\langle\text{ev}\rangle \exists e_2\langle\text{ev}\rangle \exists s\langle\text{s}\rangle [E = e_1 \oplus e_2 \wedge \text{change-towards}(x, R(x, s), e_2) \wedge \text{cause}(e_1, e_2) \wedge \text{end-of}(\text{culm}(e_2), E)]$

The causing event (e_1) is later identified with the event denoted by the verb selecting the ResP as a complement by the operation of event identification (see Pylkkänen, 2000). The semantic representation contains an eventive predicate of directed transition (*change-towards*) taking an entity (the changing object) and a state (the ‘direction’ of change) as arguments and meaning that the entity is undergoing whatever transformations are necessary to end up in the result state. The fact that the transition is successfully concluded can be asserted or negated independently of the transition event. The ‘direction’ argument of the transition event (a new state of the entity undergoing change) is understood as its natural culmination (the output of the *culm*(e) function) and can be used to delimit the entire eventuality E .

And here is a more complete representation of the semantics of (25a), repeated as (28a):

¹⁰ The situation is different in unaccusative resultative constructions, which most likely denote a simple, non-causative eventuality. This difference can be accounted for by assuming that the notion of causation is introduced by a separate functional head, along the lines of Pylkkänen (2000).

¹¹ In the system used here, there are four basic types: e – entity, ev – event, s – state and t – truth value.

- (28) a. The waiter scrubbed the table; clean_j.
 b. $E=e_1 \oplus e_2 \wedge \text{scrub}(\text{waiter}, \text{table}, e_1) \wedge \text{change-towards}(\text{table}, \text{clean}(\text{table}, s), e_2) \wedge \text{cause}(e_1, e_2) \wedge \text{end-of}(\text{culm}(e_2), E)$

Putting the directed-transition event in the semantics of telic resultative accomplishments allows us to derive the meaning of a progressive predicate from its non-progressive counterpart without the interruption problem troubling the early, purely interval-based, accounts. The effect of the progressive / imperfective operator on the meaning of a resultative or goal construction can be rendered as simply removing the information about the conclusion of the transition process delimiting the whole eventuality. The truth of $\text{PROG}(p)$ does not have to entail the truth of p , although the truth of p is correctly predicted to entail the truth of $\text{PROG}(p)$. They both describe essentially the same event of change in some direction. The direction provides the necessary information to compute the ‘natural’ culmination in a telic accomplishment (the $\text{culm}(e)$ function). In a progressive construction the process of change can be interrupted at any moment before reaching its culmination. The notion of directionality might be compatible with some modal approaches, for instance, with accounts in terms of different paths through intermediate stages leading to the same outcome (having the same ‘direction’) as well as in terms of worlds in which the process is interrupted and ones in which it is successfully concluded.

In the case of a manner verb like *scrub* combined with a resultative phrase, introducing the progressive Asp head changes a derived telic accomplishment back into an atelic activity, without the culmination but with added event-structural complexity. The bold part in the example below is the information removed by the progressive operator.

- (29) a. The waiter was scrubbing the table; clean_j.
 b. $E=e_1 \oplus e_2 \wedge \text{scrub}(\text{waiter}, \text{table}, e_1) \wedge \text{change-towards}(\text{table}, \text{clean}(\text{table}, s), e_2) \wedge \text{cause}(e_1, e_2) \quad \{\text{end-of}(\text{culm}(e_2), E)\}$

The same analysis is applicable to goal phrases added to a manner-of-motion predicate, like *to jump*. The only difference is that the final state is characterized as being at a location.

- (30) a. John jumped.
 b. $\text{jump}(\text{John}, e)$
- (31) a. John_j jumped (all the way) to the store_j.
 b. $E=e_1 \oplus e_2 \wedge \text{jump}(\text{John}, e_1) \wedge \text{change-towards}(\text{John}, \text{be-at}(\text{John}, \text{store}, s), e_2) \wedge \text{cause}(e_1, e_2) \wedge \text{end-of}(\text{culm}(e_2), E)$
- (32) a. John_j was jumping (all the way) to the store_j.
 b. $E=e_1 \oplus e_2 \wedge \text{jump}(\text{John}, e_1) \wedge \text{change-towards}(\text{John}, \text{be-at}(\text{John}, \text{store}, s), e_2) \wedge \text{cause}(e_1, e_2) \quad \{\text{end-of}(\text{culm}(e_2), E)\}$

It should be possible to extend the analysis to all accomplishments in progressive / imperfective contexts. For accomplishment predicates without a resultative or goal phrase it can be assumed that the main verb lexicalizes a directed-transition process with a default result state (plus a causing event for complex causative eventualities).

- (33) a. Mary built a house.
 b. $E=e_1 \oplus e_2 \wedge \text{build}(\text{Mary}, \text{house}, e_1) \wedge \text{change-towards}(\text{house}, \text{completely-built}(\text{house}, s), e_2) \wedge \text{cause}(e_1, e_2) \wedge \text{end-of}(\text{culm}(e_2), E)$
- (34) a. Mary was building a house.
 b. $E=e_1 \oplus e_2 \wedge \text{build}(\text{Mary}, \text{house}, e_1) \wedge \text{change-towards}(\text{house}, \text{completely-built}(\text{house}, s), e_2) \wedge \text{cause}(e_1, e_2) \text{ **\{end-of(culm}(e_2), E)\}**}$
- (35) a. John crossed the road.
 b. $E=e_1 \oplus e_2 \wedge \text{move}(\text{John } e_1) \wedge \text{change-towards}(\text{John}, \text{be-at}(\text{other side of the road}, s), e_2) \wedge \text{cause}(e_1, e_2) \wedge \text{end-of}(\text{culm}(e_2), E)$
- (36) a. John was crossing the road.
 b. $E=e_1 \oplus e_2 \wedge \text{move}(\text{John } e_1) \wedge \text{change-towards}(\text{John}, \text{be-at}(\text{other side of the road}, s), e_2) \wedge \text{cause}(e_1, e_2) \text{ **\{end-of(culm}(e_2), E)\}**}$

If a resultative or goal phrase is added to such an accomplishment predicate, its semantics replaces the default result.¹²

The situation might look slightly different in Polish. For reasons discussed above, Polish verbs might not be lexically specified for telicity. If that should be the case, then Polish lexical ‘accomplishments’ might contain just the directed-transition event (plus a causing event in causative constructions) without the information about its culmination. Rather than the imperfective Asp head removing the culmination information then, it is the perfective Asp head that adds this information to the truth conditions of a perfective sentence. The bold part is the information added by the perfective operator.

- (37) a. Maria malowała dom.
Mary painted house
 ‘Mary was painting the house.’
 b. $E=e_1 \oplus e_2 \wedge \text{paint}(\text{Mary}, \text{house}, e_1) \wedge \text{change-towards}(\text{house}, \text{some-color}(\text{house}, s), e_2) \wedge \text{cause}(e_1, e_2)$
- (38) a. Maria po- malowała dom.
Mary PERF-painted house
 ‘Mary painted the house.’
 b. $E=e_1 \oplus e_2 \wedge \text{paint}(\text{Mary}, \text{house}, e_1) \wedge \text{change-towards}(\text{house}, \text{some-color}(\text{house}, s), e_2) \wedge \text{cause}(e_1, e_2) \wedge \text{end-of}(\text{culm}(e_2), E)$

¹² Usually the ‘direction’ introduced by the resultative phrase is semantically close to the default result, although sometimes a resultative phrase denoting a non-standard outcome of an activity is possible, completely overriding the default goal and giving rise to a disconnected (strong) resultative construction (see, for instance, Dimitrova-Vulchanova, 2002; Washio, 1997, as presented in Takamine, 2007; Beavers, to appear, p. 9). Examples of disconnected resultatives in English are given in (i) and (ii):

- (i) The horses dragged the log_j smooth_j.
 (ii) Harry kicked his trunk_j open_j.

Dragging logs does not necessarily make them smoother and kicking a trunk is not a perfectly reliable way of getting it to open. Equivalent constructions in Polish are hard to obtain.

7 Summary

The article investigated the interaction of resultative and goal phrases in Polish and English with aspect, in particular the ability of such phrases to aspectually delimit non-progressive atelic predicates in English and their inability to delimit progressive constructions in English and imperfective constructions in Polish. A syntactic analysis of relevant aspectual phenomena was adopted, according to which a functional aspectual head Asp specified as either [-telic] or [+telic] can appear above the VP projection in a clause. The value of the aspectual feature on the head completely overrides the telicity of the verbal predicate that the head takes as a complement. In Polish, the AspP projection is obligatory, whereas in English it is optional. In English sentences with no syntactic aspectual operator, resultative and goal phrases are able to freely influence the telicity of the whole construction, delimiting it. It was argued that in progressive English sentences and imperfective Polish sentences resultative and goal phrases, as complements of the verb, are in the scope of Asp [-telic], and as such they cannot affect the telicity of the whole construction.

As far as the meaning of progressive / imperfective resultative and goal constructions is concerned, it was argued that resultative and goal phrases themselves denote a directed-transition event – a process (typically caused by another event) of some entity changing towards a new state. The process has a culmination understood as the new state actually holding of the entity at the end of the whole eventuality. This semantics allows a resultative or goal phrase to combine with a lexical activity (atelic) and derive an accomplishment (telic). When the newly derived accomplishment is later selected by Asp [-telic], the information about culmination is removed and the predicate becomes atelic again, denoting now a (potentially caused) process of change in a particular direction with no culmination. A formalization of this analysis was provided as well as a way of extending it to all accomplishment predicates combined with a progressive / imperfective operator.

References

- Bennett, M and Partee, B. (1972). *Toward the logic of tense and aspect in English*. Bloomington: Indiana University Linguistics Club.
- Borik, O. (2006). *Aspect and reference time*. Oxford: Oxford University Press.
- Bott, O. (2010). *The processing of events*. Amsterdam: John Benjamins Publishing.
- Bowers, J. (2003). Predication. In M. Baltin and Ch. Collins (Eds.), *The handbook of contemporary syntactic theory* (pp. 299-334). Oxford: Blackwell Publishers.
- Cornilescu, A. (2004). *Complementation in English: A minimalist perspective*. Bucharest: EUB.
- Davidson, D. (1967). The logical form of action sentences. In N. Rescher (Ed.), *The logic of decision and action* (pp. 81-94). Pittsburgh: University of Pittsburgh Press.
- Dimitrova-Vulchanova, M. (2002). On two types of result: resultatives revisited. Retrieved from <http://edvarda.hf.ntnu.no/ling/tross/vulchanova.pdf>
- Dowty, D. R. (1979). *Word meaning and Montague Grammar. The semantics of verbs and times in Generative Semantics and in Montague's PTQ*. Dordrecht: D. Reidel.

- Engelberg, S. (2002). The semantics of the progressive. In Cynthia Allen (Ed.), *Proceedings of the 2001 Conference of the Australian Linguistic Society*. Retrieved from <http://www.als.asn.au>
- Ettlinger, M. (2008). The syntactic behavior of the resultative: Evidence for a constructional approach. *Proceedings of 41st Annual Meeting of the Chicago Linguistics Society*. Chicago Linguistics Society: Chicago. Retrieved from <http://faculty.wcas.northwestern.edu/~met179/ling/mecls41.pdf>
- Filip, H. (2003). Prefixes and delimitation of events. *Journal of Slavic Linguistics*, 11(1), 55-101.
- Folli, R. and Ramchand, G. (2005). Prepositions and results in Italian and English: An analysis from event decomposition. In H. J. Verkuyl and A. van Hout (Eds.), *Perspectives on aspect* (pp. 81-105). The Netherlands: Springer.
- Fontanals, J. M. (2000). Why can't we wipe the slate clean? A lexical-syntactic approach to resultative constructions. *CatWPL*, 8, 71-95.
- Goldberg, A. E. and Jackendoff, R. (2004). The English resultative as a family of constructions. *Language*, 80(3), 532-568.
- Landman, F. (1992). The progressive. *Natural Language Semantics*, 1, 1-32.
- Lasersohn, P. N. (2006). *Event-based semantics*. Retrieved from <http://semanticsarchive.net/Archive/jFhNWM2M/eventbasedsemantics.pdf>
- Levin B. and Rappaport Hovav, M. (1995). *Unaccusativity: At the syntax-lexical semantics interface*. Cambridge: MIT Press.
- Łazarczyk, A. A. (2010). Decomposing Slavic aspect: The role of aspectual morphology in Polish and other Slavic languages. (Doctoral dissertation). Retrieved from <http://digitallibrary.usc.edu/assetserver/controller/item/etd-Lazarczyk-3856.pdf>
- Maienborn, C. (1996). On the meaning of sentence modifiers: Semantic indeterminacy and its grammatically induced specification. In R. van der Sandt, R. Blutner, and M. Bierwisch (Eds.), *From underspecification to interpretation: Proceedings of the Berlin Workshop on Underspecification* (pp. 183-201). IBM Deutschland: Working Papers of the Institute for Logic and Linguistics, Heidelberg.
- Mezhevich, I. (2003). English resultatives: State versus location. In S. Burrelle and S. Somesfalean (Eds.), *Proceedings of the 2003 Annual Conference of the Canadian Linguistic Association* (pp. 166-177). Québec: Université du Québec à Montréal.
- Nam, S. (2005). Directional locatives in event structure: Asymmetry between Goal and Source. *Eoneohag (Linguistics)*, 43, 85-117.
- Naumann, R. and Piñón, C. (1997). Decomposing the progressive. In P. Dekker et al. (Eds.), *Proceedings of the 11th Amsterdam Colloquium* (pp. 241-246). Amsterdam: University of Amsterdam.
- Pylkkänen, L. (2000). Representing causatives. In B. Jackson and T. Matthews (Eds.), *Proceedings of SALT X* (pp. 132-148). Ithaca, NY: Cornell University.
- Rappaport Hovav, M. and Levin, B. (2001). An event structure account of English resultatives. *Language*, 77(4), 766-797.

- Rappaport Hovav, M. and Levin, B. (2010). Reflections on manner / result complementarity. In M. Rappaport Hovav, E. Doron, and I. Sichel (Eds.), *Lexical semantics, syntax and event structure* (pp. 21-38). Oxford: Oxford University Press.
- Slabakova, R. (2005). Perfective prefixes: What they are, what flavors they come in, and how they are acquired. In S. Franks, F. Y. Gladney, and M. Tasseva-Kurkchieva (Eds.), *Formal approaches to Slavic linguistics 13: The South Carolina meeting* (pp. 324-341). Ann Arbor, MI: Michigan Slavic Publications. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.66.8800>
- Swart de, H. (2000). Tense, aspect and coercion in a cross-linguistic perspective. In M. Butt and T. Holloway King (Eds.), *Proceedings of the Berkeley Formal Grammar Conference*. University of California, Berkeley. Retrieved from <http://csli-publications.stanford.edu/LFG/5/bfg00/bfg00deswart.pdf>
- Takamine, K. (2007). Resultative Predicates in Japanese. In M. Basić, M. Pantcheva, M. Son, and P. Svenonius (Eds.), *Nordlyd: Tromsø Working Papers on Language and Linguistics, 34.2. Special issue on Space, Motion, and Result* (pp. 102–125). Tromsø: University of Tromsø.
- Tenny, C. L. (1994). *Aspectual roles and the syntax-semantics interface*. London: Kluwer Academic Publishers.
- Verkuyl, H. J. (1996). *A theory of aspectuality: The interaction between temporal and atemporal structure*. Cambridge: Cambridge University Press.
- Washio, R. (1997). Resultatives, compositionality and language variation. *Journal of East Asian Linguistics*, 6, 1-49.

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