Resultative adverbial modification in Hungarian

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Abstract: In this paper I identify resultative adverbs such as *foltmentesen* 'spotlessly' in Hungarian as a subclass of low adverbial adjuncts and propose a syntactic analysis of these adverbs. I show that these resultative adverbs are similar to resultatives carrying sublative case such as *tisztára* 'lit. onto clean' in *tisztára törli az asztalt* 'wipe the table clean' in that they can both contribute result states to event descriptions, but they are also different with respect to how they interact with inner aspect in the event domain of the sentence. I argue that resultatives like *tisztára* 'lit. onto clean' create telic event descriptions in the specifier of the inner aspectual functional projection AspP below *v*P, as proposed by Kardos & Farkas (2022), whereas resultative adverbs like *foltmentesen* 'spotlessly' typically modify such descriptions by adjoining to AspP. The latter thus contrast with other low adverbials including manner adverbs, which adjoin to *v*P. Hungarian resultative adverbs also seem to contrast with their English counterparts like *colorfully* since the latter only modify result states, as argued by Geuder (2000) and Jung & Choi (2023).

Keywords: resultative adverbs, result state, inner aspect, adverbial modification, Hungarian

1. Introduction

This paper is concerned with adverbial modification in Hungarian. In particular, it provides a syntactic analysis of resultative adverbs such as *foltmentesen* 'spotlessly' and *finoman* 'deliciously' illustrated in (1a) and (1b) below.[1][2]

(1) a. Kati (10 perc alatt/*10 perc-ig) foltmentes-en ki-súrolta a kád-at.
Kati (10 min under/*10 min-for) spotless-ly PRT-scrubbed the tub-ACC
'Kati scrubbed the tub spotless (in 10 minutes).'
b. Mari (30 perc alatt/*30 perc-ig) finom-an el-készítette az étel-ek-et.
Mari (30 min under/*30 min-for) delicious-ly PRT-prepared the dish-PL-ACC
'Mari prepared the dishes (in 30 minutes) and the dishes that came about were delicious.'

These examples express situations where some activity denoted by the verb stem in the sentence causes the coming about of a result state at the termination of that activity. Such situations are referred to as accomplishments by Dowty (1979). For example, (1a) describes a scrubbing activity at the termination of which the tub becomes spotless, whereas in (1b) the adverb *finoman* 'deliciously' describes the state of the dishes that come about at the end of the

[1] Geuder (2000) uses the term 'resultative adverb' to refer to adverbials like *elegantly* in *Mary dressed elegantly*, where the adverb can describe Mary's state once she was dressed up. Another reading that is available is a manner reading, where *elegantly* expresses that "Mary acted in an elegant way when getting dressed" (*ibid*. 34).
[2] The following abbreviations are used in this paper: ACC = accusative, INE = inessive, PL = plural, PRT = verbal particle, SUBL = sublative, SUP = superessive

activity expressed by the verb *készítette* 'prepared'.[3] Similar situations are expressed by resultative expressions carrying the sublative case suffix *-ra*/*-re*, shown in (2).[4]

(2) a. Kati (10 perc alatt/*10 perc-ig) foltmentes-re súrolta a kád-at.
Kati (10 min under/*10 min-for) spotless-SUBL scrubbed the tub-ACC
'Kati scrubbed the tub spotless (in 10 minutes).'[5]
b. Mari (30 perc alatt/*30 perc-ig) finom-ra készítette az étel-ek-et.
Mari (30 min under/*30 min-for) delicious-SUBL prepared the dish-PL-ACC
'Mari prepared the dishes (in 30 minutes) and the dishes that came about were delicious.'

The examples above are similar to (1a) and (1b) in that the former also describe activities at the termination of which new result states come about expressed by the resultative phrases carrying sublative case. It is also important to note that the event descriptions in (1) and (2) all receive a telic interpretation, as diagnosed by the temporal adverbial test. Telicity in (1) is ensured by the verbal particles *ki* and *meg*, whereas in (2) it is contributed by the resultative phrases *foltmentesre* 'lit. onto spotless' and *finomra* 'lit. onto delicious'. For more on the telicising role of verbal particles and *-ra*/*-re* resultatives, see Section 3.2.

In this paper I argue that expressions like *foltmentesen* 'spotlessly' and *finoman* 'deliciously' as well as *foltmentesre* 'lit. onto spotless' and *finomra* 'lit. onto delicious' are similar in that they can both contribute a new result state to the situation of the sentence, but they also differ with respect to how they interact with inner aspect in the event domain of the sentence: Following Kardos & Farkas (2022) I assume that *-ra*/*-re* resultatives are directly responsible for creating telic structures in the specifier of an inner aspectual projection, AspP, below vP in Hungarian. I also show that resultative adverbs like *foltmentesen* 'spotlessly' and *finoman* 'deliciously' only modify telic structures by adjoining to AspP. To provide support for this latter claim, I examine the distributional properties of resultative adverbs like *foltmentesen* 'spotlessly', which I claim also form a natural class with measure adverbs like *részben* 'partly' and *félig* 'halfway', similarly to what we find in English, as recently shown by Jung & Choi (2023). The examination of the distribution and interpretive properties of

[3] Some further examples illustrating resultative adverbs like those in (1) are *gyönyörűen* 'beautifully', as in *gyönyörűen feldíszítette a fát* 'decorated the tree beautifully', *elegánsan* 'elegantly', as in *elegánsan felöltözött* 'got dressed elegantly', *sikeresen* 'successfully', as in *sikeresen levizsgázott* 'successfully completed an exam' and *ízletesen* 'deliciously', as in *ízletesen megfőzte a levest* 'cooked the soup and the soup that came about was delicious'. Furthermore, the adverb *finoman* can also be a manner adverb expressing that the activity of the verb in the sentence was carried out in a careful manner, as in *finoman kinyitotta az ajtót* 'opened the door carefully'.

[4] While the example in (1b) is considered acceptable by the native speakers I have consulted to collect native speaker judgements, (1a) is somewhat marked for some speakers and acceptable for others. The speakers who found (1a) somewhat marked had a clear preference for (2a) when asked how they would rather describe the situation that is meant to be expressed by (1a). This may have to do with the fact that the class of resultative adverbs ending in the suffix *-an*/*-en* is much smaller than the class of resultatives associated with sublative case marking. Some speakers may associate acceptability with frequency, so these speakers may evaluate forms like *foltmentesen* 'spotlessly' in (1a) somewhat marked since they hear such forms much less frequently than resultatives carrying sublative case when it comes to the description of situations where some activity causes the coming about of a result state. I find (1a) and (1b) equally acceptable.

[5] Where possible, the English translation of the Hungarian examples associated with a resultative expression carrying the suffix *-an*/*-en* or the suffix *-ra*/*-re* contains an AP resultative since this seems to be the best possible English description of the situations expressed by the Hungarian data.

resultative adverbs like *foltmentesen* 'spotlessly' and measure adverbs in Hungarian will also demonstrate that the telicity of event descriptions arises independently from the expression of results. A larger theoretical implication of this study is thus that result states, as expressed by some verbal particles, resultatives carrying sublative case, resultative adverbs like *foltmentesen* 'spotlessly' and result verbs in Hungarian, as further illustrated in subsequent sections, are not necessarily related to telicity. This finding stands in contrast with analyses in which telicity is derived from the presence of a result state in the semantics or syntax of verbal predicates (Dowty 1979; Parsons 1990; Higginbotham 2000; Ramchand 2008). Also, the facts of Hungarian indicate that resultative adverbials can not only modify result states, as argued by, for example, Geuder (2000) and Jung & Choi (2023) in the context of English data, but they can also create them.

The structure of the paper is as follows: In Section 2 I provide a brief description of some previous generalizations regarding adverbial expressions in Hungarian, where I focus on adverbial adjuncts and specifically address the divide between high and low adverbial adjuncts, or clausal versus VP-adverbials (Jackendoff 1972). Then, in Section 3, I propose a syntactic analysis of resultative adverbial adjuncts, a new subtype of low adverbial adjuncts, by examining their distribution and interpretive properties against the background of a recent analysis of English resultative adverbs such as *colorfully* in *paint the picture colorfully* by Jung & Choi (2023). In Section 4 I also draw a parallel between resultative adverbs like *foltmentesen* 'spotlessly' and measure adverbs like *félig* 'halfway' and argue that they form a natural class similarly to their English counterparts. In Section 5 I briefly discuss some theoretical implications of this study regarding the notions of result and telicity, while in Section 6 I conclude.

2. Adverbial adjuncts in Hungarian: the divide between high and low adverbs

In this section I provide a brief description of some previous generalizations regarding the grammar of Hungarian adverbial elements illustrated below:

(3) a. Kati (szerencsé-re) fel-ment a lépcső-n (szerencsé-re).
Kati (luck-SUBL) PRT-went the stair-SUP (luck-SUBL)
'Luckily, Kati went up the stairs.'
b. Kati (óvatos-an) fel-ment a lépcső-n (óvatos-an).
Kati (careful-ly) PRT-went the stair-SUP (careful-ly)
'Kati went up the stairs carefully.'

A common property of the adverbial expressions in (3a) and (3b) is that they have a flexible distribution. Such expressions are standardly assumed to be adjuncts associated primarily (though not exclusively) with a transparent or a non-transparent PP structure (Egedi 2021). Adverbial adjuncts with a transparent PP structure contain a noun phrase complement like *szerencse* 'luck' in (3a) and a P head instantiated by a case suffix like *-re* in the same example or some other adpositional element. By contrast, the adverb *óvatosan* 'carefully' in (3b) has a

non-transparent PP structure in that it is associated with the adjectival root *óvatos* 'careful' and the suffix *-an*.[6]

Another property of adverbial adjuncts is that they can co-occur in the same clause either in the preverbal or postverbal section of the sentence. I first illustrate this with the following examples from É. Kiss (2009), where each sentence contains both the manner adverb *gyorsan* 'quickly' and the measure adverb *félig* 'halfway':

(4) a. János gyors-an fél-ig meg-oldotta a feladat-ot.
János quick-ly half-to PRT-solved the task-ACC
'János completed half of the task quickly.'
b. János meg-oldotta gyors-an félig a feladat-ot.
János PRT-solved quick-ly half-to the task-ACC
c. János meg-oldotta fél-ig a feladat-ot gyors-an.
János PRT-solved half-to the task-ACC quick-ly

(É. Kiss 2009, 22)

What is also notable regarding the co-occurrence of adverbial adjuncts is that, although their postverbal order is free, as shown in (4b) and (4c), their preverbal order is fixed.

(5) ??János fél-ig gyors-an meg-oldotta a feladat-ot.
János half-to quick-ly PRT-solved the task-ACC

(É. Kiss 2009, 22)

(6) a. Kati szerencsé-re óvatos-an fel-ment a lépcső-n.
Kati luck-SUBL careful-ly PRT-went the stair-SUP
'Luckily, Kati went up the stairs carefully.'
b. *Kati óvatos-an szerencsé-re fel-ment a lépcső-n.
Kati careful-ly luck-SUBL PRT-went the stair-SUP

É. Kiss (2009) derives the word order restriction illustrated above by assuming on the basis of Ernst's (2002) theory of adverbs that different types of adverbial expressions have different semantic requirements: Adverbials select different types of fact-event objects (FEOs) that form a hierarchy in the grammar of languages. This hierarchy, as presented by É. Kiss (2009, 28), is given in (7):

(7) Hierarchy of FEOs:
speech act > fact > proposition > event > specified event

On the analysis of Ernst (2002), fact-event objects such as proposition, event and specified event above are linked to different syntactic projections in a way that any FEO type can be converted to any higher FEO type, but they cannot be lowered (see also Ernst 2004). A single

[6] According to Kádár (2009, 176), adverbs like *óvatosan* 'carefully' also have "an empty N head (meaning 'mood', 'way', 'manner')" that is modified by the adjectival root. The suffix *-an* is thus attached to a noun phrase in this example.

adverbial expression can therefore adjoin to different syntactic projections depending on whether they modify a larger FEO like a proposition or a smaller one like an event. For example, according to É. Kiss (2009, 36), adverbs like *szerencsére* 'luckily' in (6a) enter the derivation high by adjoining to a Speaker Deixis Phrase introducing "the speaker as a sentient, deictic argument, and his point of view", whereas *óvatosan* 'carefully' selects PredP above *v*P, realizing an event lower in the hierarchy.

The divide between high adverbs like *szerencsére* 'luckily' and low adverbs like *óvatosan* 'carefully' is also signaled by the following diagnostics, discussed by Egedi (2021). First, low adverbs like *óvatosan* 'carefully' can easily be focused, whereas high adverbials like *szerencsére* 'luckily' cannot. Consider (8).

(8) a. Kati óvatos-an ment fel a lépcső-n.
Kati careful-ly went PRT the stair-SUP
'It was in a careful manner that Kati went up the stairs.'
b. *Kati szerencsé-re ment fel a lépcső-n.
Kati luck-SUBL went up the stair-SUP
c. Szerencsé-re Kati ment fel a lépcső-n.
luck-SUBL Kati went PRT the stair-SUP
'Luckily, it was Kati who went up the stairs.'

That the adverbial *óvatosan* 'carefully' is focused in (8a) is evidenced by the fact that it is followed by the finite verb *ment* and the particle *fel* in that order, which is different from the order particle + verb, found in neutral sentences. That adverbials like *szerencsére* 'luckily' cannot be focused is shown by the ungrammaticality of (8b). Once this adverb appears higher in sentence structure, to the left of the focused element *Kati* in (8c), the sentence becomes acceptable.

Another diagnostic showing that the adverbs may belong to different subclasses of adverbial adjuncts by virtue of adjoining to higher or lower functional projections in the sentence concerns their relative order with respect to one or more than one topic constituent. The following examples from Egedi (2021) illustrate this:

(9) a. Szerencsé-re a felügyelő döntés-re jutott.
luck-SUBL the inspector decision-SUBL got
'Luckily, the inspector arrived at a decision.'
b. *Könny-en a felügyelő döntés-re jutott.
easy-ly the inspector decision-SUBL got
Intended meaning: 'The inspector arrived at a decision easily.'
(10) a. A nyomozó szerencsé-re a gyilkos-t el-kapta a falu-ban.
the detective luck-SUBL the murderer-ACC PRT-caught the village-INE
'Luckily, the detective caught the murderer in the village.'
b. *A nyomozó könny-en a gyilkos-t el-kapta a falu-ban.
the detective easy-ly the murderer-ACC PRT-caught the village-INE
'Intended meaning: 'The detective caught the murderer easily in the village.'

(adapted from Egedi 2021, 378–379)

The Hungarian sentence may be associated with a single topic phrase or multiple topic phrases outside the domain of the verbal predicate, represented as PredP by É. Kiss (2009) and many others. What the examples in (9) and (10) show is that whereas *szerencsére* 'luckily' can naturally occur before a single topic (9a) or can also readily intervene between two topics (10a), the manner adverb *könnyen* 'easily' causes ungrammaticality in both positions, as is clear from (9b) and (10b). This is evidence that *szerencsére* 'luckily' attaches to a higher functional projection, whereas *könnyen* 'easily' appears lower in sentence structure.[7]

Regarding low adverbial adjuncts, several subtypes are distinguished in prior literature. In Surányi (2008), for example, durative adverbs like *röviden* 'briefly', measure adverbs like *teljesen* 'completely', manner adverbs requiring an agent like *ügyesen* 'skillfully' and celerative adverbs like *(túl) korán* '(too) early' belong to the class of low adverbial adjuncts. In her recent overview article about Hungarian adverbial adjuncts, Egedi (2021) distinguishes between manner adverbs like *könnyen* 'easily' and *óvatosan* 'carefully', measure adverbs like *félig* 'halfway', participant adverbs like *a kannával* 'with the can', approximative adverbs like *majdnem* 'almost' and intensifiers like *nagyon* 'very much' regarding the class of low adverbials. This author also follows É. Kiss (2009) by assuming that low adverbial adjuncts such as *könnyen* 'easily' adjoin to PredP in the sentence.

In Sections 3 and 4 I focus on low adverbial adjuncts and identify a new subtype, which I refer to as resultative adverbial adjuncts. I argue that resultative adverbial adjuncts like *foltmentesen* 'spotlessly' form a subclass with measure adverbs like *félig* 'halfway' within the class of low adverbial adjuncts: they both attach lower to sentence structure than, for example, manner adverbs like *óvatosan* 'carefully' or *könnyen* 'easily', which I assume adjoin to *v*P. Before providing a syntactic analysis of resultative adverbs like *foltmentesen* 'spotlessly' in Hungarian, however, I first discuss a recent proposal regarding the syntax of English resultative adverbs to set the stage for my analysis of the Hungarian facts.

3. The syntax of resultative adverbs

3.1. Jung & Choi's (2023) analysis of resultative adverbs in English

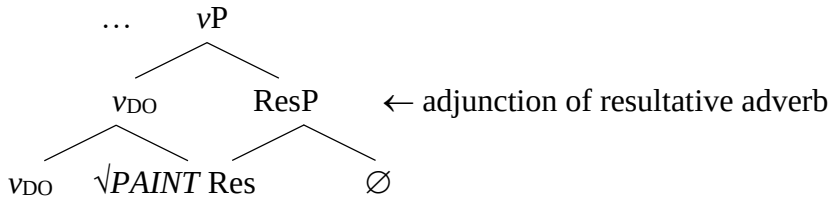
In a recent paper, Jung & Choi (2023) provide a syntactic analysis of English resultative adverbs couched in the framework of Distributed Morphology (Halle & Marantz 1993; Marantz 1997; Arad 2005). On this analysis, adverbs like *colorfully* in expressions like *paint (the picture) colorfully* modify results by adjoining to a resultative functional projection, ResP, below *v*P in the event domain. The authors follow previous analyses such as Geuder (2000) by proposing that resultative adverbs modify results, but also depart from Geuder by virtue of representing result states in the structure of sentences, and not as a purely semantic phenomenon. An important characteristic of the proposal of Jung and Choi is that they

[7] Surányi (2008) and Egedi (2021) also identify a third type of adverbial adjuncts based on their adjunction site. They refer to expressions like *gyakran* 'often' and *még mindig* 'still' as middle adverbial adjuncts by virtue of the fact that they cannot precede topics and so appear lower then high adverbial adjuncts. Such adverbs also appear higher than low adverbial adjuncts by their ability to appear between topics and quantifiers, where quantifiers are located above the domain of the verbal predicate.

dissociate the (a)telicity of a predicate from the encoding of result states. That a verbal predicate is an atelic activity or a telic accomplishment (in the sense of Dowty 1979) is ensured at the level of v, which is also responsible for the creation of a verbal structure.[8] Here is the structure they propose for sentences associated with activity predicates like *paint*.

(11) a. The artist painted (colorfully). (for/#in two hours)

b.

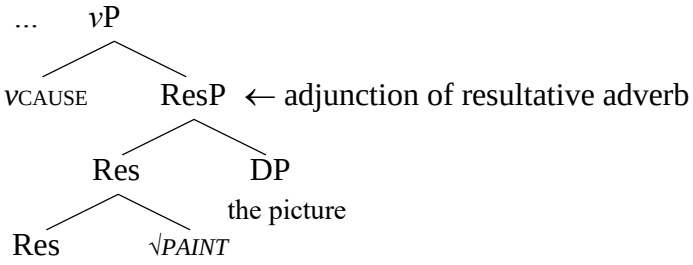


The representation above captures that *paint* is an atelic activity by virtue of containing the manner verb *paint*, which comes about in a way that the verbal root √*PAINT* head-adjoins to v_{DO}, and a null theme. That some result must come about for the truth of the sentence in (11a) is ensured by the presence of ResP below *v*P.

Accomplishments, by contrast, are represented as follows:

(12) a. The artist painted the picture (colorfully). (in/#for two hours)

b.



In the representation in (12b), the telicity of the predicate *paint the picture* is linked to v_{CAUSE}, and an overt theme DP that measures out the painting event. In both structures the resultative adverb *colorfully* modifies ResP by adjoining to it.

One empirical prediction of this analysis concerns the distribution of resultative adverbs and manner adverbs like *quickly*. On the assumption that manner adverbs are modifiers of *v*P (the standard assumption) and thus merge higher than resultative adverbs, it is expected that resultative adverbs must appear closer to the verb than manner adverbs. This is borne out in (13).

(13) a. The artist painted (the picture) colorfully (very) quickly.

b. ???The artist painted (the picture) quickly (very) colorfully.

(Jung & Choi 2023, 11)

As the examples above show, when the resultative adverb *colorfully* precedes the manner adverb *quickly* with the predicates *paint* or *paint the picture*, the sentence is grammatical. If,

[8] For more on how different types (or "flavors") of *v* determine the aspectual properties of verbal expressions, see Folli & Harley (2005).

on the other hand, the manner adverb precedes the resultative adverb, the sentence becomes unnatural.

Another empirical prediction of this analysis is discussed in the context of ambiguous adverbs like *beautifully*, which can either express how the picture was painted (manner reading), or the state of the picture that comes about at the termination of the painting activity (result reading).

(14) a. The artist painted the picture beautifully$_{RES}$ beautifully$_{MAN}$.
b. *The artist painted the picture beautifully$_{MAN}$ beautifully$_{RES}$.

(Jung & Choi 2023, 12)

What is interesting regarding these examples is that the only interpretation that is available with *beautifully* appearing twice in the same clause is the one where the adverb closer to the verb expresses a result state, whereas the other adverb expresses manner. This can be explained if we assume that resultative adverbs attach to ResP below *v*P, whereas manner adverbs attach to *v*P.

A third piece of evidence for the adjunction analysis of resultative adverbs illustrated in (11) and (12) comes from the contrast shown in (15) and (16) below:

(15) a. Jim cleaned the room spotlessly.
b. the spotlessly clean room
(16) a. Jim cleaned the room quickly.
b. *the quickly clean room

(Jung & Choi 2023, 15–16)

The examples in (15a) and (15b) show that the resultative adverbial *spotlessly* can either modify a verbal expression or it can appear in an adjectival phrase, where *clean*, categorized as a verb or an adjective, is derived from the result root √*CLEAN*. By contrast, according to (16), the manner adverb *quickly* can only modify a verbal expression. This follows on the analysis discussed here as resultative adverbs adjoin to ResP before the categorizing *a* or *v* is introduced into the structure (Jung & Choi 2023, 15), whereas manner adverbs require a verbal structure, available in (16a), but not in (16b).

Finally, the authors also argue that English resultative adverbs form a natural class with measure adverbs like *partway* and *partly*. This is reflected in their similar syntactic analysis: Measure adverbs also modify ResP below *v*P by adjoining to it. The following examples serve as evidence for this claim:

(17) a. Jill opened the door partway quickly.
b. */?Jill opened the door quickly partway.

(Jung & Choi 2023, 20)

As with resultative adverbs like *colorfully* in (13), the measure adverb *partway* must be closer to the verb than the manner adverb *quickly*. This is expected if *partway* enters the derivation lower than *quickly*. Furthermore, similarly to resultative adverbs, measure adverbs can readily

modify both verbal expressions and adjectives, as shown in (18), in contrast to manner adverbs, which cannot, as also previously illustrated above in (16).

(18) a. Sylvia partly opened the door.
b. the partly open door
c. *the quickly open door

(Jung & Choi 2023, 20)

Overall, English resultative adverbs and measure adverbs both identify a resultative functional projection ResP below vP in the event domain. Manner adverbs, by contrast, modify *v*P. ResP is solely responsible for the expression of results, while aspectual class information is tied to *v* in a way that v_{DO} marks atelic activities and v_{CAUSE} marks telic accomplishments. On this view, then, the encoding of results and that of inner aspectual information are independent of each other.

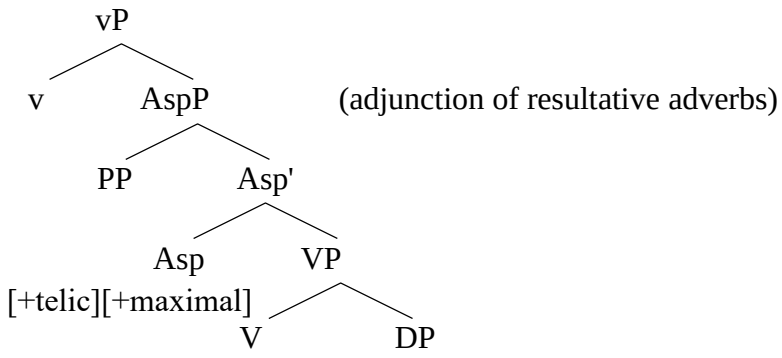
In what follows I turn my attention to the facts of Hungarian and show that the distribution and interpretive properties of resultative adverbs like *foltmentesen* 'spotlessly' and measure adverbs like *félig* 'halfway' point towards a different analysis, though these adverbs also form a natural class, similarly to their English counterparts. In my analysis, presented in the next sections, I argue that both resultative adverbs like *foltmentesen* 'spotlessly' and measure adverbs adjoin to an inner aspectual functional projection, AspP, within the event domain, as proposed by Kardos & Farkas (2022). I also argue, in line with Jung & Choi (2023), that results are independent from inner aspect, but they are a purely semantic/pragmatic phenomenon, contra the analysis of these authors.

3.2. The syntax of Hungarian resultative adverbs

In this section I provide a syntactic analysis of resultative adverbs like *foltmentesen* 'spotlessly' in Hungarian. I assume a layered structure regarding the Hungarian verbal domain such that it is also associated with an inner aspectual functional projection AspP, an assumption that has been widely discussed in prior literature in the context of English and several other languages including Hungarian (for more on this, see Borer 2005; MacDonald 2008; Travis 2010; among others). I specifically build on a recent proposal by Kardos & Farkas (2022), who assume that the telicity of Hungarian accomplishments like *megfőzte a levest* 'cooked the soup (telic)' and *tisztára súrolta a kádat* 'scrubbed the tub clean' is directly linked to the presence of inner aspectual AspP in the structure of the sentence, whereas activities like *főzte a levest* 'cooked the soup (atelic)' and *súrolta a kádat* 'scrubbed the tub (atelic)' are lacking in this functional projection. In the telic examples, it is the particle *meg* and the resultative expression carrying sublative case *tisztára* 'lit. onto clean', standardly analyzed as PPs, that are responsible for the telic interpretation by virtue of checking the telic and maximal features of the Asp head in the specifier of AspP. The novel claim that I argue for in the present section is that resultative adverbs like *foltmentesen* 'spotlessly' are modifiers of AspP between vP and VP and are thus different from resultatives carrying sublative case, which are directly responsible for the

creation of telic structures in [Spec, AspP], similarly to telicising verbal particles like *meg*.[9] Here is the structure I propose for the Hungarian verbal domain associated with resultative adverbial modification:

(19)



Support for the analysis of resultative adverbial adjuncts above comes from the fact that such adverbials have a fairly free distribution, similarly to other adverbials illustrated in Section 2.[10]

(20) a. Béla (elegáns-an) fel-öltözött (elegáns-an).
Béla (elegant-ly) PRT-dressed (elegant-ly)
'Béla got dressed elegantly.'
b. Kati (foltmentes-en) ki-súrolt egy kád-at (foltmentes-en).
Kati (spotless-ly) PRT-scrubbed a tub-ACC (spotless-ly)
'Kati scrubbed a tub spotless'.
c. Anna (sikeres-en) le-vizsgázott (sikeres-en).
Anna (successful-ly) PRT-took.an.exam (successful-ly)
'Anna successfully completed an exam.'

Although the least marked position of the adverbs above is the one before the verbal predicate, similarly to other low adverbial adjuncts like *könnyen* 'easily' and also high adverbials like *szerencsére* 'luckily', as noted by Egedi (2021, 376), the postverbal occurrence of *elegánsan* 'elegantly', *foltmentesen* 'spotlessly' and *sikeresen* 'successfully' in (20) is also considered grammatical.

Another important property of resultative adverbs like those above is that they require the presence of a verbal particle when it comes to episodic sentences illustrated in (21)

[9] The assumption that resultative adverbial adjuncts like *foltmentesen* 'spotlessly' differ from resultatives like *tisztára* 'lit. onto clean' in this way is inspired by Borer's (2005) distinction between modifiers and range assigners. The former are illustrated by, for example, English resultatives like *flat* in *hammer the metal flat,* which serve as modifiers of Borer's quantity (=telic) projection, Asp_Q, without having a direct role in the creation of telicity, whereas the latter, illustrated by Slavic perfective prefixes or English verbal particles like *off* in *Robin took off*, assign range to an open value associated with Asp_Q, thereby directly creating quantity/telic structures.

[10] That many adverbial expressions have a relatively free distribution in Hungarian in a way that they may appear preverbally or postverbally is also claimed by É. Kiss (2009) to support the adjunction theory of Ernst (2002) in her analysis of Hungarian adverbial expressions in contrast to feature-checking theories such as Alexiadou (1997) and Cinque (1999), where adverbs are licensed as specifiers of various functional projections.

regardless of the expression of a result state in the sentence.[11][12] In this respect they contrast with manner adverbs like *gyorsan* 'quickly' in (22a) and clausal adverbs like *szerencsére* 'luckily' in (22b), which can both appear in the environment of activities expressed by a verbal predicate without a particle.

(21) a. Kati foltmentes-en *(ki)-súrolt/törölt egy kád-at.
Kati spotless-ly *(PRT)-scrubbed/wiped a tub-ACC
'Kati scrubbed/wiped a tub spotless.'
b. Anna foltmentes-en *(ki)-tisztított egy kád-at.
Anna spotless-ly *(PRT)-cleaned a tub-ACC
'Anna cleaned a tub spotless.'

(22) a. Kati gyors-an futott a verseny-en.
Kati quick-ly ran the race-SUP
'Kati ran quickly at the race.'
b. Anna szerencsé-re játszott a csapat-ban.
Anna luck-SUBL played the team-INE
'Luckily, Anna played on the team.'

The examples in (21) are different in that the predicate in (21a) does not entail the coming about of a new result state in the absence of a resultative adverb at the termination of the scrubbing or wiping activities, whereas in (21b) a new result is encoded in the verbal predicate *tisztít* 'clean' by virtue of the fact it is derived from the adjective *tiszta* 'clean'. Support for these claims comes from the entailment test below, inspired by a test of Beavers and Koontz-Garboden (2020, 167), according to which the continuation *but nothing is different about it* sounds natural with manner verbs like *sweep*, but generates a contradiction with result verbs like *break*.

(23) a. János ki-súrolt egy kád-at, de a kád nem változott semmi-t.
János PRT-scrubbed a tub-ACC, but the tub not changed nothing-ACC
'János scrubbed a tub (telic), but the tub didn't change.'
(Kardos 2023, 267)
b. #Anna ki-tisztított egy kád-at, de a kád nem változott semmi-t.
Anna PRT-cleaned a tub-ACC, but the tub not changed nothing-ACC
#'Anna cleaned a tub, but the tub didn't change.'

(24) #Kati foltmentes-en ki-súrolt egy kád-at, de a kád nem változott semmi-t.
Kati spotlessly-ly PRT-scrubbed a tub-ACC, but the tub not changed nothing-ACC
#'Kati scrubbed/wiped a tub spotless, but the tub didn't change.'

[11] To be fair, it must be mentioned that in non-episodic sentences, it is possible for resultative adverbs like *foltmentesen* 'spotlessly' to appear in the environment of particless verbs. This is illustrated by the sentence *A mosógép foltmentesen mos* 'The washing machine washes clothes spotlessly.'

[12] My editors point out that the obligatory presence of the verbal particle in examples like (21) could be accounted for by Jung & Choi (2023) on the assumption that the particle represents ResP in the structure of the sentence. This, however, is challenged by data like (21a), which is not necessarily associated with the coming about of a result state, as I argue immediately below (21) and (22).

The entailment test in (23a) shows that the referent of the internal argument *egy kádat* 'a tub' is not entailed to undergo a change of state in the environment of the particle verb *kisúrol* 'PRT-scrub'. Likewise, the denial of a new clean state is also possible with *kisúrol* 'PRT-scrub', as shown by the adequate nature of the sentence *János kisúrolt egy kádat, de a kád nem lett tiszta* 'János scrubbed a tub (telic), but the tub didn't become clean'. (For more on this test, see Rappaport Hovav & Levin 2010.) By contrast, according to (23b), the cleanliness of the tub is an entailed result state that comes about at the end of the cleaning event of the particle verb *kitisztít* 'PRT-clean'. This is reflected by the fact that the cancelling of this property yields a semantic anomaly. However, once the resultative adverb *foltmentesen* 'spotlessly' appears in the environment of the verbal expression *kisúrolt egy kádat* 'PRT-scrubbed a tub', as in (24), cancelling the meaning that the tub became spotless results in a contradiction. It is examples like these that indicate that resultative adverbs like *foltmentesen* 'spotlessly' can contribute result states to expressions that do not necessarily encode such states. The cleanliness of the tub at the termination of the scrubbing activity associated with *kisúrol egy kádat* 'scrub a tub (telic) is only a pragmatic inference. The same pattern is illustrated by the examples in (25) and (27) associated with *kimos* 'PRT-wash' and *kivasal* 'PRT-iron':

(25) a. Ili ki-mosott egy ruhá-t, de a ruha nem változott semmi-t.
Ili PRT-washed a dress-ACC, but the dress not changed nothing-ACC
'Ili washed a dress (telic), but the dress did not change.'
b. #Ili foltmentes-en ki-mosott egy ruhá-t, de a ruha nem változott semmi-t.
Ili spotless-ly PRT-washed a dress-ACC, but the dress not changed nothing-ACC
'Ili washed a dress spotless, but the dress did not change.'

As shown by (25a), *kimos egy ruhát* 'wash a dress (telic)' is compatible with the continuation that the dress did not undergo a change.[13] This indicates that the predicate does not have a result entailment.[14] By contrast, once the adverb *foltmentesen* 'spotlessly' appears in the sentence, the same continuation yields an anomalous sentence (25b). This is evidence that the adverb is directly responsible for the meaning that the dress undergoes a change of state. It is also important that the aspectual make-up of the predicate remains intact in the presence of the resultative adverb. The predicate *kimos egy ruhát* 'wash a dress' is telic with or without *foltmentesen* 'spotlessly'. Telicity is ensured by the verbal particle *ki*. Consider (26).

(26) a. Ili 10 perc-ig/*10 perc alatt mosott egy ruhá-t.
Ili 10 min-for/10 min under washed a dress-ACC

[13] The denial of a clean result state is also compatible with this example (cf. *Ili kimosott egy ruhát, de a ruha nem lett tiszta* 'Ili washed a dress (telic), but the dress didn't become clean').

[14] A reviewer reminds me that the presence of inaminate causer subjects might change the entailment pattern illustrated in (25a) in a way that a change of state becomes entailed. A similar effect of such subjects has been reported by Alexiadou et al. (2017) with respect to German and French. The Hungarian facts seem to be similar: For example, the sentence **Az eső lemosta az autót, de az autó nem változott semmit* 'The rain washed the car, but the car did not change' sounds odd and thus contrasts with (25a) regarding the presence of a result entailment. Crucially, inanimate causer subjects like *az eső* 'the rain' are also incompatible with atelic predicates: **Az eső mosott egy autót* 'The rain washed a car' seems unnatural in comparison to *Ili mosott egy autót* 'Ili washed a car', which is perfectly fine. For more on similar effects in English and Italian, see Folli & Harley (2005).

‘Ili washed a dress for 10 minutes.’

b. Ili 10 perc alatt/*10 perc-ig ki-mosott egy ruhá-t.
Ili 10 min under/*10 min-for PRT-washed a dress-ACC
‘Ili washed a dress in 10 minutes.’

c. Ili 10 perc alatt/*10 perc-ig foltmentes-en ki-mosott egy ruhá-t.
Ili 10 min under/*10 min-for spotless-ly PRT-washed a dress-ACC
‘Ili washed a dress spotless in 10 minutes.’

Another example illustrating the lack of a result state in the verbal predicate is *Pali kivasalta az inget* ‘Pali ironed the shirt (telic)’ in (27a), whereas according to (27b) the presence of the resultative adverb *gyönyörűen* ‘beautifully’ ensures that the shirt ends up in a beautiful state at the end of the ironing activity.[15]

(27) a. Pali ki-vasalta az ing-et, de az ing gyűrött maradt.
Pali PRT-ironed the shirt-ACC, but the shirt creasy remained
‘Pali ironed the shirt (telic), but the shirt had creases in it.’

b. #Pali gyönyörű-en ki-vasalta az ing-et, de az ing gyűrött maradt.
Pali beautiful-ly PRT-ironed the shirt-ACC, but the shirt creasy remained
#‘Pali ironed the shirt and the shirt became beautiful, but the shirt had creases in it.’

Of course, predicates like *kimos* ‘PRT-wash’ and *kivasal* ‘PRT-iron’ often express situations where the referent of the direct object ends up in a new result state (for example, a clean state in the case of *kimos* ‘PRT-wash’), but this meaning is not an entailment. This is also supported by the example in (28).

(28) János ki-mosott egy tiszta ruhá-t.
János PRT-washed a clean dress-ACC
‘János washed a clean dress (telic).’

As is clear from (28), the predicate *kimos* ‘PRT-wash’ can describe events in which the referent of the direct object is already clean at the beginning of the washing eventuality. This indicates that *kimos* ‘PRT-wash’ only describes a washing activity that culminates in an endpoint without a new result state (Kardos 2023).

In this way, verbs like *vasal* ‘iron’ and *mos* ‘wash’ both obey manner/result complementarity (Rappaport Hovav & Levin 2010): they lexically entail the manner in which the activities in their denotation are carried out, but not the result. When accompanied by a verbal particle like *ki*, they are still manner verbs without result entailments. The difference between the base verbs and the particle verbs lies in their inner aspectual characteristics. The former are associated with atelicity, whereas the latter are telic.

[15] I thank Viktória Ugrai for the example in (27a).

When a result verb like *megtisztít* 'PRT-clean' appears in the sentence, by contrast, an anomalous sentence comes about with a direct object modified by the adjective *tiszta* 'clean'. This is shown in (29).

(29) #János meg-tisztította a tiszta cipőjé-t.
János PRT-cleaned the clean his.shoe-ACC
Intended meaning: 'János cleaned his clean shoes.'

Since the result predicate *megtisztít* 'PRT-clean' describes events at the beginning of which the referent of the direct object is not clean, whereas at the culmination of the event it is, it is expected that the sentence in (29) is inadequate with a direct object whose referent is asserted to be clean already at the beginning of the cleaning.[16]

Returning to examples associated with resultative adverbial adjuncts, an alternative structure that is possible with a resultative adverbial adjunct in the sentence is one in which, instead of a verbal particle, a resultative phrase carrying sublative case co-occurs with the verb.

(30) a. Juli elegáns-an *(rövid-re) vágta Béla hajá-t.
Juli elegant-ly *(short-SUBL) cut Béla his.hair-ACC
'Juli elegantly cut Béla's hair short.'
b. Kati foltmentes-en *(tisztá-ra) súrolt/törölt egy kád-at.
Kati spotless-ly *(clean-SUBL) scrubbed/wiped a tub-ACC
'Kati scrubbed/wiped a tub spotless and clean.'
c. Laci gyönyörű-en (élé-re) vasalta egy nadrágjá-t.[17]
Laci beautiful-ly (its.crease-SUBL) ironed a his.trouser-ACC
'Laci pressed creases into a pair of his trousers beautifully.'

These examples are interesting in that two result states are expressed in a single clause with respect to the same entity. In (30a) Béla's hair is asserted to become short and elegant at the end of the cutting activity, whereas in (30b) the tub is clean and spotless once the scrubbing/wiping activity comes to an end.[18] Also, (30c) can be interpreted in a way that the

[16] A similar contrast is observable in English when it comes to the verbs *wipe* and *clean*. Levin & Rappaport Hovav (1991, 136) note, citing Jackendoff's (1990) observation, that it is possible to "wipe a table even if its surface is already clean and clear and there is nothing to remove from it". By contrast, the verb *clean*, when used as a result verb, is necessarily associated with events in which the referent of the theme is not clean at the beginning of the cleaning and it becomes clean at the end. As pointed out by Levin & Rappaport Hovav (2014, 338), this verb also has "a manner sense, which no longer entails the result". In other words, *clean* is polysemous by virtue of having a result sense and a manner sense.

[17] The adverbial *gyönyörűen* 'beautifully' can only describe the manner of the ironing activity in the absence of the resultative *élére* 'lit. onto its crease' in (30c). This is compatible with the hypothesis that resultative adverbial adjuncts modify AspP, directly created by verbal particles and resultatives carrying sublative case in Hungarian. The expression *vasalta egy nadrágját* 'ironed a pair of his trousers' is an activity, lacking in AspP, and thus incompatible with a resultative adverbial adjunct. By contrast, *élére vasalta egy nadrágját* 'pressed creases into one of his trousers' is associated with AspP and so readily admits adverbials such as *gyönyörűen* 'beautifully' expressing the result state of the trousers.

[18] An alternative analysis of (30a) is that Béla's hair became elegantly short, whereas in (30b) the tub became spotlessly clean.

trousers ended up with creases in them and they also became beautiful at the end of the ironing activity. This poses a challenge for a well-known semantic restriction according to which there can be only one result state expressed in a single clause with respect to the entity that undergoes a change (see various instantiations of this restriction in Tenny 1987, 1994; Goldberg 1991; among others). Tenny (1994: 80) illustrates the consequences of the violation of what she calls the Single Delimiting Constraint with the following examples:

(31) a. *Martha wiped the table dry clean.
b. *The sun dried the grass up out.

(Tenny 1994, 80)

Assuming that "the event described by a verb may only have one measuring-out and be delimited only once" (*ibid*. 79), Tenny predicts that verbs can have one delimiting resultative or verbal particle at most. In a recent paper, however, Ausensi & Bigolin (2021) argue that this restriction or the Unique Path Constraint, as they call it after Goldberg (1991), holds even for examples illustrating two results in a single clause on the condition that it is understood as a syntactic constraint and not a semantic one. They first show that, contra Tenny's claim regarding examples like those in (31), it is actually possible for clauses to include multiple result phrases in the form of resultative APs and PPs in English. They find naturally occurring data like those in (32) and several others illustrating this.

(32) a. The Indians were laying for them and shot them dead off their horses.
b. Schumacher's forearm connected with Battiston's face, removing two teeth and knocking him unconscious to the ground.

(Ausensi & Bigolin 2021, 576)

In (32a) the AP *dead* and the PP *off their horses* both express result states with respect to the same entity in the event of the clause, whereas in (32b) it is the AP *unconscious* and the PP *to the ground* that serve this function. The authors argue that this is not a problem for the Unique Path Constraint if it is understood as a restriction on the number of syntactic results in a single clause: "the verbalizing little v head can only select for one result predicate as its complement" (Ausensi & Bigolin 2021, 575). In (32a) and (32b), it is the APs *dead* and *unconscious* that are argued to be syntactic results, whereas the PPs *off their horses* and *to the ground* are analyzed as modifiers, which the authors refer to as low depictives, using the terminology of Acedo-Matellán et al. (forthcoming). Low depictives "denote states that are temporally linked with the state denoted by a result predicate" and join sentence structure via a low applicative head (*ibid*. 576). This way they save the Unique Path Constraint by reformulating it as a constraint on the structural representation of result-denoting expressions.

Later, Ausensi et al. (2024) reject this analysis, which they claim makes incorrect predictions about the temporal and causal relations associated with examples like those in (32).[19] These authors argue that the data in (32) illustrate genuine resultatives in that in each

[19] I thank an anonymous reviewer for drawing my attention to this work.

sentence the second result state is causally dependent on the combination of the verb and the first result state. At the same time, they also agree with Ausensi & Bigolin (2021) that constraints such as the Unique Path Constraint cannot be correct as a semantic restriction concerning the expression of resultativity.

The Hungarian data in (30) also pose a challenge for any constraint that takes the number of result states to be semantically restricted in a way that no more than a single result state can be expressed with respect to the same entity in a single clause. However, if result states are assumed to be independent from delimitedness/telicity and there is a constraint such that only a single element can be directly involved in the creation of telic structure, the examples in (30) are not unexpected: In (30a), (30b) and (30c) the expressions *rövidre* 'lit. onto short', *tisztára* 'lit. onto clean' and *élére* 'lit. onto its crease' are assumed to occupy a specifier position where they ensure that the verbal predicate is telic, and additionally, they also express result states, whereas the adverbial adjuncts *elegánsan* 'elegantly', *foltmentesen* 'spotlessly' and *gyönyörűen* 'beautifully' only modify the telic structures that come about in the presence of the resultative expressions associated with sublative case. Yet another example illustrating this pattern is provided in (33).

(33) János sikeres-en ötös-re vizsgázott.
János successful-ly five-SUBL took.an.exam
'János completed an exam successfully with a grade of five.'

In (33) the resultative adverb *sikeresen* 'successfully' can appear in the environment of the resultative expression *ötösre* 'lit. onto five' given that these expressions are associated with different inner aspectual effects. The former serves as a modifier of AspP, whereas the latter is directly responsible for creating AspP. In contrast to examples like (30a) and (30b), it seems more clear that the adverbial *sikeresen* 'successfully' cannot modify the result state expressed by the resultative *ötösre* 'lit. onto five', which then further supports the claim that it is possible for two result states to describe the same entity in a single clause in Hungarian.

What is not possible, by contrast, or somewhat marked is the co-occurrence of multiple resultative expressions carrying sublative case (34a) or the appearance of a resultative carrying sublative case in the environment of a telicity-marking verbal particle (34b).[20]

[20] That resultatives carrying sublative case sound unnatural in the environment of particle verbs has been pointed out by, for example, Komlósy (1992), who finds examples like **pirosra befestette a kerítést* 'painted the fence red' ungrammatical, where *pirosra* is the resultative expression associated with sublative case and *be* attached to the verb *festette* 'painted' is a verbal particle. Another example illustrating this restriction is **laposra kikalapált egy fémlemezet* 'hammered a metal sheet flat', where the co-occurrence of the resultative expression *laposra* and the verbal particle *ki* seems to cause ungrammaticality. My native judgement regarding these examples is that the preferred structures in both cases are the ones where either a resultative expression with sublative case or a verbal particle appears in the sentence, but not both. For some reason, I also find these examples different in terms of their grammaticality: While **laposra kikalapált egy fémlemezt* 'hammered a metal sheet flat' sounds ungrammatical to my ears, ?*pirosra befestette a kerítést* 'painted the fence red' is less unnatural. In this respect (34b) is similar to this latter example, which is why I use a question mark instead of an asterisk with (34b). An initial idea as to why the difference in grammaticality arises between these examples is that the grammatical status of verbal particles like *be*, *ki* and *meg* is more varied than assumed here: It is possible that the different structural positions of these particles allow or disallow the co-occurrence patterns illustrated above. A more thorough investigation of this remains for future research.

(34) a. *Juli foltmentes-re tisztá-ra törölt egy kád-at.
Juli spotless-SUBL clean-SUBL wiped a tub-ACC
b. ?Juli foltmentes-re meg-törölt egy kád-at.
Juli spotless-SUBL PRT-wiped a tub-ACC

These facts again follow on the assumption that *-ra*/*-re* resultatives occupy [Spec, AspP] along with particles like *meg*, whereas resultative adverbial adjuncts adjoin to AspP.

Another notable property of resultative adverbial adjuncts is that they may also co-occur with manner adverbs like *óvatosan* 'carefully' and *gyorsan* 'quickly' in a single clause. This is illustrated in (35).

(35) a. Anna óvatos-anMAN foltmentes-enRES el-mosott egy edény-t.
Anna careful-ly spotless-ly PRT-washed a dish-ACC
'Anna carefully washed a dish spotless.'
b. Béla gyors-anMAN elegáns-anRES fel-díszítette a fá-t.
Béla quick-ly elegant-ly PRT-decorated the tree-ACC
'Béla quickly decorated the tree elegantly.'
c. Anett gyors-anMAN sikeres-enRES le-vizsgázott.
Anett quick-ly successful-ly PRT-took.an.exam
'Anett quickly completed the exam successfully.'

As shown above, it is possible for the manner adverbs *óvatosan* 'carefully' and *gyorsan* 'quickly' to co-occur with the resultative adverbs *foltmentesen* 'spotlessly' in (35a) or *elegánsan* 'elegantly' in (35b) in a way that the manner adverb precedes the resultative adverb in the preverbal section of the sentence in each example. What is much less natural, however, is for the resultative adverb to precede the manner adverb before the verb. Consider (36).

(36) a. ??Anna foltmentes-en óvatos-an el-mosott egy edény-t.
Anna spotless-ly careful-ly PRT-washed a dish-ACC
b. ??Béla elegáns-an gyors-an fel-díszítette a fá-t.
Béla elegant-ly quick-ly PRT-decorated the tree-ACC
c. ??Anett sikeres-en gyors-an le-vizsgázott.
Anett successful-ly quick-ly PRT-took.an.exam

The resultative adverbs *foltmentesen* 'spotlessly', *elegánsan* 'elegantly' and *sikeresen* 'successfully' sound marked before the manner adverbs *óvatosan* 'carefully' and *gyorsan* 'quickly' in the examples above. This restriction is predicted if we assume that manner adverbs adjoin to vP, whereas resultative adverbs like those in (36) modify AspP below vP. The hierachical organization of manner adverbs and resultative adverbs is thus similar in English and Hungarian in that manner adverbs seem to merge higher in the event domain than resultative adverbs like English *colorfully* and *foltmentesen* 'spotlessly'.

An important difference between the two languages, however, is that Hungarian resultative adverbial adjuncts do not require the presence of a result state in the verbal predicate

that they modify. This is evidenced by the examples in (23)-(25) and (27). Hungarian resultative adverbial adjuncts may also create result states in and of themselves, similarly to *-ra*/*re* resultatives. Finally, Hungarian data also seem to illustrate the possibility of the expression of multiple result states in a single clause. In examples like (30) and (33), one result state is expressed in the specifier of an inner aspectual functional projection by a resultative expression carrying the sublative case marker *-ra*/*-re*, while another result state is expressed by an adverbial expression ending in the suffix *-an*/*-en* modifying this functional projection by adjoining to it.

In what follows I draw a parallel between resultative adverbs like *foltmentesen* 'spotlessly' and measure adverbs and argue that they form a natural class within the class of low adverbial adjuncts in Hungarian, similarly to their English counterparts. They adjoin to the same functional projection within the verbal domain below the adjunction site of manner adverbs.

4. The parallel between resultative adverbial adjuncts and measure adverbs

In this section I show that Hungarian resultative adverbial adjuncts share important grammatical properties with measure adverbs by examining the distribution and interpretive properties of measure adverbs like *részben* 'partly' and *félig* 'halfway'. I propose that, similarly to resultative adverbial adjuncts, Hungarian measure adverbs also require telic structures corresponding to AspP between vP and VP. This is in contrast to claims about English, according to which adverbial expressions like *partly* and *half* modify results (see Tenny 2000 and Jung & Choi 2023). Support for my claim comes from examples like those in (37), where each verb requires a telicity-marking particle and is a result verb derived from the adjective that expresses the final result that obtains once the event described by the sentence comes to an end.

(37) a. Az ég rész-ben/fél-ig *(ki)-tisztult.
the sky part-in/half-to *(PRT)-cleared
'The sky partly cleared.'
b. A könyv rész-ben/fél-ig *(meg)-sárgult.
the book part-in/half-to *(PRT)-became.yellow
'The book partly became yellow.'
c. János pupillái rész-ben/fél-ig *(ki)-tágultak.
János his.pupils part-in/half-to *(PRT)-dilated
'János's pupils became partially dilated.'

Again, similarly to what is observable with resultative adverbs (see the examples in (21)), a verbal particle is necessary with the verbs *tisztul* 'become clean/clear' (derived from *tiszta* 'clean'), *sárgul* 'become yellow' (derived from *sárga* 'yellow') and *tágul* 'become dilated' (derived from *tág* 'wide') in the presence of the measure adverbs *részben* 'partly' and *félig* 'halfway'. The presence of a result state as expressed by the adjectives underlying these verbs is not sufficient for the licensing of the measure adverbs. The obligatory presence of a telicising verbal particle also characterizes examples associated with an incremental theme whose

referent undergoes a change of state in creation or consumption events, as shown in (38) and (39).

(38) a. Béla fél-ig *(meg)-festett egy ház-at.
Béla half-to *(PRT)-painted a house-ACC
'Béla completed half of the process of painting a house.'
b. Juli fél-ig *(meg)-rajzolt egy auto-t.
Juli half-to *(PRT)-drew a car-ACC
'Juli completed half of the process of drawing a car.'

(39) a. Ili fél-ig *(meg)-ivott egy limonádé-t.
Ili half-to *(PRT)-drank a lemonade-ACC
'Ili drank half of a lemonade.'
b. Misi fél-ig *(meg)-evett egy banán-t.
Misi half-to *(PRT)-ate a banana-ACC
'Misi ate half of a banana.'

Although the themes in the examples above are quantities in the sense of Borer (2005) and have a measuring-out effect with creation/consumption verbs, though this meaning is only an inference, as argued by Kardos & Farkas (2022), the measure adverb *félig* 'halfway' requires the particle *meg* in the sentences in (38) and (39). This further supports the view that measure adverbs adjoin to AspP, created directly by the particle *meg.*

A final type of example that can be regarded as evidence for the claim that measure adverbs require AspP is shown in (40), where each sentence is associated with an intransitive verb expressing an activity and an obligatory verbal particle ensuring that this activity culminates in an endpoint.

(40) a. János fél-ig *(meg)-reggelizett.
János half-to *(PRT)-ate.breakfast
'János completed half of the breakfast-eating activity.'
b. Réka fél-ig *(le)-vizsgázott.
Réka half-to *(PRT)-took.an.exam
'Réka completed half of the exam.'

In addition to the obligatory presence of the particles *meg* and *le*, what is also notable regarding the examples above is that they both express that the eventuality of the VP has been half completed without the involvement of a new result state that comes about at the termination of that eventuality. This is expected if the adverb *félig* 'halfway' is sensitive to the telicity properties of the expression it modifies, and not the presence of a result state.

In English, the adverb *halfway* also modifies delimited event descriptions in examples like (41).

(41) a. Mary ate an apple halfway.
b. Susan walked the Appalachian Trail halfway.

(Tenny 1994, 19)

As Tenny (1994, 19) discusses, the adverb *halfway* "explicitly modifies the measure provided by the direct argument". She further notes that in the case of these examples "it is possible to equate half of the event with half of the measuring internal argument" (*ibid*. 19). While in English the direct object can often serve a measuring-out function, which is necessary for a delimited reading, in Hungarian it is often verbal particles that ensure this reading.[21]

The adverb *half*, by contrast, has a different semantics: It often has a measure reading such that it modifies "the endstate of the core event" (Tenny 2000, 303), but it is also compatible with a so-called "messing-around" reading. Consider the example in (42).

(42) The doctor half cured her patient.

(Tenny 2000, 308)

As Tenny (2000) observes, this sentence has an interpretation "in which we understand that the doctor did a sloppy job of curing the patient" (*ibid*. 308). In other words, it is not the core event that the adverb modifies, but the manner in which the curing activity is carried out.[22] The Hungarian counterpart of this sentence associated with *félig* 'halfway' and the particle verb *meggyógyít* 'PRT-cure' does not have this interpretation.

(43) Az orvos fél-ig *(meg)-gyógyította a beteg-et.
the doctor half-to *(PRT)-cured the patient-ACC
'The doctor completed half of the process of treating the patient.'

As the translation of (43) shows, the only reading that one can assign to this example is that the doctor completed half of the activity aimed at curing the patient. In other words, the measure adverb is interpreted with respect to a complete event in a way that it expresses that only half of this event took place.

Finally, it is also expected on the present analysis that the co-occurrence of measure adverbs with manner adverbs is restricted. If measure adverbs adjoin to the derivation before manner adverbs do, the former must be closer to the verb than the latter for the sentence to be acceptable. This is illustrated in (44), taken from É. Kiss (2009). (See also Section 2.)

(44) a. János gyors-an fél-ig meg-oldotta a feladat-ot.
János quick-ly half-to PRT-solved the task-ACC
'János completed half of the task quickly.'
b. ??János fél-ig gyors-an meg-oldotta a feladat-ot.
János half-to quick-ly PRT-solved the task-ACC

[21] Tenny (1994, 126) notes that the adverb *halfway* cannot be a modifier if (i) the measure in a sentence like (41a) is accompanied by the verbal particle *up* and (ii) if the measure is omitted from the sentence. This is shown by the ungrammaticality of the sentences **I ate the apple up halfway* and **I ate halfway*. The latter example is claimed to be evidence that the adverb *halfway* modifies the measure and not the action of eating. If it measured the action of eating, the sentence could mean 'I ate half of some prototypical meal'. The Hungarian facts are different, as shown by the example in (40a), where the adverb *félig* 'halfway' modifies the action of breakfast-eating.
[22] For more on the semantics of *half*, see Bochnak (2013).

(É. Kiss 2009, 22)

As with resultative adverbs, measure adverbs like *félig* 'halfway' must appear after manner adverbs in the preverbal section of sentence. Otherwise, the sentence becomes highly marked, as shown in (44b).

5. A final note on results and telicity

In light of the discussion so far, we can conclude that in Hungarian result states (including goals reached at the end of change-of-location events) can be expressed in one of the following ways within a single clause: They can be directly encoded by verbal particles (45a), *-ra*/*-re* resultatives (45b), resultative adverbial adjuncts (45c), and result verbs (45d).

(45) a. János be-jött.
János PRT-came
'János came in.'
b. Béla foltmentes-re törölt egy pohar-at.
Béla spotless-SUBL wiped a glass-ACC
'Béla wiped a glass spotless.'
c. Ili foltmentes-en meg-törölt egy pohar-at.
Ili spotless-ly PRT-wiped a glass-ACC
'Ili wiped a glass spotless.'
d. Vera meg-tisztította a sütő-t.
Vera PRT-cleaned the oven-ACC
'Vera cleaned the oven.'

In (45a) the particle *be* expresses that János ends up in some place, in (45b) and (45c) the glass becomes spotless, while in (45d) the oven becomes clean. Apart from asserting that a new result state comes about, the sentences above are also similar in that they all describe delimited events. This is expected on analyses that directly link the telicity of an expression to the presence of a result state in the syntax or semantics of that expression. Such an analysis is illustrated in (46) from Rappaport Hovav & Levin (1998).

(46) a. Phil swept the floor clean in/*for an hour.
b. [x ACT <SWEEP>] y] CAUSE [BECOME [y <*CLEAN*>]]]
(adapted from Rappaport Hovav & Levin 1998, 119)

On the decomposition analysis above (see also Dowty 1979; Pustejovsky 1991, 1995; Ramchand 2008; among others), the telicity of the expression *swept the floor clean* follows from the presence of the caused clean state of the floor in the complex event structure of that expression. While in the case of (46a), the telicity of the event description is correctly predicted, it has been noted by multiple scholars in recent decades that there are telic expressions not associated with a new result state and there are expressions encoding the coming about of a result state without the additional interpretive effect of telicity. The following examples from Higginbotham (2000) and Goldberg & Jackendoff (2004) illustrate this:

(47) a. Kim ran around the corner.

(Higginbotham 2000)

b. For years, Bill heated the mixture hotter and hotter.

(Goldberg & Jackendoff 2004, 543)

Decomposition analyses associating accomplishments with a causing activity and a caused result state incorrectly predict atelicity in the case of (47a) and telicity regarding the verbal predicate in (47b). (See also Borer 2005 for more on this.) Hungarian verbal predicates like *kisúrol* 'PRT-scrub' and *kimos* 'PRT-wash' have also been demonstrated here to receive a telic interpretation without entailing that a result state comes about. This is also a problem for analyses that fundamentally associate Hungarian verbal particles with a predicative function with respect to the theme whose referent undergoes some change. Such an analysis is illustrated by É. Kiss (2006), who also argues that the telicising function of Hungarian verbal particles is only a lexical semantic matter. If, by contrast, the telicity of *kisúrol* 'PRT-scrub' and *kimos* 'PRT-wash' and other similar examples is syntactically represented in a way that it is directly linked to the verbal particle in the structure of the sentence, as assumed here, and results are proposed to be a purely semantic or pragmatic effect, the facts of Hungarian will be accounted for. Results are semantically entailed by, for example, resultatives carrying sublative case, resultative adverbial adjuncts and result verbs, whereas in the case of particle verb constructions they are often just a pragmatic inference. This is also compatible with Borer's (2005, 153) claim regarding the strict telicity of expressions like *straighten the rope completely,* according to which the uncancellability of telicity in the case of this example "emerges directly from the fact that in these cases the *grammar,* rather than the lexical semantics of a particular listeme, has forced the projection of telic structure". That telicity in the case of particle verbs like *kisúrol* 'PRT-scrub' and *kimos* 'PRT-wash' is uncancellable is a robust generalization, while the encoding of a result state in these verbs seems only a pragmatic effect.

6. Conclusion

In this paper I have identified a new subclass of low adverbial adjuncts in Hungarian, which I refer to as resultative adverbial adjuncts. I have argued that these adverbial expressions form a natural class with measure adverbs by virtue of modifying telic structures associated with an aspectual functional projection in the event domain of the sentence. These adverbs contrast with manner adverbs, another type of low adverbial adjuncts, in that the latter adjoin to vP above the adjunction site of resultative and measure adverbs. I have also shown that, similarly to resultatives carrying the sublative case suffix *-ra*/*-re*, resultative adverbial adjuncts can contribute result states to event descriptions, which, on their own, do not encode the coming about of such states. The Hungarian facts also serve as evidence for the claim that telicity and result state are not derivable from one another, and while the former seems to be a syntactic phenomenon, the latter is a matter of semantics/pragmatics.

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