The argument structure of adjectival participles revisited

1. Introduction

Kratzer (2000) postulates two semantic subclasses of adjectival participles in German, based on whether or not they can be modified by *immer noch* ‘still’. Target state participles, which are compatible with *immer noch*, are argued to describe reversible, transitory states and to be derived from categoriless stems that have both an event and a target state argument ((1a)). Resultant state participles (borrowing a term from Parsons 1990), in turn, cannot combine with *immer noch*; Kratzer argues that these participles are derived from verbs and introduce states that hold forever after the event that brings them about ((1b)).

\[(1) \quad \text{a. Die Geißlein sind (immer noch) versteckt.} \quad \text{Target state} \]
\[\quad \text{the goats are still hidden} \quad \text{‘The goats are still hidden.’} \]
\[\quad \text{b. Das Theorem ist (*immer noch) bewiesen.} \quad \text{Resultant state} \]
\[\quad \text{the theorem is still proven} \quad \text{intended: ‘The theorem is still proven.’} \]

She furthermore argues that both types of participles lack Voice, i.e. that the external argument is completely absent. Apparent evidence for this claim comes from the lack of control into purpose clauses ((2a); see also Baker et al. 1989) and the lack of the so-called disjoint reference effect ((3a)) in adjectival participles, i.e. the availability of a reflexive reading, as opposed to verbal participles ((2b, 3b)) (see also Kratzer 1994).

\[(2) \quad \text{a. *Der Reifen war aufgepumpt, um die Fahrt fortzusetzen.} \]
\[\quad \text{the tire was inflated in order the journey to continue} \quad \text{intended: ‘The tire was inflated in order to continue the journey.’} \]
\[\quad \text{b. Der Reifen wurde aufgepumpt, um die Fahrt fortzusetzen.} \]
\[\quad \text{the tire became inflated in order the journey to continue} \quad \text{‘The tire was (being) inflated in order to continue the journey.’} \]

\[(3) \quad \text{a. Das Kind war schlampig gekämmt.} \]
\[\quad \text{the child was slopp(ily) combed} \quad \text{‘The child was combed in a sloppy manner.’} \]
\[\quad \text{(i) Someone (else) (has) combed the child.} \quad \text{(disjoint interpretation)} \]
\[\quad \text{(ii) The child (has) combed him/herself.} \quad \text{(reflexive interpretation)} \]
\[\quad \text{b. Das Kind wurde schlampig gekämmt.} \]
\[\quad \text{the child became slopp(ily) combed} \quad \text{‘The child was (being) combed in a sloppy manner.’} \]
\[\quad \text{(i) = Someone (else) (has) combed the child.} \quad \text{(disjoint interpretation)} \]
\[\quad \text{(ii) NOT: The child (has) combed him/herself.} \quad \text{(reflexive interpretation)} \]

Note that German makes a morphological distinction between adjectival and verbal passives, in that adjectival (past) participles combine with an inflected form of *sein* ‘to be’, whereas verbal (past) participles combine with an inflected form of *werden* ‘to become’. If combination with *sein* is the defining characteristics for a participle to be adjectival, as is commonly assumed, then both types of participles are adjectival, and we follow this common assumption. Kratzer’s overall conclusions, however, seem to suggest that she views both types of participles as stativized, but resultant state participial constructions as verbal, rather than adjectival.
This seemingly semantic difference between two types of adjectival (or stativized; cf. fn. 1) participles is often understood as a direct reflection of a structural difference (e.g., Anagnostopoulou 2003, Alexiadou & Anagnostopoulou 2008, Lundquist 2008; cf. Embick 2004, who makes a distinction between stative and resultative participles). Target state or stative participles are assumed to be directly derived from roots ((4a)), whereas resultant state or resultative participles are argued to involve a verbal layer on top of the root ((4b)). It has furthermore been argued that in some languages, resultative participles have a Voice layer and inherit the complete argument structure of the underlying verb ((4c), e.g. Greek -menos-participles, Anagnostopoulou 2003; Alexiadou & Anagnostopoulou 2008; Hebrew participles derived from the causative template, Doron to appear).

(4) a. [Asp [Root]] (English, German, Greek)  
    b. [Asp [vP [Root]]] (English, German, Greek)  
    c. [Asp [VoiceP [vP [Root]]]] (Greek; Hebrew causative template)

One of Embick’s (2004) arguments for the absence of a v layer in stative participles is the following. Like the adjective in (5a), the participle in (5b) expresses a situation in which the door never participated in a change-of-state event.

(5) a. This door was built open/*opened.  
    b. This door was built closed.

Based on data like these and others, Embick concludes that participles that can appear in the complement of verbs like build involve a root-derivation.

Recently, this picture has been challenged in various ways. Anagnostopoulou & Samioti (to appear), for example, argue that in Greek, (at least some) target state (or stative) participles (-tos-participles) could involve a verbal layer (vP), and even VoiceP. Their evidence is based, among other things, on the presence of overt verbalizing morphology with target state participles, suggesting the presence of v (e.g. afri-is-tos ‘foaming), the availability of ability/possibility readings with -tos participles and compounding including Voice related modifiers (e.g. aksiomeletitos ‘worth-studying’), suggesting the presence of Voice. Furthermore, McIntyre (2013) and Bruening (to appear) have shown that English adjectival participles can license by-phrases and conclude from this that they must, therefore, involve a Voice layer just as verbal participles.

In this paper we provide morphological evidence that adjectival passives can involve more verbal functional structure than assumed even in German and English. In sections 2 and 3, we will show that some adjectival target state participles must involve a verbal eventive layer, and that some, in addition, involve Voice, which provides further evidence that, at least in some cases, verbal and adjectival passives can be structurally quite similar.2 In section 4, we will propose that differences between verbal and adjectival passives in the productivity of by-phrases and other tests used to diagnose the presence of implicit arguments reside in the nature of the participle-forming head, i.e. whether it derives an eventive (verbal) or a stative (adjectival) participle. In section 5, we propose that differences between Greek and German/English adjectival passives have a different source and follow naturally from our hypothesis that the Greek form is ambiguous (for some speakers) between an adjectival passive and the perfect of an eventive passive. Finally, section 6 concludes.

2 Our claim is not that ALL adjectival participles involve a verbal eventive layer; sometimes adjectival participles lack any eventive verbal layers, as suggested by (5) for which we assume the structure in (4a).
resultatives subsume Kratzer’s phrasal target states as well as her resultant states.

2. Morphological evidence for verbal structure

In this section we provide morphological evidence for postulating additional verbal functional structure in adjectival participles. The existence of verbalizing morphology inside some participles suggests that these participles contain an eventive v layer, whereas transitivizing morphology points to the existence of a Voice layer inside such participles.

2.1 Target state participles can involve overt verbalizing heads.

In English and German, many verbs are derived from some non-verbal source (category-neutral Roots in our terminology) by the addition of verbalizing affixes. In this paper, we take a Distributed Morphology (DM) approach and take verbalizing affixes to be the spell-out of a v-head, assuming that their presence is clearly related to the verbal/eventive nature of the verbs (see in particular Embick 2004). Harley (2011), for example, argues for English that affixes like -ify, -ate and -ize are specific verbalizing morphology. In (6) we see that participial morphology can attach to these verbalizers to form a verbal or an adjectival participle. This suggests that the verbalizing head is still present in the participle, and that the participle morphology does not attach directly to the root.

(6) Root: √COLON √MOBIL √DICT √HTML √SATIS
    Root + v: colon-ize mobil-ize dict-ate html-ify satis-fy

The logic of this argumentation predicts that adjectival participles of the form in (6) involving verbalizing suffixes should not be compatible with Embick’s context in (5), as they are not derived from roots but involve an eventive layer. While at first sight this prediction seems to be borne out (cf. (7a)), we have not been able to find English minimal pairs (adjective vs. participle), which could support this point, i.e. where not only the participle is ungrammatical but the adjective is conceptually acceptable as the complement of built (cf. (7a, b) vs. (5a, b)).

(7) a. *The rail-trail was built electrified.
    b. *The rail-trail was built electric.

In German, we face the same problem with this example; we find both sentences in (8) unacceptable.

(8) a. *Die Straßenbeleuchtung wurde elektrisch gebaut.
    The road lighting became electric built
    intended: ‘The road lighting was built electric.’
    b. *Die Straßenbeleuchtung wurde elektrifiziert gebaut.
    The road lighting became electrified built
    intended: ‘The road lighting was built electrified.’

However, with another example our prediction seems to be testable; in our judgements (9a) with an adjective is an acceptable continuation of the given context while (9b) with the adjectival participle involving a verbalizer is strongly degraded:

(9) a. *The rail-trail was built electrifying.
    b. *The rail-trail was built electrifying.
(9) Es gab ein Haus, das war so instabil, dass es zusammengebrochen ist.  
    it gave a house that was so unstable that it collapsed is  
    ‘There was a house, that was so unstable that it collapsed.’
    a. Das nächste Haus haben sie dann aber stabil errichtet/gebaut.  
    the next house have they then but stable constructed built  
    ‘However, the next house they built more stable.’
    b. *Das nächste Haus haben sie dann aber stabilisiert errichtet/gebaut.  
    the next house have they then but stabilized constructed built  
    intended: ‘However, the next house they built more stabilized.’

To clarify this issue we resorted to other verbs that should behave like build in not allowing resultative participles as their complements, for example konzipieren ‘to conceptualize’. Our judgments, then, suggest the following contrast:

(10) a. Die Straßenbeleuchtung wurde von Anfang an elektrisch konzipiert.  
    the road lighting became from beginning on electric conceptualized  
    ‘From the start, the road lighting had been conceptualized electric.’
    b. **Die Straßenbeleuchtung wurde von Anfang an elektrifiziert konzipiert.  
    the road lighting became from beginning on electrified conceptualized  
    intended: ‘From the start, the road lighting had been conceptualized electrified.’

A preliminary Google search for German supports this contrast at least by trend, as illustrated in (10).

(10) “elektrisch gebaut” (‘built electric’) about 100 hits  
    “elektrifiziert gebaut” (‘built electrified’) 8 hits  
    “elektrisch konzipiert” (‘planned electric’) 16 hits  
    “elektrifiziert konzipiert” (‘planned electrified’) 0 hits (1 irrelevant hit)

Hence, the prediction seems to be borne out: These participles have an event implication due to the presence inside of them of verbalizing morphology and they are not derived directly from the root. Thus, they behave on a par with Embick’s resultative participles.

At this point we note that Embick’s resultative participles cannot be identified with Kratzer’s resultant state participles. In particular, a number of participles involving overt v-layers (and thus behaving like Embick’s resultative participles) instead pattern with Kratzer’s target state participles in being compatible with still ((11)).

(11) a. The boss is still satisfied.  
    b. The patient is still hospitalized.  
    c. The city is still electrified.  
    d. The country is still colonized.

(12) shows that the same holds for German.

(12) a. Der Patient ist immer noch hospitalisiert.  
    The patient is still hospitalized  
    ‘The patient is still hospitalized.’
    b. Die Armee ist immer noch mobilisiert.  
    the army is still mobilized  
    ‘the army is still mobilized.’
c. Das Wassergeschäft ist immer noch privatisiert.
The water-business is still privatized
‘The water-business is still privatized.’
d. Das Land ist immer noch kolonialisiert.
The country is still colonized.
‘The country is still colonized.’

This suggests that at least some participles that behave like target state participles are not derived from the root but contain an additional verbalizing layer, contra Kratzer (2000).

In the following section, we will show that some participles that behave like Kratzer’s target state participles involve transitivizing morphology, which suggests that they contain an additional Voice layer on top of v, as argued for by Doron (to appear), based on similar facts from Hebrew.

### 2.2 Target state participles can involve transitivizing morphology

German has a few verbs that mark the causative alternation with a stem alternation (cp. English *rise* vs. *raise*, *lie* vs. *lay*). With the German counterpart of *sink*, for example, the transitive and the passive form are weak and use the fixed stem vowel *e* ((13a, b)), while the anticausative form is strong and uses the stem vowels *i* and *u* (as well as *a* in the past) ((13c, d)).

(13) a. Hans versenkt / *versinkt das Schiff.
    John sinksTRANS / sinksINTRANS the ship
    b. Das Schiff wurde (von der Marine) versenkt / *versunken.
    the ship was (by the marine) sunkenTRANS / sunkenINTRANS
    c. Das Schiff versenkt / *versenkt. (anticausative)
    the ship sinksINTRANS / sinksTRANS
    d. Das Schiff ist versunken / *versenkt. (anticausative; perfect tense)
    the ship is sunkenINTRANS / sunkenTRANS

Within a DM perspective, such morphological shifts must be related to the presence vs. absence of higher verbal structure, i.e. verbal structure on top of the first verbalizer/eventivizer v. In principle, two types of verbal heads present in causatives but not in anticausatives could be relevant for this morphological shift, either a further eventive v-head or a Voice head introducing an external argument, see Embick (2010).4

---

3 Other verbs with this property are given in (i-iv). These verbs do not form target state participles, however. Icelandic has a much bigger number of relevant verbs (cf. e.g. Maling & Zaenen 1990, Sigurðsson 1989).

(i) a. Er hat den Baum gefällt.
    he has the tree felledTRANS the tree is fallenINTRANS
    b. Der Baum ist gefallen.
    the tree is fallen

(ii) a. Er hat das Bild an die Wand gehängt.
    he has the picture on the wall hungTRANS the picture is/has on the wall hungINTRANS
    b. Das Bild ist/hat an der Wand gehangen.
    the picture is/has on the wall hung

(iii) a. Er hat das Kind erschreckt.
    he has the child frightenedTRANS the child is frightenedINTRANS
    b. Das Kind ist erschrocken.
    the child is frightened

(iv) a. Er hat das Kind aufgeweckt.
    he has the child wakedTRANS the child is awokenINTRANS
    b. Das Kind ist aufgewacht.
    the child is awoken

4 That is, anticausatives would involve one eventive layer (v-BECOME) while causatives involve an additional verbal layer on top (v-CAUSE) as well as a Voice Projection. as in (i)
However, a number of authors have argued (mainly on the basis of scope ambiguities with adverbs like *again*) that causatives do not differ from anticausatives in event complexity, i.e. there is no empirical motivation that causatives involve more eventive verbal layers than anticausatives (e.g. von Stechow 1995, Pytlkänen 2008, Schäfer 2008). Therefore, we follow Kratzer (2005), Alexiadou, Anagnostopoulou & Schäfer (2006, to appear) and Schäfer (2012), and take both causatives and anticausatives to be bi-eventive (involving one verbal event v and a Result State), so that the former differ from the latter only in the presence of a Voice layer (Kratzer 1996) introducing an external argument, as illustrated in (14).

\[(14) \quad \text{a. } [\text{Voice } [v \text{ [STATE]]}] \quad \text{(causative)}
\]
\[\text{b. } [v \text{ [STATE]]} \quad \text{(anticausative)}
\]

Under this conception, the presence vs. absence of the Voice layer triggers the stem alternation. Specifically, we analyze *ver-sinken/ver-senken* as follows: the prefix *ver-* introduces the result state, *sink* modifies v, and *senk* is the Spell Out of *sink* in the context of Voice (active or passive).

Turning back to adjectival passives, we crucially observe that not only the anticausative version of German *sink* can form an adjectival participle ((15a)), but also the causative form does ((15b)).

\[(15) \quad \text{a. } \text{Das Schiff ist schon lange versunken.}
\quad \text{the ship is already long sunken}_{\text{TRANS}}
\]
\[\quad \text{b. } \text{Das Schiff ist schon lange versenkt.}
\quad \text{the ship is already long sunken}_{\text{INTRANS}}
\]

This suggests that Voice can be present in adjectival passives, contra traditional assumptions about the general absence of Voice in adjectival participles in German. The verbal input to such participles is thus even bigger than what Embick suggested for resultative participles.

This leads us to the second piece of evidence that Kratzer’s distinction between target state and resultant state participles does not match Embick’s distinction. In particular, we observe that the above adjectival participle which, in our analysis, must involve Voice, behaves like target state participles. While *das Schiff versenken* does not really form a target state participle, as the *still*-modification test is only possible if the state is in principle reversible ((16a)), examples with reversible states, such as (16b), readily allow for *still*-modification with both, their anticausative but also their causative, transitive basis.

\[(16) \quad \text{a. } ??\text{Das Schiff ist immer noch versenkt.}
\quad \text{the ship is still sunken}_{\text{TRANS}}
\]
\[\quad \text{b. } \text{Die Münze ist immer noch im Aquarium versenkt / versunken.}
\quad \text{the coin is still in the aquarium sunken}_{\text{TRANS} / \text{INTRANS}}
\]

In sum, the analysis of morphological effects within the framework of DM suggests that target state participles can contain verbal structure and are not equivalent to Embick’s stative participles (which are necessarily derived from the root). Morphologically, we can identify two verbal layers, an eventive verbalizer (little v) and a transitivizer (Voice). We have also suggested that the presence of verbalizing morphology has semantic effects; at least the

Under such a decomposition one could argue that adjectival participles of causatives do not involve Voice but v-CAUSE which triggers the stem alternation. However, as mentioned in the main text, there are no empirical arguments for an additional verbal layer in causatives.
predictions are clear; they should always trigger an event implication and purely stative/adjectival readings/contexts should be out.

In the following section, we will explore the question whether the presence of transitivizing morphology implies the presence of an external argument.

3. Is the external argument present in the structure of adjectival participles?

In the previous section, we have seen that the verbs with a morphologically marked causative alternation form two adjectival participles directly related to this morphological alternation. Commonly, with minimal pairs related to these verbs, other than those based on adjectival participles, this morphology reflects semantic (in-)transitivity, which in turn is determined syntactically by the presence/absence of active or passive Voice. In (17), we see that this transitive/intransitive opposition is also found with adjectival participles, at least at an intuitive level, since there is a clear difference in interpretation. In particular, the necessarily adjectival passive based on the causative *verse*inkt implies an external argument ((17a)), while (verbal or adjectival) participles based on anticausative *versunken* lack such an implication ((17b)).

(17) a. Hurra, das Schiff ist endlich *verse*inkt.
   hooray, the ship is finally sunk*TRANS
   => job-is-done reading (cf. Kratzer 2000)
   b. Hurra, das Schiff ist endlich *versunken*.
   hooray, the ship is finally sunk*INTRANS
   => no obvious job-is-done reading though compatible with such a scenario

Negation of a causative event with these participles points into the same direction, since it is possible with the adjectival participle based on the anticausative ((18a)) but unacceptable with the adjectival passive based on the causative version ((18b)).

(18) a. Die Münze ist schon lange *versunken*, aber keiner hat sie je versenkt.
   the coin is already long sunk*INTRANS, but no-one ever sank it
   b. Die Münze ist schon lange-versenkt, *aber keiner hat sie je versenkt.
   the coin is already long sunk*TRANS, but no-one ever sank it

However, we also know that the adjectival participle of a transitive verb like *kill* implies an external argument at some level. For example, the sentence in (19) is not compatible with a situation where the president simply died from old age.

(19) Der Präsident ist getötet.
   the president is killed
   ‘The president it killed.’
The implication of an external argument here is not morphologically conditioned, though, since transitivity morphology is absent in such examples and one could assume that the idea of an external argument arises only due to conceptual knowledge about killing events (e.g. Alexiadou et al 2006). This, in turn, opens up the possibility that the implication of an external argument in adjectival passives in general might be conceptually and not structurally conditioned.

However, we find such a move problematic. In particular there are several tests that are intended to diagnose the presence of an implicit external argument at a syntactic level, most prominently control into purpose clauses and the disjoint reference effect (see (2) and (3)), but also the presence of by-phrases. As we have noted above, the traditional view is that these tests give different results in verbal and in adjectival passives (Baker et al. 1989, Kratzer 1994, 2000, among others), suggesting that the latter lack Voice. Greek has been noted to be an exception for many of these tests (Anagnostopoulou 2003, Alexiadou & Anagnostopoulou 2008, Anagnostopoulou & Samioti to appear). The received view for German is that adjectival passives contrast with verbal passives in their highly restricted availability of by-phrases and event-related adverbial modification. For English, it is commonly assumed that by-phrases are unavailable altogether. This standard view translates into a theoretical picture, according to which Greek adjectival passives have Voice, whereas English and German adjectival passives lack Voice. In the following, we will show that these standard assumptions about English and German adjectival participles cannot be maintained.

3.1 By-phrases and event-related modification in adjectival passives

The standard claim for English is that adjectival passives are incompatible with by-phrases, and to our knowledge there is little discussion on other event-related modifiers in English adjectival passives. The generality of this claim has been challenged recently, also for other languages, for which it has been shown that event-related modifiers are available (yet more restricted in the languages in A. as opposed to B.):

A. German (e.g., Rapp 1996, 1997, Maienborn 2007, 2011, Gehrke 2012)  
   English (McIntyre 2011, Bruening 2012)  
   Spanish (Gehrke & Sánchez-Marco 2012)  
   Hebrew (Meltzer 2011)  
B. Greek (Anagnostopoulou 2003, Alexiadou & Anagnostopoulou 2008)  
   Hebrew (Doron to appear, for the causative template)

We will first turn to by-phrases. Greek ((20a)) but not German ((20b)) and English ((20c)) participles allow for all kinds of by-phrases.

(20)  a. Ta lastixa ine fuskomena apo tin Maria.  
      the tires are inflated by the Mary  
      ‘The tires are inflated by Mary.’

    b. Die Reifen sind (*von Maria) aufgepumpt.  
      the tires are by Mary inflated  
      intended: ‘The tires are inflated by Mary.’

    c. Der Müllleimer ist (*von meiner Nichte) geleert.  
      the rubbish bin is by my niece emptied  
      intended: ‘The rubbish bin is by my niece emptied.’   (Rapp 1996:246)

    d. The door seemed {broken/opened/painted} (*by Mary).   (McIntyre 2013)
Some *by*-phrases, however, are acceptable also in German (and sometimes they get better in a particular context, see Rapp 1997, Schlücker 2005 among others), as illustrated in (21).

(21) Die Zeichnung ist von einem Kind angefertigt.
     the drawing is by a child produced
     ‘The drawing is produced by a child.’
     (Rapp 1997:192)

Rapp (1997) suggests that only those *by*-phrases are possible that are characteristic for the result state, but she does not spell out what exactly this means, neither in semantic nor in syntactic terms. Meltzer (2011), and similarly Maienborn (2007, 2011) generally maintain that adjectival passives only make available a state (as all adjectives do) and that the event and an external argument are completely absent. They argue that event-related modifiers modify the state directly and result in the coercion of the state into an event (Maienborn) or reconstruction of an event related to the state by a meaning postulate (Meltzer). In particular, Maienborn suggests that the restrictions on event-related modification follow from general restrictions on state modification. However, Gehrke (to appear) points out that the restrictions on event-related modification do not match the restrictions on state modification, and that an account that assumes an event (i.e. verbal structure) inside deverbal adjectives is to be preferred. Anagnostopoulou (2003), in turn, makes a structural distinction between high agent-oriented (Voice-related) and low result-oriented manner adverbs and argues that German adjectival passives only allow for the latter. In principle, then we could extend this account to *by*-phrases and make a distinction between Voice-related *by*-phrases that are disallowed with adjectival passives and low result-related ones that are allowed.

However, there are several reasons not to follow this route. For one thing, many *by*-phrases that are acceptable with German adjectival passives, such as the one in (21), are clearly event- rather than state-related and name an agent of the underlying event. Furthermore, changing the determiner of the complement of the *by*-phrase in (21), renders this example ungrammatical, as shown in (21’).

(21’) *Die Zeichnung ist von dem Kind angefertigt.
     the drawing is by the child produced

Arguing that the *by*-phrase in (21’) is agent-related and licensed by Voice whereas the one in (21) is result-related, seems rather stipulative. Gehrke (to appear) shows instead that the generalization for event-related *by*-phrases in combination with German adjectival passives is that these are acceptable with nominal complements that can receive some kind of generic interpretation (mostly indefinite and bare nominals), but unacceptable with complements that refer to a particular referent in the discourse (mostly definite NPs, including personal pronouns and proper names). She proposes that the restrictions on event-related modification with adjectival passives follow from the idea that the underlying event does not get instantiated but remains in the kind domain. Event-related modification, then, is only possible if it can modify an event kind, hence the preference for *by*-phrases with a generic flavor. We will discuss this idea in more detail in Section 4.

McIntyre (2013) and Bruening (to appear) show that *by*-phrases can appear with adjectival passives in English as well and provide examples like the ones in (22).

---

5 In addition, there are state-related *by*-phrases which appear with adjectival participles derived from stative predicates, e.g. *von der Musik beeindruckt* ‘impressed by the music’. Such *by*-phrases do not display the restrictions outlined above for event-related *by*-phrases, and also differ from the latter in terms of prosody, availability of word order variation, and other points (see Rapp 1997, Schlücker 2005, Gehrke to appear for discussion). In the remainder of this paper, we will primarily be concerned with event-related *by*-phrases.
A similar picture arises when we look at instruments, i.e. prepositional phrases headed by *with*. Greek participles allow for all kinds of instruments ((23a)), whereas this is not the case in German ((23b)).

(23) a. Ta malia tis basilisas ine xtenis *mena* me xrisi xtena.
    The hair the queen-GEN are combed with golden comb
    ‘The hair of the queen is combed with a golden comb.’
  b. Ihre Haare *sind* (*mit* einem goldnen Kamm) gekämmt. (Rapp 1996: 257)
    Mary is with a golden comb combed
  c. Der Mülleimer *ist* (*mit* der Heugabel) geleert. (Rapp 1996: 246)
    the rubbish bin is with the hayfork emptied

However, as in the case of *by*-phrases, some instruments are acceptable also in German adjectival participles (with similar semantic restrictions as discussed in the context of *by*-phrases), as illustrated in (24).

(24) Der Brief **war mit** roter Tinte/*mit* einem Bleistift geschrieben. (Rapp 1997:192)
    the letter was with red ink/with a pencil written

A similar picture emerges for English; we cite data from McIntyre (2013) and Bruening (to appear) in (25).

(25) a. The radioactive nucleotides are so small that they **remain unseen**, even **with** the most powerful microscope.
  b. Our Lord makes the DNA, the tiniest information bank of the world which **is unseen** even **with** the naked eye, …
  c. … the very earliest stages of an arteriosclerotic plaque, which **remains undiscovered** even **with** the most up to date clinical diagnostics.

Finally, only Greek freely allows all kinds of event-related adverbials ((26)), whereas there are severe restrictions in German ((27)).

(26) a. To thisavrofilakio itan **prosektika anigmeno**.
    the safe was cautiously opened
    ‘The safe was cautiously opened.’
  b. To pc itan diorthomeno **prin tris meres**.
    the pc was repaired three days ago
    ‘The pc was repaired three days ago.’
  c. To pedi itan htenis **meno sto banio**.
    the child was combed in the bathroom
‘The child was combed in the bathroom.’

(27) a. Der Müllleimer ist *langsam / *genüsslich geleert. (Rapp 1996:246)
   the waste-bin is slowly / enjoyably emptied
   the computer is before three days repaired
   intended: ‘The computer is repaired three days ago.’
c. *Das Kind war im Badezimmer gekämmt. (Gehrke 2012)
   the child was in the bathroom combed
   intended: ‘The child was combed in the bathroom.’

Again, some such adverbs are acceptable, as illustrated for German in (28).

(28) Die Haare waren schlammpig gekämmt / geschnitten. (Kratzer 2000)
   the hairs were sloppily combed / cut
   ‘The hair was sloppily combed / cut.’

To our knowledge, the literature on English does not really discuss data like these, but the following examples suggest that English behaves like German in this respect.

(29) a. *The waste-bin is emptied slowly / with pleasure.
   b. *The computer is repaired three days ago.
   c. *The child is combed in the bathroom.
   d. Her hair is sloppily combed / cut.

In sum, event-related by-phrases, instruments and adverbs can be found in both verbal and adjectival passives. While in English and German these are more restricted in adjectival participles than in verbal passive participles Greek adjectival participles allow such modifiers quite unrestrictedly. These facts have led Anagnostopoulou (2003) to argue that some Greek adjectival participles (those ending in -menos) involve a Voice projection, whereas German adjectival passives never do. However, positing that German adjectival passives generally lack Voice is immediately called into question by the Voice-related morphology we discussed in Section 2. Hence, we will not pursue this kind of approach. Instead, in Section 4, we will combine the semantic perspective provided by Gehrke (2012) and subsequent work, according to which restrictions on event-related modification follow from general restrictions on event kind modification, with the syntactic perspective presented for English in McIntyre (2013) and Bruening (to appear) that Voice is present also in adjectival passives.

In the following, we will show that the alleged absence of control into purpose clauses and the disjoint reference effect that has been taken as syntactic key arguments for the absence of an external argument in adjectival passives, do not apply to all cases of adjectival passives and further call into question the alleged absence of external arguments from adjectival passives.

3.2 Control and disjoint reference effects in adjectival passives

As mentioned in the introduction, the possibility of control into purpose clauses has been taken as a central piece of evidence in favor of a syntactically present external argument in verbal passives. The received view holds that Greek but not German/English adjectival passive constructions allow control into purpose clauses, as illustrated by the contrast between (30a), on the one hand, and (30b) and (30c) on the other. This has led to the general
assumption that external arguments are present in Greek adjectival passives but absent from German and English ones.

(30) a. Aftos o pinakas ine zografismenos apomia
    This the painting is painted by a
    omadha aktiviston gia na sokarun tus anthropus.
    group activists-GEN for to shock-pl the people
    ‘This painting is painted by a group of activists in order to shock the people.’

b. Das Bild ist gemalt, (*um die Oma zu schockieren).
    the picture is painted in-order the grandma to shock
    intended: ‘The picture is painted in order to shock grandma.’

c. The idea seemed widely publicised (??in order to discredit him). (McIntyre 2013)

However, it can be shown that at least in some cases both English and German participles allow Control into purpose clauses. McIntyre (2013) provides the following examples from English.

(31) a. The … bags remained closed in order to keep the modified atmosphere intact.
    b. Use of the name Blohm + Voss remained prohibited, in order to … spare the world the shock that ships were being built there again.
    c. The investigation launched by the prosecution remained limited in order to protect the police.

We also found plenty of Control examples for German on Google, such as the ones in (32) and (33); recall that the choice of the copula be makes sure that we are dealing with adjectival participles.

(32) a. Nachdem die Manschette aufgepumpt ist, um den Blutstrom in der Arterie zu
    block begins the release the. GEN cuff
    ‘After the cuff is pumped up in order to block the blood stream, begins the release of the cuff.’

b. Wichtig ist, dass die Fronttube bei viel Wind gut aufgepumpt ist, um die Form optimally to keep
    important it that the front tube at much wind well up-pumped is in-order the form
    ‘It is important that, in the case of strong wind, the front tube is pumped up well in order to keep the form optimal.’

(33) a. Alle anderen Bereiche sind versteckt, um den Mitgliedern maximale Sicherheit from curious looks from exterior to guarantee
    all other areas are hidden in-order the members maximal security
    vor neugierigen Blicken von außerhalb zu garantieren.
    ‘All other areas are hidden in order to guarantee all members maximal security.’

b. Die Partition ist versteckt, um ein versehentliches Löschen der Dateien zu prevent
    the partition is hidden in-order an unintended erasing the. GEN data to
    verhindern.
    ‘The partition is hidden in order to avoid that it gets deleted by mistake.’
However, the relevance of control data as a diagnostics for an implicit external argument is often rejected. In this context, William’s (1985) example in (34) is typically cited, where a purpose clause can show up with a genuine adjective, which clearly lacks an external argument on any account.

(34) Grass is green in order to promote photosynthesis.

While we agree that purpose clauses can occur in the absence of a structurally represented implicit argument, this is possible only in a very restricted contextual setting. Since this restriction does not hold for adjectival participles, we think that, nevertheless, the data in (32)-(33) are indicative for the presence of an implicit external argument in adjectival participles. In particular, it is well known that examples like (34) work in ‘director-contexts’, in which a powerful controller (a director, God, nature, or the like) is the subject of the purpose clause, as in (35a,b).\(^6\) To our knowledge, adjectives cannot license purpose clauses outside of such contexts; otherwise we would find examples like (35c,d) good.

(35) a. The cat chosen is very big in order PRO\(_{\text{director}}\) to make it visible to the audience.
   b. Peter was fast in order PRO\(_{\text{director}}\) to impress the audience.
   c. My\(_j\) cat is big \#in order PRO\(_{\text{jk}}\) to impress my\(_j\) mother.
   d. I\(_j\) bought a new car. It is very big \?(!?)in order PRO\(_j\) to impress my girl-friend.

In the above Control examples with adjectival passives, in contrast, we want to maintain that it is indeed the understood subject of the event associated with the adjectival passive, which controls PRO, not some contextually given director. Consider the contrast in (36), which shows that purpose clauses (whose subject is not controlled by God / a director) are possible (albeit slightly degraded) only with adjectival passives ((36b)), but not with adjectives ((36a)).

(36) a. Die Heizung **ist/bleibt** ganz **warm**, the heating *is/remains* very *warm*
    "um einen gemütlichen Abend zu haben.
    in-order a nice evening to have
    intended: ‘The heating is very warm in order to have a nice evening.’

   b. Die Heizung **ist/bleibt** (auf) ganz **warm** **gestellt**,
   the heating *is/remains on* very *warm put*
   "um einen gemütlichen Abend zu haben.
   in-order a nice evening to have
   ‘The heating is put on very warm in order to have a nice evening.’

We conclude from data like these that purpose clauses are not entirely impossible with adjectival passives. While these data might not convince everyone that there must be an implicit argument in adjectival passives, it is at least compatible with this idea. However, we also see that purpose clauses are much more restricted with adjectival than with verbal passives, and we will come back to this point in sections 4 and 5.

Let us then turn to the disjoint reference effect. One main argument for the proposal that verbal and adjectival passives differ in the presence/absence of Voice is the apparent lack of

\(^6\) We find the same with unaccusatives:
(i) The actor died/fell to shock the audience.
the ‘disjoint reference effect’, i.e. the availability of a reflexive reading in the latter, which was illustrated in (3) (Kratzer 1994, Rapp 1996). A further example is the following, from Roßdeutscher & Kamp (2010).

(37) a. Die Gäste sind angemeldet. (adjectival passive)
    the guests are registered
    (i) Someone else registered the guests. (disjoint interpretation)
    (ii) The guests registered themselves. (reflexive interpretation)
b. Die Gäste wurden angemeldet. (verbal passive)
    The guests were registered
    (i) Someone else registered the guests. (disjoint interpretation)
    (ii) *The guests registered themselves. (reflexive interpretation)

However, as also noted by McIntyre (2013) and Bruening (to appear), this does, by far, not hold for all adjectival participles. The effect is typically illustrated with two verbs, ‘comb’, as in (3), and, for German additionally with anmelden ‘register’ in (37) (Roßdeutscher & Kamp 2010). Crucially, however, these two verbs are naturally reflexive, i.e. although these verbs have a transitive, disjoint construal (s.o. combs someone else), these verbs tend to be used reflexively (cf. Kemmer 1993 who counts, for example, body dress verbs like dress and grooming verbs like comb or wash among the naturally reflexive verbs).

The logic of the argument that adjectival participles allow a reflexive interpretation because they lack a Voice projection whose implicit external argument would trigger a disjoint reference effect with the internal argument predicts, however, this effect to occur with all kinds of transitive verbs, e.g. töten ‘kill’ in (38). This is not what we find; in fact the adjectival participles of the majority of transitive verbs do reject a reflexive interpretation.

(38) Das Kind war getötet. (adjectival passive)
    the child was killed
    ‘The child was killed.’
    (i) Someone killed the child.
    (ii) NOT: The child committed suicide.

As we can see in this example, the disjoint reference effect occurs also in the adjectival passive. Of course, one could say that conceptual knowledge about killing events (they are naturally disjoint, not naturally reflexive) makes a reflexive interpretation in the absence of reflexive morphology deviant; but then disjoint reference effects become vacuous as a test. (39) from McIntyre (2013) makes the same point for English; the examples show that even a context explicitly supporting a reflexive interpretation cannot make a reflexive interpretation available, suggesting that the disjoint reference effect is syntactically hard wired.7

(39) a. #John criticised himself, but to me he seemed unfairly criticised.
    b. #Some people trust themselves while others underrate themselves and think they won’t succeed. Mary seems very underrated and not very trusted.
    c. #He had self-hate problems and remained very hated until he sought help.

Hence, disjoint reference effects suggest the presence of an implicit argument in adjectival passives rather than its absence. Why some adjectival passives lack the disjoint reference

---

7 The symbol # indicates that only irrelevant disjoint interpretations are possible, e.g. that others criticized John in (39a).
effect, then, is a separate issue: either there is a covert way to express reflexivity with these particular verbs or these verbs can in fact lack Voice.

In sum, unlike commonly assumed, adjectival passives do give positive results for the standard tests that have been taken to diagnose the presence of Voice. However, quantitatively, adjectival passives behave still very different from verbal passives. They pass these tests only sometimes, and we assume that the particular restrictions we find with adjectival passives follow from the fact that we are not dealing with an event particular with actual event participants that can be referred to in the discourse, but with an event kind. In the following section, we will spell out the proposal of the different kinds of data sets we have discussed in sections 2 and 3.

4. The proposal

We saw in section 2 that Embick’s (2004) stative participles, i.e. participles derived directly from the root, such as those in (40), cannot be equated with Kratzer’s (2000) target state participles, diagnosed by the compatibility with immer noch ‘still’. In particular, we have seen that some participles containing verbalizing morphology are compatible with immer noch, and we conclude from this that such target state participles can contain vPs, as in (41).

(40) \[ \text{ASP} \]
\[ \text{ASP} \quad \text{¬ OPEN} \]

(41) \[ \text{ASP} \]
\[ \text{ASP} \quad \text{vP} \]
\[ \text{v} \quad \text{¬ OPEN} \]

If Gese et al. (2011) and McIntyre (2011) are correct, and adjectival passives of unaccusatives exist, the latter could be the structure of adjectival participles of unaccusatives. Furthermore, it could be the structure of the naturally reflexive predicates which do not display the disjoint reference effect, as alluded to in the discussion of examples (37)-(39).

Let us then turn to the question whether or not adjectival participles can contain a Voice projection. We saw that the standard tests diagnosing external arguments sometimes suggest the presence of an implicit external argument in adjectival passives. The disjoint reference effect suggests this basically all the time, and the morphology is always compatible with this and sometimes suggests this strongly. In the following, we discuss different theoretical options that are compatible with these facts.

The first approach is to follow the standard assumption that Voice is always absent in adjectival passives. We think that we identified a number of arguments against this standard account. To start with, it always had the problem to explain why transitive verbs should be able to leave out Voice in the adjectival passive but not in the verbal passive or in the active. In the absence of any explanation of this, this account weakens the overall theory of argument structure. Furthermore, we have seen that transitivizing morphology sometimes explicitly
suggests that adjectival participles contain a Voice projection. In addition, we have seen that event-related modifiers in general, including by-phrases, are sometimes possible in adjectival participles in German and English. If these constructions lack Voice, we would need a theory when and how an alternative mechanism can introduce by-phrases. Note in this context however that the by-phrases that are acceptable in adjectival passives are a proper subset of the by-phrases found in verbal passives, and this fact would be unexpected under this kind of account. Finally, the fact that the majority of adjectival participles displays the disjoint reference effect suggests that this account is simply wrong.

A second approach would be to assume an ambiguity, in that some adjectival passives involve Voice, whereas others do not. However, transitivizing morphology and disjoint reference effects suggest that this cannot be right, either. In particular, we find transitivizing morphology even if other tests seem to give a negative result (e.g. if the by-phrase is out). Hence, we would need a theory to predict when Voice is present and when not (see the first point above).

Finally, a third option (similar to McIntyre 2013 and Bruening to appear) is to assume that Voice is present in adjectival passives of transitive verbs. The task of this approach, then, is to explain the restrictions we find with adjectival passives as opposed to verbal passives (i.e. the limited availability of by-phrases and event-related modifiers, the limited possibility of Control into purpose clauses, and the absence at times of the disjoint reference effect) by other means, for example by postulating a specific Voice head in adjectival passives (which would be along the lines of McIntyre or Bruening) or by proposing a semantic (in particular sortal) difference between the events involved in verbal and in adjectival passives, as proposed in Gehrke (2012) and subsequent work. In particular, we need a theory to predict when Voice can license overt by-phrases (etc.) and when not. We think the third hypothesis is the most promising.

Following Bruening (to appear), then, we assume an extra position on top of Voice, PASS, which produces verbal and adjectival passives (as well as nominalizations), as illustrated in (42) and (43).

---

(42)  
\[
\text{PASS}_{\text{VERBAL}}
\]

\[
\text{PASS}_{\text{VERBAL}} \quad \text{VoiceP}
\]

\[
\text{Voice} \quad \text{vP}
\]

\[
v \quad \sqrt{\text{OPEN}}
\]

(43)  
\[
\text{PASS}_{\text{ADJ}}
\]

\[
\text{PASS}_{\text{ADJ}} \quad \text{VoiceP}
\]

\[
\text{Voice} \quad \text{vP}
\]

---

It should be noted that generic middles can also contain transitivizing morphology although they seem to lack an implicit external argument. Schäfer (2008) argues that the reflexive morphology in German middles acts as an expletive external argument in the specifier of an expletive Voice projection; it is the presence of this expletive Voice projection, which triggers transitivizing morphology.

Another instance where we find transitivizing morphology in the absence of an overt subject are so called ‘Fate Accusatives’ in Icelandic (e.g. Maling & Zaenen 1990). As argued by Haider (2001) and Schäfer (2008, 2012), these involve a weather pronoun in subject position, i.e. they are in fact syntactically transitive.
Following Alexiadou et al. (2012), we assume that these heads introduce a Voice-shifting projection. Both PASS-heads select for VoicePs without specifier (see Bruening to appear for a possible way of implementation). PASS-verbal does not shift the category and the event properties, and it basically absorbs the external argument. PASS-adj shifts, in addition, the category and stativizes the event (derived stative).

A question that arises under this account is how to derive the restrictions on by-phrases and other modifiers as well as Control that we still find in adjectival passives, which is a problem for Bruening (to appear). We would like to relate this to the stative semantics of adjectival passives, and that these restrictions are not (argument) structural or syntactic in nature, but rather semantic. In particular, we will follow Gehrke (2012), and subsequent work, who proposes that an adjectival passive construction refers to the instantiation of a consequent state kind of an event kind. In particular, she argues that as a result of the category change from verb to adjective in adjectival passives, the underlying event associated with the verb does not get instantiated but remains in the kind domain (assuming that verbal predicates are generally predicates of event kinds, which get instantiated only when such verbal structure is directly embedded under Tense/Aspect). The consequent (i.e. result or inchoative) state associated with the verbal predicate, in turn (can) get instantiated at some later stage, as this is the one that gets embedded under Tense/Aspect (in parallel to states associated with adjectives in general). Restrictions on event-related modification, then, follow from restrictions on kind modification more generally. For example, given that event kinds lack spatiotemporal location, the event cannot be modified by spatial or temporal modifiers, as evidenced, for instance, by (27c). NPs naming participants of event kinds, in turn, as those in by-phrases or instruments, cannot name actual event participants of an event particular that can be referred to in the actual discourse, but rather have a more generic flavor (see op.cit. for details of this account).

This predicts that the examples in which by-phrases are acceptable are similar/reproducible across languages. Furthermore, contextual factors that have been shown to improve by-phrases (on which see, e.g., Maienborn 2007, Gehrke 2012) should be identical across languages. At least the facts from English and German point into this direction, and Spanish seems to pattern with these languages as well (see Gehrke & Sánchez-Marco 2012). However, this does not explain why Greek seems to be so much more productive, and we will turn to a possible explanation of this fact in the final section of this paper.

5. Cross-linguistic variation

In this last section, we will address the question of why Greek differs from English and German both as far as the distribution of by-phrases is concerned, and the type of modifiers allowed with adjectival participles. An answer to this question is provided in Alexiadou, Anagnostopoulou & Schäfer (to appear), and we summarize here their observations.

First of all, what these authors note is that Greek non-negated participles are more liberal than their German and English counterparts, supporting the conclusion that there is indeed a cross-linguistic difference between Greek and German/English. Interestingly, however, Greek negated participles, which only take the -tos suffix, admit agents and instruments under conditions very similar to those licensing such modifiers in English and German. This is illustrated in (44) below, taken from Alexiadou, Anagnostopoulou & Schäfer (to appear). Similar observations hold for the distribution of instrumental phrases:
Second, with -menos participles, the authors observe that when the modifiers are also included in the state, as in e.g. Hebrew, a target state interpretation becomes possible. This is illustrated below, data from Alexiadou, Anagnostopoulou & Schäfer (op.cit):

(45)

By-phrases
a. To stadio ine akomi perikklomeno apo tin astinomia.
   The stadium is still surrounded by the police
   ‘The stadium is still surrounded by the police.’

Instruments
b. O skilos ine akomi demenos me skini.
   The dog is still tied with leash
   ‘The dog is still tied with a leash.’

Manner adverbs
c. O skilos ine akomi demenos sfixta.
   The dog is still tied tight
   ‘The dog is still tight tied.’
d. To stadio ine akomi filagmeno prospektika.
   The stadium is still guarded carefully
   ‘The stadium is still carefully guarded.’

Locations
e. Ta axladia ine akomi voutigmenasto krasi.
   The pears are still soaked in wine
   ‘The pears are still soaked in wine.’

The above observations suggest that the cross-linguistic variation found is quite complex. We can identify the following points of variation: a) Hebrew, German and English never permit Voice-modification exclusively related to the underlying event while Greek does, with non-negated resultant state participles. b) Negated participles show a uniform behavior in all four languages and require modifiers of the appropriate type. c) Greek target state participles only permit modifiers that continue to be relevant/present in the target state, just like adjectival participles in Hebrew, German and English.

An account of these patterns would thus need to provide an answer to the following three questions raised in Alexiadou, Anagnostopoulou & Schäfer (op.cit):
1) Why is Greek more liberal than Hebrew/German/English in permitting modifiers exclusively modifying the underlying event with non-negated resultant state participles?
2) What is special about negated participles that imposes a generic/sortal interpretation on permissible modifiers, even in Greek?
3) What is special about target state participles that forces modifiers to be licensed only if they continue to be relevant (present/responsible) in the target state in Greek?

As these authors note, Kratzer (2000) has already provided the beginnings of an answer to this question. Specifically, she proposed that there are two ways to form adjectival participles. One involves a Perfect operator and yields resultant state participles, the other one does not
and yields target state participles. In contrast resultant state participles are built on an aspectual perfect operator which maps properties of eventualities into properties of times. In the spirit of the kind-token distinction we discussed in the previous section, we can rephrase this distinction in terms of the difference between event kinds and event tokens. Participles denoting consequent states of actual events express something similar to the perfect of result, Kratzer’s resultant state passives (and these, then, could even be identified with Maienborn’s 2007 temporal readings). This option would be possible only in Greek.

The final question that arises then is to which extent Greek resultant state participles are different from the Perfect of eventive passives built on the basis of HAVE + uninflected passive participle. Alexiadou & Anagnostopoulou (2008) argued that that the BE + participle in -menos construction has the semantics of the Perfect of Result. If there is indeed a difference between the two, this would have to relate to the fact that an experiential reading is possible only for the HAVE + passive participle construal, and not for the BE + -menos participle construal.

\[(46)\]
\begin{align*}
a. \ & \text{To vivlio ehi diavasti.} \\
& \text{the book has read-NA} \\
& \text{‘The book has read.’}
\end{align*}
\begin{align*}
b. \ & \text{To vivlio ine diavasmeno.} \\
& \text{the book is read} \\
& \text{‘The book is read/has been read.’}
\end{align*}

In order to test the difference between the two constructions, we need to examine their behavior in contexts which trigger an existential reading only, i.e. the result state can be denied. In Greek such contexts are found in the presence of e.g. the adverbial mehri tora ‘uptil now’, which is an adverb that triggers an experiential perfect reading (cf. Giannakidou 2003). In such a context (a) is fine, while (b) sounds odd.

\[(47)\]
\begin{align*}
a. \ & \text{To thema ehi diavasti 74 fores.} \\
& \text{the issue has read-NACT 74 times} \\
& \text{‘The issue has been read 74 times.’}
\end{align*}
\begin{align*}
b. \ & \text{#To thema ine diavasmeno 55 fores.} \\
& \text{the issue is read-neut 55 times} \\
& \text{‘The issue is read 55 times.’}
\end{align*}

This would seem to suggest that while the HAVE + passive participle construction is ambiguous between a perfect of result and an experiential reading, the BE + -menos participle construction allows only the resultative interpretation. Crucially, however, the difference between the two would relate to the type of ASP operator included, and would not be due to the presence vs. absence of Voice (von Stechow 2002). Further research is necessary in order to determine further differences between the two constructions. We will leave this topic for future research.

We note briefly, however, that participial constructions have been re-analyzed many times in the history of Greek. For instance, the string BE + participle in -menos, was the only way to form the perfect for many centuries in the history of Greek, dating from 4th century BC to nearly 19th century AD (cf. Alexiadou to appear for discussion). Although historically, the BE+participle started off as a resultative construction, it grammaticalized into a perfect around the 5th century BC. The Modern Greek perfect emerged during the Medieval Greek period out of an earlier ‘have’ future/conditional tense (basically have + aorist infinitive). This form grammaticalized as a perfect towards the 19th century.
6. Conclusion

In this paper, we argued that adjectival passives across languages do not seem to differ in terms of the presence/absence of verbal layers (v, Voice). The restrictions observed with adjectival passives compared to verbal passives are best accounted for under a semantic explanation.

References


