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RESEARCH ARTICLE

Active participles are (deverbal) adjectives

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Abstract

This paper examines so-called active participles in three languages with different morphological systems (Bosnian/Croatian/Serbian, English and Hebrew). Based on a range of morphological, syntactic and interpretational diagnostics, I argue that these elements are uniformly deverbal adjectives. This result challenges a substantial body of work claiming that active participles show an adjectival/verbal ambiguity, but it is in line with Bešlin (2023), which analyzes passive participles as deverbal adjectives. Importantly, deverbal adjectives may denote predicates of properties or predicates of eventualities (events or states), depending on the characteristics of the verbal structure they embed. If these conclusions generalize to other languages, then there is no need to assume that (verbal) participles constitute a separate grammatical category, which is a desirable theoretical outcome. The results presented in this paper argue for an architecture of the grammar in which there is no one-to-one mapping between an item's syntactic category and its meaning.

1. Introduction

In the generative tradition, active participles (1a) have received less attention than passive participles (1b). Nonetheless, research on the two types of participles has taken a similar trajectory. Specifically, there has been a general consensus regarding the active participles' categorial status, with most authors claiming that at least some of them show an adjectival/verbal ambiguity (Chomsky 1957, Fabb 1984, Brekke 1988, Milsark 1988, Bennis and Wehrmann 1990, Parsons 1990, Meltzer-Asscher 2010, 2011, Biskup 2016, 2019). The disagreement thus far has been restricted to the question of whether all prenominal active participles, like (2), are unambiguously adjectival (Borer 1990, Parsons 1990), or if they can be verbal as well (e.g. Brekke 1988, Milsark 1988, Meltzer-Asscher 2010, 2011).

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(1) a. The police are **arresting** John.
b. John was **arrested** (by the police).

(2) The **smiling** boy entered the room.

Note at the outset that active participles are distinct from gerunds (3); gerunds have the clausal distribution of nouns, despite looking identical to active participles in English.

(3) **Arresting** John / the evening was not fun for them.

In this paper, I investigate the interpretation, morphology and distribution of active participles in English, Bosnian/Croatian/Serbian (BCS) and Hebrew, with the goal of arguing that they are deverbal adjectives. I examine English participles because they have received the most attention in the literature. Being a morphologically impoverished language, English does not always provide us with the strongest positive data about categorization; therefore, I also look at two morphologically rich languages, one with concatenative morphology (BCS), the other with a non-concatenative/templatic morphological system (Hebrew). Substantial evidence converges on the conclusion that all active participles in these languages have the external syntax (i.e. clausal distribution) and morphology of adjectives, while they are internally verbal.[1] This will be shown to be the case even for active participles with an eventive interpretation.

The findings in this paper strengthen the two main conclusions reached in Bešlin (2023) – namely, that syntactic category membership is not always straightforwardly reflected in interpretation and that 'participle' is unnecessary as an independent category in the grammar. The latter conclusion sets the present analysis apart from both lexicalist and non-lexicalist approaches that argue for the existence of 'verbal' participles. An often-overlooked consequence of adopting the verbal analysis for active participles is that they must be treated as a distinct grammatical category. This necessity arises because 'verbal' (eventive) active participles do not share the same distribution as other verbs (finite or non-finite) in the languages under consideration. Consequently, maintaining that participles are 'verbal' compels us to introduce a new category to account for their (morpho)syntactic properties.[2] In lexicalist models, this would have to mean that Part(iciple) is a separate grammatical category, while in non-lexicalist analyses, an extra verbal functional projection must be assumed (for example, PartP in Doron and Reintges 2005, Migdalski 2006, Meltzer-Asscher 2010, 2011, Biskup 2019).

The paper is organized as follows. In Section 2, I establish the basic interpretive characteristics of active participles and discuss some issues that arise when one attempts to establish a strong link between the distributional properties of a linguistic item and its interpretation, for participles and more broadly. In Section 3, I provide a basic overview of the relevant English data and sketch out the two competing analyses. In Section 4, I show that active participles contain some verbal morphology close to the root, but their morphological

[1] See Emonds (1991) for an early analysis along these lines; see also Salzmann and Schaden (2019) on the adjectival nature of the (eventive active) double compound perfect in Bernese German.

[2] In Section 6, I will argue that certain distributional differences between two types of participles follow from their meaning rather than their grammatical category. Technically, certain unacceptable sentences are grammatically well-formed; the deviance is argued to follow from a semantic clash. Therefore, one could attempt to account for the distributional differences between (finite and non-finite) verbs and verbal participles based on some principled meaning difference (without assuming a category contrast), but no such attempt has been made to my knowledge.

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features are otherwise distinctly adjectival. I show that Hebrew active participles appear in verbal templates and that BCS active participles are marked with verbal theme vowels. I analyze the 'participial' suffix in the concatenative languages as an exponent of the adjectivizing morpheme, showing that the same suffix appears on root-derived adjectives. In Hebrew, the prefix that appears on active participles is analyzed as an adjectivizing morpheme. Active participles are shown to inherit their formal features (e.g. gender, number, case and/or definiteness) from nouns to the same extent as adjectives in the languages under consideration. Section 5 focuses on active participles' distributional properties, showing that they mirror the distribution of adjectives, not verbs. Evidence comes from copula selection, depictive constructions, reduced temporal clauses, attributive modification, *it*-cleft constructions, and selectional restrictions in BCS deadjectival nominals.

Finally, Section 6 shows that the diagnostics that have been used to argue for the verbal status of certain active participles either (i) rest on problematic assumptions or faulty empirical generalizations, or (ii) are sensitive to semantic properties of the elements they examine. As we will see, some of the diagnostics in that section in fact provide positive evidence that active participles pattern with adjectives, and not with verbs (word order restrictions on modification, *-ly* and *non*-affixation, phasal verb complements, and coordination). In Section 7, I discuss how the findings reported in this paper advance our understanding of grammatical categories.

2. Interpretation

Many researchers have noted that at least some active participles can have two distinct interpretations; the participle in (4a) denotes an event, while the participle in (4b) denotes a state.[3] This has led to the conception that the participle in (4a) is a verb – because verbs canonically denote events – and the one in (4b), an adjective – because adjectives canonically denote states (see, for example, Meltzer-Asscher 2010, 2011 and the references therein).

(4) a. The child is annoying the teacher.
b. the annoying child

Positing a system of transparent mappings from syntactic category to meaning components such as eventivity or stativity is theoretically appealing. In a world where adjectives always denoted states, verbs always denoted events, and nouns always denoted entities, the syntax-semantics interface would be quite straightforward, at least in this particular domain. The view that adjectives and adjectival participles invariably denote states is explicitly adopted in Parsons (1990), Meltzer-Asscher (2010, 2011) and Gehrke (2015), and tacitly assumed in most generative work on participles.

However, note first that the eventive/stative ambiguity with active participles is clearest in cases like *annoying* in (2) whose verbal counterparts can have both an eventive and a stative reading (5); see Dowty (1979), Pesetsky (1995), a.o. The distinction is much less clear with participles derived from verbs which do not show such ambiguity. Consider (6), derived from an unambiguously eventive verb.

[3] Throughout, I write the shorthand *denotes X* to mean *denotes a predicate of Xs* or *is of type* ⟨*X,t*⟩.

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(5) a. Mary (intentionally) annoyed John. *(eventive)*
b. The state of the world annoyed John. *(stative)*

(6) a. The dancing child came into the room.
b. The child was dancing as she came into the room.

Though it is true that *dancing* in (6a) can be understood as either *currently dancing* or *habitually/generally dancing*, it is unclear how this ambiguity is different from the famous stage-/individual-level ambiguities of certain prenominal adjectives; see (7a) with the two interpretations in (7b) and (7c), discussed in Chomsky (1957) and Bolinger (1967), a.o.

(7) a. The visible stars include Aldebaran and Sirius.
b. 'The stars that are generally visible include Aldebaran and Sirius' *(individual-level)*
c. 'The stars that are visible now include Aldebaran and Sirius' *(stage-level)*

A common view, recently expressed by Cinque (2010), is that this ambiguity is due to the attributive versus predicative origin of the adjective in (7a) and has nothing to do with its category. The same analysis could arguably be applied to (6a), without positing that the two interpretations arise because of a category difference. I will have more to say about the ambiguity of *annoying*-type participles in Sections 3 and 6.7; for now, it is sufficient to flag that we should be extremely careful about using any diagnostics that invoke meaning contrasts to determine syntactic category.

More generally, it is well known that verbs can denote permanent properties (e.g. *God exists*) and stage-level adjectives denote transitory eventualities (e.g. *John is hungry*), suggesting that interpretation is not a reliable diagnostic for category membership. Bešlin (2023) shows for passive participles in BCS, Greek, English and German that having the external syntax and morphology of an adjective is in no way causally related to having a stative interpretation or denoting a property. Instead, both stative and eventive participles in these languages are adjectives that embed varying amounts of verbal structure. This understanding of the facts is complementary to a prominent line of analysis of deverbal nominals within the Distributed Morphology (DM) framework. Namely, it is well established that deverbal nouns can embed more or less verbal structure, both across and within languages (e.g. Alexiadou 2001). Differences in interpretation come about due to the presence/absence of the various layers of (non-categorizing) functional structure, and despite the presence of the categorizers *v* and *n* (see Wood 2023 for a recent implementation). Yet, the ultimately nominal character of deverbal nouns has not been frequently challenged, in stark opposition to participles, where an adjectival/verbal ambiguity is routinely assumed. In the domain of participles, research has persistently (and erroneously) equated stative interpretations with adjectivehood, and eventive interpretations with verbhood, as we will see throughout the paper. Here, I will claim that all active participles are adjectives that embed varying amounts of verbal structure (see Bešlin 2023 for a similar analysis of passive participles). Their external syntax is adjectival, while their internal syntactic properties depend on the properties of the verbal functional structure they contain. While interpretation seems to correlate with certain syntactic factors (e.g. having a direct object forces an eventuality interpretation of an expression regardless of its external syntax), we will see that a specific interpretation is not a direct result of categorization.

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3. Data and Competing Analyses at a Glance

In this section, I first provide a brief summary of the relevant English data. Then, I lay out the two competing analyses of participles, making clear at the outset the differences between them.

Active participles can appear in a number of different positions, the most typical ones shown in (8)–(9). The verb corresponding to the participle in (8), call it PART-ST, is a stative verb; the verb corresponding to the participle in (9), call it PART-EV, is eventive. This is important because PART-ST and PART-EV behave differently (Meltzer-Asscher 2010). While both types of participles can appear as matrix predicates (8a)–(9a), attributive modifiers (8b)–(9b), and in reduced relative clauses (8c)–(9c), only PART-ST can appear as complements of verbs like *seem*; cf. (8d)–(9d).

(8) a. John is loving this.
b. a treat-loving child
c. Anyone loving this woman is bound to be unhappy.
d. The children seem loving (*their parents).

(9) a. John is washing the car.
b. a self-washing filter
c. The children washing the car will be rewarded.
d. *The children seem washing the car.

Independently of participles, the verb *seem* can take adjectival complements, but not (bare) verbal complements (10). The complement of *seem* position has therefore been taken as one of the foremost diagnostics for the adjectival status of participles.[4] Note that PART-ST can only appear in the complement position of *seem* if it is not followed by a direct object. This is despite the fact that the verb *love* is transitive and that the participle in (8a) and (8c) does have a direct object.

(10) The street seemed calm / *glimmer.

Based on the contrast in (8d)–(9d) and a number of other diagnostics discussed in Section 6, the consensus in the literature has been that at least some active participles show an verbal/adjectival ambiguity. As mentioned in Section 1, there is some disagreement about the verbal/adjectival status of PART-EV in the attributive position (9b). Beyond this, PART-EV has been argued to be verbal, while PART-ST is thought to be ambiguous between verbs and adjectives. For Meltzer-Asscher (2010), for example, the PART-ST in (8b) and (8d) are adjectives, while those in (8a) and (8c) are verbs.

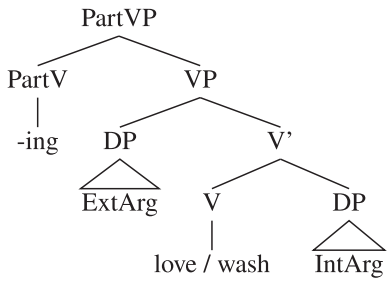
Let us spell out in more detail what this distinction entails. Meltzer-Asscher (2010) adopts a semi-lexicalist approach, in which adjectival participles are formed in the lexicon and verbal participles in the syntax. For verbal participles, she assumes the structure in (11). On this view,

[4] There are two verbs *seem* in English, one perceptual and one epistemic; see Matushansky (2002). The restriction on the complement only applies to perceptual *seem*, which takes small-clause complements, and not to epistemic *seem*, which takes TP/CP complements. Accordingly, **Mary seems jumping* is impossible, but *Mary seems to be jumping* is completely fine. The literature on active participles is concerned only with perceptual *seem*, because it differentiates between PART-ST and PART-EV.

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any morphological and distributional similarities between 'verbal' (i.e. eventuality-denoting) participles and adjectives would have to be treated as purely accidental.

(11)



For adjectival participles, Meltzer-Asscher (2010) assumes a lexical rule which applies only to stative verbs, (i) changing their category to adjective, and (ii) marking the internal argument for existential closure. An illustration of this rule in action is given in (12a); an example sentence and its denotation are given in (12b), as they appear in Meltzer-Asscher (2010: 2231).[5] Syntactically, the participle in (12b) is treated as a simple adjective.[6]

(12) a. **reveal**-V (θ_{cause}, θ_{theme}, [s]) → **revealing**-A (θ_{cause}, θ_{theme}, [s])
b. The shirt is revealing.
∃s[REVEAL(s) & Cause (s, the shirt) & ∃x[Theme(s, x)]]
'There is a state of revealing of which the Cause is the shirt, and there is some x which is the Theme of this state.'

The alternative I argue for in this paper is broadly in line with the DM framework, in which word-building is a syntactic process and morphological structure is (derived from) syntactic structure. The position that all active participles in the languages under discussion are deverbal adjectives entails that they are internally verbal – embedding more or less verbal structure – while their topmost structural layer is adjectival. Active participles of eventive verbs like *wash* in (9) are adjectives that embed a full active VoiceP (13). In (13), *v* is the categorizer that selects the acategorial root and introduces the internal argument. Voice introduces the external argument and licenses accusative case on the internal argument (Kratzer 1996). Finally, the structure is adjectivized. Participles derived from stative verbs are also able to appear in this kind of structure, as in (8a), (8b) and (8c).[7] As we will see in the following sections, the topmost adjectival layer is responsible for the fact that these participles have morphological properties of adjectives and appear in the same positions

[5] The picture is slightly different for object-experiencer verbs; Meltzer-Asscher (2010) takes the existential closure in those cases to introduce a special variable, x_{arb}, which ranges over groups of humans. This distinction need not concern us here.

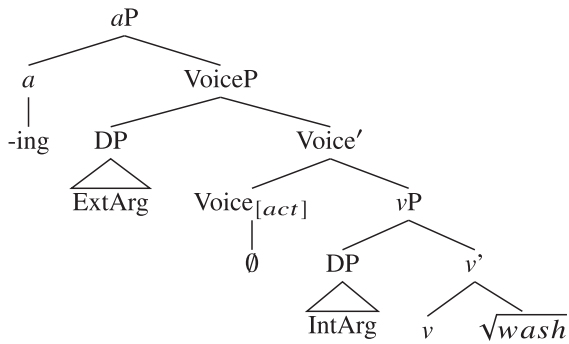
[6] There are a number of issues with this lexicalist treatment, but I do not address them here since a non-lexicalist alternative could be made compatible with my account, and my main goal here is to argue against the existence of 'verbal' participles.

[7] Active participles are also available from unaccusative verbs like *arrive* and object-experiencer verbs like *frighten*, which have been argued to be unaccusative as well (e.g. Belletti and Rizzi 1988, Pesetsky 1995). These participles have the same structure as (13) except that VoiceP is not projected. More generally, different verbs may have different syntactic structures – the important thing is that however their thematic domain is syntactically represented, the participle has an adjectival projection on top.

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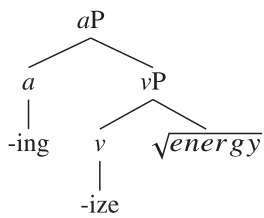
as adjectives, when no further semantic restrictions are imposed.[8] Semantically, these (deverbal) adjectives should (i) be of type ⟨e,⟨v,t⟩⟩ – that is, denote a relation between an individual (the Agent/Holder argument) and an eventuality, and (ii) be non-scalar, which will be important in accounting for why they are unable to appear in certain positions available to some other adjectives. I assume the structure in (13) for Hebrew and BCS eventuality-denoting participles as well.

(13)



As noted by Meltzer-Asscher (2010), stative verbs also give rise to participles like (8d), which can appear in the complement position of verbs like *seem*. I will argue that these participles are deverbal adjectives with an impoverished verbal structure, as in (14).[9]

(14)



These participles denote properties, and their morphology confirms that they are not simple adjectives. As we will see, these participles always appear in a verbal template in Hebrew, include a verbal theme vowel in BCS, and some of them have overt verbalizers in English (e.g. *The performance seemed electr**ify**ing / energ**iz**ing*, see Harley 2009). This is not to say that some of the relevant participles in English are not root-derived adjectives; for example, the

[8] Implementing this is straightforward for operations that are generally thought to involve c-selection – for example, co-occurrence with a particular affix (putting aside additional semantic restrictions). C-selection is robustly determined under sisterhood, so we expect the selecting element to only be able to see the adjectival layer of the participle, and not its internal structure. With other configurations where the participle behaves like an adjunct (e.g. depictives, noun modifiers), it is more difficult to appeal to selection, since selection is usually assumed to regulate the distribution of obligatory elements. This is a more general issue, however; whatever mechanism governs the ability of adjectives to modify nouns (*a sad child*), and the inability of (infinitive) verbs to do so (**a know child*), should also account for why participles can function as noun modifiers (*a knowing child*).

[9] The absence of the DP-internal argument in (14) is presumably due to the absence of Voice, which licenses accusative case. At least some speakers allow these small participles to appear with PP complements instead, as in (i), lending support to this claim.

(i) a. %As far as we're concerned, the performance seemed [energizing to the crowd].
b. %She seemed [adoring of her husband].

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equivalent of the English *boring people* in BCS is *dosad-n-i ljudi* 'boredom-A-PL.M people', where *dosadni* is a root-derived adjective whose morphology clearly differs from that of deverbal adjectives (participles), as we will see in the following section. Since English does not give us any clues as to the derivation of *boring*, we cannot determine with certainty whether it is a simple adjective or a deverbal adjective that embeds minimal verbal structure.[10]

Why is an adjectivized *v* not interpreted as a predicate of eventualities? There are several analytical options. It could be that the structure [*v* [ROOT]] never denotes eventualities and that it is only some higher functional structure that supplies this meaning; see Anagnostopoulou and Samioti (2013) for such a proposal. Alternatively, in a structure like [a [v [ROOT]]], DM architecture allows the presence of *a* to influence the meaning of *v*; in this case, the alloseme of *v* in the context of *a* would be null (see Wood 2023 for a development of this idea in the domain of nominalizations). I leave this issue for further research.

4. Morphological Generalizations

In this section, I discuss the morphological generalizations that pertain to active participles in the languages under discussion: verbal morphology, 'participial' marking and ϕ-marking. I conclude there is no morphological evidence that participles are verbs (though they contain verbal structure). In fact, the evidence clearly suggests that the grammar treats participles as deverbal adjectives.

4.1. Verbal morphology

We cannot rely on the morphology of English active participles to tell us much about their category.[11] As already mentioned, some active participles have overt verbalizers, suggesting that they contain at least *v*P (see Harley 2009, a.o.). In BCS, both finite verbs and infinitives, as well as participles (but not members of other categories), contain a so-called verbal theme vowel, which immediately follows the root. This suffix has been argued to be the exponent of *v* (Svenonius 2004, Caha and Ziková 2016, Biskup 2019, Bešlin 2023). The suffix is different for different classes of verbal stems; I illustrate the three main classes in (15). The verbal theme vowel may vary across the verbal paradigm (present tense being notoriously irregular), but the theme of the active participle is always identical to that of the infinitive.

(15)

a. spav-**a**-m	d. vol-**i**-m	g. uč-**i**-m
sleep-V–1SG	sleep-V–1SG	teach-V–1SG
'I (am) sleep(ing)'	'I (am) lov(ing)'	'I (am) teach(ing)'
b. spav-**a**-t-i	e. vol-**e**-t-i	h. uč-**i**-t-i
sleep-V-INF	love-V-INF	teach-V-INF
'(to) sleep'	'(to) love'	'(to) teach'
c. spav-**a**-l-a	f. vol-**e**-l-a	i. uč-**i**-l-a
sleep-V-A-F.SG	love-V-A-F.SG	teach-V-A-F.SG

[10] Manner adverbs are often used as a test for the presence of *v*P structure. However, since these structurally-small participles are only derived from stative verbs, and stative verbs and adjectives generally have the same modification possibilities, we cannot tell the verbal or the adjectival projection is hosting the modifier.

[11] But see Malak (1993) for evidence that the active participle in Old English, a language with richer morphology, bore all the hallmarks of adjectivehood.

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‘(has) slept’ ‘(has) loved’ ‘(has) taught’

In Hebrew, the participle consists of a root in a verbal template and a prefix (which I analyze as an adjectivizer in the following section). Setting aside the prefix (and ϕ-marking) for now, note that the verbal template *XaXeX* found with participles (16a) is also used to form the future (16b), the infinitive (16c) and sometimes the imperative (16d). This template is not used in the derivation of simple nouns or adjectives.

(16) a. me-**xanex**-et
PREF-educate.V-F.SG
‘she is educating’
b. te-**xanex**
FUT.2SG.M-educate.V
‘you will educate’
c. le-**xanex**
INF-educate.V
‘(to) educate’
d. **xanex-∅**
educate.V-IMP-2SG.M
‘Educate!’

What we have seen is that participles in the three languages show morphological evidence of containing verbal structure. Verbal morphology is found immediately adjacent to the root, suggesting that it attaches low in the structure. In Hebrew in particular, templates are determined based on the first categorizing morpheme (here, *v*), while further derivation is done with affixation, as we will see immediately in the following section.

4.2. ‘Participial’ marking

The status of the English participial suffix *-ing* is controversial, with most recent literature treating it as a verbal aspectual suffix. The picture is muddled even further by the fact that the suffix also appears in gerunds (e.g. *John’s marrying Jane surprised me.*). This has led some researchers to argue that *-ing* is special and that the result of its affixation may be of any category (e.g. Milsark 1988). However, the distributional facts in Section 5 will lead us to the conclusion that *-ing* affixation never produces verbs. In addition to attaching to certain roots (e.g. *cunning*, *grueling*, *fleeting*), *-ing* may attach to verbal stems (e.g. *electrifying*, *energizing*, *jumping*), producing adjectives in both cases. I will therefore conclude that *-ing* is an exponent of the adjectivizing morpheme (*a*).[12]

[12] In the case of English gerunds, several possibilities arise. (1) It may be that the *-ing* suffix is the adjectivizing *-ing*, and the nominalizing suffix is null. (2) English may have an additional nominalizing suffix *-ing.* The latter view receives some support from the existence of entity-denoting nouns like *building*, *lining*, *painting* and others. Historically, the two suffixes were distinct: nominal *-ing* comes from Old English *-ung/-ing*, and participial *-ing* from the Old English *-ende* (e.g. Hogg and Fulk 2011), but it is possible that they have merged into one suffix in the synchronic grammar of English speakers. (3) *-ing* may be a root, following recent work that argues some or all derivational affixes to be roots rather than (functional) categorial heads (Lowenstamm 2014, Creemers et al. 2018). I will put aside proposal (3) in the remainder of the paper, for a number of reasons. First, I believe the concerns that prompted Lowenstamm (2014)’s proposal are successfully dealt with in Embick (2014) without recourse to the

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For Hebrew, Meltzer-Asscher (2010, 2011) argues that active participles 'appear in a morphological form identical to that of verbs in the present tense, in any one of the five non-passive verbal templates of the language (*XoXeX*, *niXXaX*, *meXaXeX*, *maXXiX*, and *mit-XaXeX*)' (Meltzer-Asscher 2010: 2212).[13] However, she also claims that, unlike the present tense form (17a), the active participle in (17b) is actually uninflected for Tense (and it instead receives temporal interpretation from the main verb), as in English.

(17) a. dina **kotev-et** mixtav
Dina write-F.SG letters
'Dina is writing letters.'
b. dan ra'a et dina **kotev-et** mixtav
Dan saw ACC Dina write-F.SG letters
'Dan saw Dina writing letters.'

A likely explanation for the identity of the active participle and the 'present tense' form in Hebrew is that the 'present tense' form in this language is also a participle – a deverbal adjective on my account.[14] On Meltzer-Asscher (2010)'s account, present tense verbs, 'verbal' participles and adjectival participles all belong to distinct categories, yet they all share identical morphology. This identity has to be treated as a complete accident, despite the fact that Hebrew generally has very few instances of zero-derivation. On my account, all three forms are deverbal adjectives, which is why they share the same morphology. As we have seen, the verbal template found on participles is accompanied by a prefix, except in the case of *XoXeX*; cf. (16a). I analyze this prefix as the exponent of the adjectivizer (*a*).

Note that in order to obtain present interpretations, uncontroversially nonverbal predicates must also appear in the form SUBJECT+PREDICATE with no intervening copula (18). This well-known fact shows that Hebrew matrix clauses need not contain a(n overt) verb, so its

assumption that derivational affixes are roots. Second, it is not clear that this model explains the purported categorial flexibility of certain affixes any better than (1) or (2). Instead of assuming (1) or (2) above, view (3) must stipulate that certain roots can combine only with certain categorial heads, despite their apparent flexibility. For example, *-ian* can combine with adjectives (*reptilian*) and nouns (*librarian*), but not verbs. Furthermore, it is not just *-ian* but the combination of the roots *librar(y)* and *-ian* that determines the availability of the (purportedly null) nominalizer in this case, since *librarian* cannot be an adjective. For (3) to hold, all these stipulations must be stated somewhere in the grammar. Finally, even if one were to subscribe to the view that some affixes are roots, *-ing* would not be considered a root in the system developed in Creemers et al. (2018), given that it is not a stress-shifting affix.

[13] Meltzer-Asscher (2010) refers to the Hebrew participles and their English *-ing* counterparts as *present* participles. While this is the traditional term, I use the term *active* participle instead because the eventualities denoted by these participles can be interpreted as prior to, simultaneous with, or following the utterance time, as I make clear in the main text.

[14] As noted by a reviewer, this has the consequence that Hebrew does not have present-tense verbs. While intuitively uncomfortable, this conclusion can be made less unusual by assuming that Hebrew has a (not typologically uncommon) two-way distinction between past and non-past Tense (Comrie 1985). Indeed, Hebrew has a synthetic past Tense form, and a synthetic form that has been called the future, which I assume to be non-past. The same two-way distinction is observed for the copula *h.y.y.* 'be'. Additionally, where most languages with a past/non-past Tense distinction would use modifiers to disambiguate present from future (at least in matrix clauses), Hebrew uses participles to achieve the same communicative goal (i.e. to indicate present-time reference). Since I independently argue that the category – meaning mapping – is quite indirect, this seems like a reasonable payoff in that treating participles as (deverbal) adjectives explains their distributional and morphological properties.

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absence in (17a) cannot be taken as evidence for the verbal status of *kotevet.* Furthermore, both the participial and the nominal predicate require the same copula for past interpretations (19). If *kotevet* in (17a) were a true present tense form, (19a) would involve the addition of a past marker to an overtly marked present tense, a typologically unattested pattern.

(18) dina mor-a
Dina teacher-F
'Dina is a teacher.'

(19) a. dina **hai-ta** kotev-et mixtav
Dina BE.PAST-F.3SG write-F.SG letters
'Dina used to write letters.'
b. dina **hai-ta** mor-a
Dina BE.PAST-F.3SG teacher-F
'Dina was a teacher.'

Overall, the morphological facts from Hebrew do not support the conclusion that the active participle in this language is verbal. On the contrary, the data suggest that this participle patterns with nonverbal predicates. The distributional facts in Section 5 will allow us to pinpoint the category of this nonverbal element as an adjective.

In BCS, I focus on the active participle known in the Slavic literature as the *l*-participle (see Bešlin 2023 for a detailed analysis of BCS passive participles).[15] Historically, the *l*-participle was used to express so-called retrospective or resultative meanings (see Migdalski 2006: Chapter 1). In contemporary BCS, it is difficult to delineate the meaning of the *l*-participle itself, since it can be used in a number of different contexts, giving rise to meanings as diverse as (active) simple past, present and past perfect, resultative and future II (used in embedded and conditional contexts); see Migdalski (2006). In fact, the distinct meanings can largely be attributed to the (independent) aspectual makeup of the copula (*biti* 'be') and the participle; see Migdalski (2006) and Todorović (2016) for thorough analyses. I detail the distribution of the *l*-participle in Section 5; for now, it suffices to note that it is used attributively (20a) and as a complement of the copula in predicative position (21a). In addition to the verbal theme vowel, the *l*-participle contains a suffix that appears on some simple adjectives: *-o* for masculine singular (20b) and *-l* for all other gender/number combinations (21b). Some other examples of such simple adjectives include *kiseo* 'sour', *vreo* 'hot' and *okrugao* 'circular'.

(20) a. o-nemoć-a-o čovek
PF-weakness-V-A.M.SG man.M.SG
'a man who (has) became weak'
b. zre-o čovek
mature-A.M.SG man.M.SG
'a mature man'

(21) a. Danica je is-prič-a-l-a priču.
Danica.F.SG BE.3SG PF-tell-V-A-F.SG story
'Danica (has) told a story.'

[15] Note that participles derived from unergative/transitive verbs exhibit the allomorph ć- in attributive position; I will avoid these examples to maintain uniformity across examples.

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b. Šljiva je zre-l-a.
plum.F.SG BE.3SG mature-A-F.SG
'The plum is ripe.'

The marker *-o/-l* seems to be an exponent of the adjectivizing morpheme (*a*); note that this is not a *ϕ*-feature marker – I will turn to *ϕ*-marking next. Before I do that, let me note that the adjectival suffix *-l* is no longer productive in BCS, except with verbal bases. Furthermore, some simple adjectives derived with the suffix *-l* likely date back to Proto-Slavic – for example, **kỳslъ* 'sour' from **kys-* + **-lъ*, **-lъ* being the participial/adjectival suffix equivalent to the BCS *-l* (Derksen 2008). However, decomposition into a root and an adjectivizing suffix is still supported in modern BCS. We can contrast adjectives like *bel-(a)* 'white-(F.SG')', which were monomorphemic already in Proto-Slavic, with adjectives like *kise-l-(a)* 'sour-A-(F.SG')'. While derivation involving *bel-* in BCS always includes the 'adjectival suffix' (now part of the root) as in *beliti* 'make white', the root of decomposable adjectives in *-l* can appear independently (e.g. *kisiti* 'to taste sour', *vreti* 'to boil', *zreti* 'to mature' (not, for example, **zreliti*)).

4.3. Φ-marking

As expected, the morphology of English is not particularly telling when it comes to *ϕ*-marking. However, let me mention that active participles in closely related German have the same agreement (concord) properties as simple adjectives; namely, the participle inherits the *ϕ*-features of the noun in the attributive position, and it is uninflected in the predicative position, as seen in (22)–(23), adapted from Haiden (2001: 195).

(22) a. ein sing-end-**es** Kind
a sing-PART-NEUT.SG child
'a singing child'
b. ein traurig-**es** Kind
a sad-NEUT.SG child
'a sad child'

(23) a. Sie stieg sing-end(*-e) in den Zug.
she stepped sing-PART-F.SG into the train
'She boarded the train singing.'
b. Sie stieg traurig(*-e) in den Zug.
she stepped sad-F.SG into the train
'She boarded the train sad.'

As already shown, BCS *l*-participles can also appear in the attributive or predicative position (24). The *l*-participle inflects for case, number and gender the exact same way an adjective does in both of these positions; cf. (25). In both cases, the *ϕ*-marking of the adjective/participle is entirely dependent on the formal features of the noun it is associated with: the head noun being modified in (24a)–(25a), and the subject noun in (24b)–(25b). Note further that a restriction exists on so-called 'long forms', in that they are only available in the attributive position; the 'short form' is available in both positions, and the pattern is exactly

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the same for participles and adjectives. In BCS, this morphological distinction is correlated with a meaning contrast between specific and non-specific NPs (Aljovic 2002).[16]

(24) a. onemoć-a-**o**/ onemoć-a-l-**i** vojnik-∅
weak-V-A.**NOM.M.SG** weak-V-A-**NOM.M.SG.SP** soldier-NOM.M.SG
'a/the soldier who (has) became weak'
b. Ovaj vojnik–∅ je onemoć-a-**o**/ *onemoć-a-l-**i**.
this soldier-NOM.M.SG BE.3SG weak-V-A-**NOM.M.SG** weak-V-A-**NOM.M.SG.SP**
'This soldier (has) became weak.'

(25) a. kise-**o**/ kise-l-**i** osmeh-∅
sour-A.**NOM.M.SG** sour-A-**NOM.M.SG.SP** smile-NOM.M.SG
'a/the sour smile'
b. Osmeh-∅ im je kise-**o**/ *kise-l-**i**.
smile-NOM.M.SG they.DAT BE.3PL sour-A.**NOM.M.SG** sour-A-**NOM.M.SG.SP**
'Their smile is sour.'

In Hebrew, simple attributive adjectives inflect for gender, number, and definiteness, while predicative adjectives inflect only for gender and number (26). The pattern is exactly the same for active participles (27). In this way, Hebrew participles differ from verbs, which index person, in addition to gender and number (28). Analyzing participles as adjectives immediately explains their pattern of agreement.

(26) a. ha-sir-ot **ha**-xum-**ot** (Glinert 2004: 104)
DEF-boat-F.PL **DEF**-brown-**F.PL**
'the brown boats'
b. ha-sir-ot xum-**ot**
DEF-boat-F.PL brown-**F.PL**
'The boats are brown.'

(27) a. ha-par-ot **ha**-kofc-**ot**
DEF-cow-F.PL **DEF**-jumping-**F.PL**
'the jumping cows'
b. ha-par-ot kofc-**ot**
DEF-cow-F.PL jumping-**F.PL**
'The cows are jumping.'

[16] The literature on Slavic participles promotes a generalization that the long form is related to stativity and the short form to eventivity (Biskup 2019 and references therein). As I say in the main text, this is not true of BCS (for active or passive participles); the contrast is instead in specificity. While there is of course much to say about the properties of the long and short forms in different Slavic languages (e.g. their clausal distribution, functions and their aspectual and argument structural restrictions), a full discussion of the facts goes beyond the scope of this paper. It is possible and in fact likely that not all Slavic languages retained the adjectival character of the *l*-participle. Russian *l*-participles behave fully like finite verbs, except for some frozen forms that have retained their adjectival character. In Polish, the clitic of the copula *być* 'be' frequently appears as a suffix on the *l*-participle (e.g. *pojecha-ł-em* 'go-LPART.M.SG-1SG' 'I went'). Note that the (bare) *l*- is used to signal masculine on the participle, but it no longer does so in the above construction. In my view, the Polish *l*-participle is on its way to being reanalyzed as a finite verb (and has diverged from frozen *l*-adjectives). In a sense, then, the term '*l*-participle' for these forms in some Slavic languages is nothing more than a statement about their diachronic origin.

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(28) etmol ha-para kafc-**a**
yesterday DEF-cow jump.PAST-**3SG.F**
'Yesterday, the cow jumped.'

We have seen that, while adjectives have language-specific morphological patterns, active participles follow these patterns perfectly. In what follows, I will show that BCS, Hebrew and English active participles have the syntactic distribution of adjectives.

5. Distributional Evidence

In this section, I consider two types of syntactic evidence in support of the claim that active participles are (deverbal) adjectives. In Sections 5.1–5.3, I show that active participles pattern with adjectives and not with verbs. While these diagnostics do not single out adjectives (to the exclusion of all other categories), the only two options that have been entertained for the languages under consideration are that their participles are verbs or adjectives. Therefore, if we can give evidence that active participles do not pattern with verbs, this provides indirect support for the claim that they are adjectives. Then, in 5.4–5.6, I offer additional positive evidence for the claim that active participles appear in syntactic positions available exclusively to adjectives.

5.1. Copula selection

Without going into too much detail for reasons of space, let me note that both adjectives and active participles appear with a copula in predicative position. They therefore pattern with nouns and PPs, but different from other finite and non-finite verbs in the languages under consideration. 'Be' and its equivalents in other languages have often been called auxiliaries when they appear with participles, and copulas when they appear with adjectives; however, Becker (2000) shows that they are morphosyntactically identical in English. The same is true of BCS. As shown in Section 6.7.3, certain participles cannot appear with the future copula in Hebrew; comparing the future-copula construction and the synthetic future tense, I will argue that the future copula imposes a semantic restriction on its complement. The inability of certain participles to appear as complements of the future copula will be shown to be a consequence of this semantic restriction.

5.2. Depictives

Let us now look at depictive constructions: constructions that predicate a property of a DP (external or internal argument) that holds throughout the event denoted by the matrix predicate. English depictives can be encoded as root adjectives, participles (active or passive), PPs or DPs (29a); crucially, they cannot be verbal elements, be it infinitives or tensed forms (29b). We observe the same pattern in BCS (30). Hebrew does not have depictives; see Schultze-Berndt and Himmelmann (2004) for a cross-linguistic overview.[17]

(29) a. She found him naked/dancing/annoyed/in a state/a poor man.
b. *She found him (to) dance(d) in the yard.

[17] The BCS pattern is identical in all relevant respects. BCS depictives of the type in (30) cannot be nominal, but that is irrelevant for the point made here.

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(30) a. Našla ga je umor-n-og/ po-crven-e-∅-l-og/
found him BE.3SG tire-A-ACC.M.SG PF-red-V-ACT-A-ACC.M.SG
očar-a-∅-n-og/ u užasnom stanju.
charm-V-PASS-A-ACC.M.SG in terrible state
'She found him tired/reddened/enchanted/in a terrible state.'
b. *Našla ga je po-crven-e-ti/ crven-i.
found him BE.3SG PFV-red-V-INF red-V.PRES.3SG
'She found him (to) get red.'

Finite verbs include Tense, so they are categorially different from participles even on a verbal analysis of the latter. Influential analyses of depictives treat them as small clauses (e.g. Rothstein 1983), and small clauses never include Tense. What is more difficult is explaining why participles are acceptable in depictive constructions, but (bare) infinitives are not. Related to this point, it is not clear on a verbal analysis of participles why participles do not combine with modals, but infinitives do. While it is possible to describe these contrasts in technical terms (e.g. by stipulating that the participle contains some additional feature), this seems to be unnecessary and uninformative. Considering all the facts presented in this paper, the simplest account is one where the outward-most layer of participles is adjectival, allowing them to appear in positions available to adjectives, but unavailable to verbs.

5.3. Reduced temporal clauses

English adjectives and participles (both active and passive) may occur in what I will call a reduced temporal clause, illustrated in (31a–c). Crucially, the infinitive cannot appear in this construction (31d). At least for English, we can use this test to further show that the distribution of participles mirrors that of adjectives, and not verbs.

(31) a. When wet, the floor is very slippery.
b. When opening the door, make sure to do it quietly.
c. When opened, the door stays that way the whole night.
d. *When (to) open the door, make sure to do it quietly.

Before moving on, I should mention that this test is inconclusive when applied to BCS and Hebrew because none of the equivalents of sentences in (31) are possible, for reasons that are poorly understood.

5.4. Attributive position

Participles also appear in positions that are otherwise *only* occupied by adjectives. As shown in (20a) and (24a), BCS active participles can act as prenominal modifiers. In addition to passive participles (which are adjectives; see Bešlin 2023) and simple adjectives, active participles are the only element that can appear in this position in BCS. Meltzer-Asscher (2010) acknowledges that even the active participles that fail her other diagnostics for 'adjectivehood' appear in the attributive position in both English and Hebrew (32).

(32) a. a jumping/ crying/ growing boy
b. yeled kofec/ boxe/ oxel
boy jumping/ crying/ eating
'a jumping/ crying/ eating boy'

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Meltzer-Asscher (2010) also incorrectly claims that participles derived from eventive transitive verbs cannot appear in the prenominal position. In fact, it is simply the case that participles derived from transitive verbs need to overtly express their internal argument (see Borer 1990). The internal argument cannot follow the attributive participle because English obeys the Head-Final Filter, a generalization that attributive modifiers need to appear adjacent to the noun they modify (Williams 1982). This is true both of complements of simple adjectives and of participles (33). English is able to work around the Head-Final Filter by incorporating the object into the participle (34a–b), while some other languages can work around it by expressing fully case-marked internal arguments to the left of the attributive participle, as in Dutch (35).

(33) a. *a fond of Mary boy
b. *a making bricks machine

(34) a. a self-destroying person
b. a brick-making machine

(35) een mij veel overlast bezorgende machine
a me.DAT much trouble.ACC causing machine
'a machine that is causing me a lot of trouble' (Bennis 2004:100)

The claim that the prenominal position in languages like English is occupied only by adjectives has been challenged, but the arguments do not stand up to scrutiny. Sleeman (2011) argues that participial modifiers contain verbal structure, but gives no evidence that they are not (ultimately) adjectives. As already noted, the fact that prenominal participles contain verbal structure is problematic for the adjectival hypothesis only if one has lexicalist assumptions. Both Sleeman (2011) and Laskova (2007) also assume that being eventive equals being a verb, and conclude from the possibility of eventive interpretations in cases like (32a) that the prenominal position can be occupied by verbs. However, we saw at the beginning of this article that it is untenable to equate eventivity with verbhood and stativity with adjectivehood. Moreover, authors who accept this position must explain the absence of infinitives in the prenominal position. Once we accept that interpretation cannot determine category, the hypothesis that the prenominal position in languages like English is occupied only by adjectives is conceptually sound again.

Contrary to common belief, the prenominal position in English can accommodate some PPs in addition to adjectives (36). In this position, there is an interesting distributional contrast between adjectives and participles on the one hand, and PPs on the other. As already mentioned, both prenominal participles (36a) and simple adjectives (36b) in English have to obey the Head-Final Filter. On the other hand, PPs are not subject to the same restriction (36c). This is another instance where participles show the same distribution as simple adjectives, suggesting that syntax does not discriminate between the two based on their category.

(36) a. a smiling (*from ear to ear) boy
b. a happy (*about everything) student
c. an in-your-face management style

We have seen that attributive participles pattern with adjectives on two counts: (i) adjectives, but not verbs, can be attributive modifiers, and (ii) adjectives and participles, but not PPs, obey the Head-Final Filter in English. This further strengthens the conclusion that all

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active participles in the languages under consideration, including those derived from eventive verbs, are adjectives.

5.5. It-clefts

English adjectives and *-ing* participles are both incompatible with the cleft focus position (37a–b); see Emonds (1991: 97). This is in contrast to infinitives, which appear in this position quite freely (37c).[18] The data in (37) provide clear evidence that the distribution of participles mirrors that of adjectives, and not of verbs.

(37) a. *It was guilty about the exams that the students felt.
b. *It was talking about the exams that the students kept.
c. It was take the dog to the vet that she didn't do.

Moreover, Emonds (1991) observes that those dialects of English that allow adjectives in the focus position of a cleft also present participle phrases in that position. In some varieties of Irish English, sentences like (38a) are grammatical. In these dialects, (38b) is also grammatical.

(38) a. % It's cold and wet we are.
b. % It is trying to milk the poor you are. (Emonds 1991: 97)

The data we have just seen shows that the distribution of active participles follows that of simple adjectives; where there are dialectal differences in distributional possibilities, the participle still patterns with the uncontroversial adjective. Since distribution is largely determined by the category of an item, I conclude from this that the external syntax of these two elements is identical; namely, they are both adjectives.

5.6. C-selection below the word level

Finally, I discuss the selectional restrictions of the BCS nominal suffix *-ic-*, broadly 'one who is $X_{\underline{a}}$' (Babić 2002: 565). Even though the present discussion is concerned with elements below the 'word' level, I include it in the section on distribution because it pertains to a prime example of c-selection. Namely, the BCS suffix *-ic-* can select for adjectival input, including participles, but it cannot select for verbs. We can observe examples where *-ic-* attaches to simple adjectives (39) and active participles (40) in *-l*, and to simple adjectives (41) and passive participles (42) in *-n*. In (43), I provide a couple of examples to illustrate the general pattern – namely, that infinitives cannot serve as input to *-ic-*affixation.

(39) a. kise-l-ic-a sour-A-N-NOM.F.SG
b. okrug-l-ic-a circle-A-N-NOM.F.SG

(40) a. lut-a-l-ic-a wonder-V-A-N-NOM.F.SG
b. sij-a-l-ic-a light-V-A-N-NOM.F.SG

[18] I do not address the question why the VP *it*-cleft seems to require *do*-support. *Do*-support does not improve (37a–b).

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(41) a. rav-n-ic-a flat-A-N-NOM.F.SG
b. perja-n-ic-a feather-A-N-NOM.F.SG

(42) a. kov-a-n-ic-a mint-V-A-N-NOM.F.SG
b. izabr-a-n-ic-a choose-V-A-N-NOM.F.SG

(43) a. *kov-a-t(i)-ic-a mint-V-INF-N-NOM.F.SG
b. *izabr-a-t(i)-ic-a choose-V-INF-N-NOM.F.SG

All things equal, if active participles are (deverbal) adjectives, we expect them to be able to serve as input to affixation anywhere that a simple BCS *l*-adjective can. While this issue requires further investigation, (39)–(43) shows that participles behave the same way as adjectives (but not verbs) in this domain, thus supporting the hypothesis that they are adjectival.

6. Existing Tests do not Diagnose a Category Contrast

In this section, I discuss the diagnostics that have been claimed to distinguish between verbal and adjectival participles. Closer examination reveals that some of these diagnostics rely on problematic assumptions or incorrect empirical generalizations. Other diagnostics are instead sensitive to well-established semantic differences which are not dependent on syntactic category.

6.1. DP-complements

Bennis and Wehrmann (1990) argues that English active participles are verbs because they can have accusative-marked DP complements (44a), while prototypical adjectives cannot (44b). Meltzer-Asscher (2010) shows that the same contrast obtains in Hebrew (45). A similar pattern obtains in BCS. Namely, participles can have accusative-marked complements just like verbs; simple adjectives can have genitive- but not accusative-marked nominal complements (46).

(44) a. John is watching her.
b. John is fond *(of) her.

(45) a. hem šam'u ota xosef-et et sodoteha
they heard her reveal.(PTCP-F.SG) ACC secrets.her
'They heard her reveal her secrets.'
b. ha-viduy šela haya xosfani (*et sodoteha)
the-confession hers was revealing.A ACC secrets.her

(46) a. Jovana je poljub-i-l-a Petr-u.
Jovana BE.3SG kiss-V-A-FEM.SG Petra-ACC
'Jovana (has) kissed Petra.'
b. Jovana je vred-n-a pažnj-e/ *pažnj-u.
Jovana BE.3SG worthy attention-GEN attention-ACC
'Jovana is worthy of attention.'

The conclusion that this makes the participles verbs is warranted only on a lexicalist approach, where 'being an adjective' entails having no verbal syntactic structure. On a

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syntactic approach to word formation, the participle has an accusative-marked complement if it contains the portion of verbal structure that is responsible for licensing it (VoiceP). This does not preclude the claim that the participle is externally adjectival; recall (13). In a similar vein, Bešlin (2023) shows that English passive participles derived from ditransitive verbs can have DP complements in unambiguously adjectival positions (47). This should be impossible on a lexicalist account where the adjectival participle is essentially a simple adjective for the purposes of the syntax. On a syntactic account, the pattern can be easily accommodated: the participle in (47) is an adjective which embeds the portion of the verbal structure that licenses the oblique argument.

(47) …I seemed granted the ability to recognize things for what they truly were.
(D. Crouse, Copy Cats, p. 140)

More generally, the argument that DP complements diagnose verbhood does not stand up to scrutiny given the well-known case of gerunds (48a). The (ultimately) nominal status of gerunds has seldom been questioned, and yet they appear with accusative-marked DP complements, while simple nouns cannot (48b). On syntactic approaches to word formation, this is accounted for by positing a full-fledged VoiceP below the nominal structure.

(48) a. John's marrying her surprised everyone.
b. John sat in the corner *(of) the room.

Taken together, these facts show that having an accusative-marked DP complement – while suggestive of the presence of VoiceP – does not entail that the element in question has the clausal distribution of a verb.

6.2. Word order with modifiers

Laskova (2007) notes that English eventive passive participles pattern with verbs in that they allow post-modification by adverbs (49a–b). She contrasts this with the behavior of participles that denote a state resulting from an event: resultative participles (Nedjalkov and Jaxontov 1988, Embick 2004). Unlike eventive passive participles and verbs, resultative participles do not allow post-modification by adverbs (49c). Based on this, Laskova concludes that English eventive passive participles are verbs. Building on this work, Meltzer-Asscher (2010) argues that English *-ing* participles must necessarily be verbs because they are readily postmodified by adverbs (50).

(49) a. The silver was (carefully) polished (carefully).
b. John (carefully) polished the silver (carefully).
c. The silver seems (carefully) polished (*carefully).

(50) a. John was jumping enthusiastically.
b. I saw John jumping enthusiastically.

Bešlin (2023) argues that adverbial post-modification in (49c) is ungrammatical because the English resultative participle lacks VoiceP; thus, there is not enough verbal structure for the verbal stem to move past the adverb to Voice. She shows that the movement generally happens by pointing to examples like (51), where the selectional relation between *rely* and *on* is disrupted on the surface because the verb has moved.

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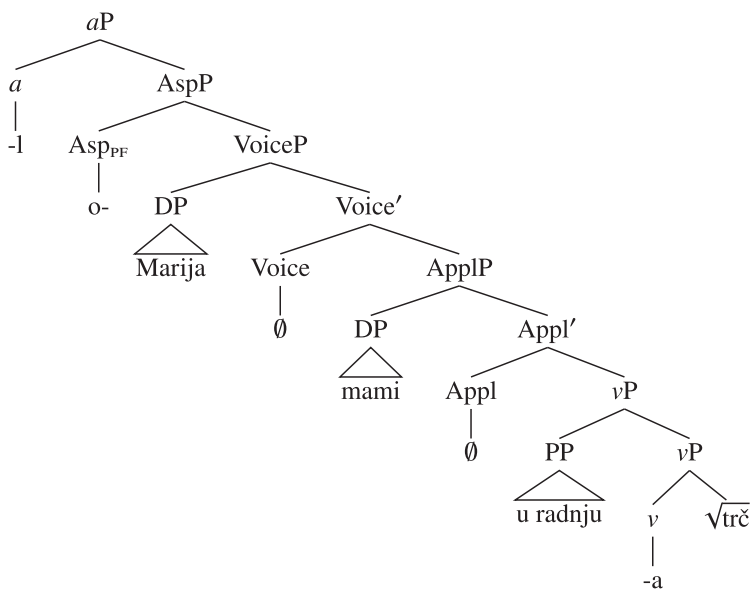
(51) He relied heavily on me.

Therefore, all that needs to be said for (50) is that the verbal structure of active participles is not impoverished in a relevant way when compared to the finite verb or the eventive passive participle. In other words, active participles in (50) include VoiceP, which allows the verbal stem to move past the adverb. This seems correct given that VoiceP hosts thematic agents, and *John* in (50) is the thematic agent of the event of jumping, denoted by the *-ing* participle. Therefore, the argument for the category contrast between resultative participles and other participles dissipates. Note that I have provided an analysis, rather than a mere observation of the relevant patterns, in contrast to Laskova (2007) and Meltzer-Asscher (2010). My analysis of this data makes no claims about the categorial status of the relevant elements (i.e. their external syntax) and is compatible with the idea that all participles have the external syntax of adjectives.

If active participles project both *v* and Voice, we predict that they should also license verbal projections which are located above *v* but below Voice. This includes high applicatives, if they are otherwise available in the language in question (see, for example, Harley 2013, 2017). Accordingly, high applicatives are indeed possible with BCS active participles (52); the structure is illustrated in (53).[19] While a closer investigation of this prediction is necessary, I am not aware of any counterexamples.

(52) Marija je o-trč-a-l-a **mam-i** u radnju.
Mary BE.3SG PFV-run-V-A-NOM.F.SG mother-DAT in store
'Mary ran to the store for her mother.'

(53)



[19] I represent the prefix *o-* in a high aspectual projection here for simplicity; alternatively, the prefix is merged low, and the (perfective) aspectual projection has null exponence (see, for example, Ramchand 2004, Svenonius 2004, Arsenijević 2006, Tatevosov 2011, 2015). Nothing in my proposal hinges on this choice.

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What happens with modifiers in the other languages? BCS has rampant scrambling; both pre- and post-modification is possible regardless of the category of the modified element. For Hebrew, I am unaware of previous attempts to use modifier placement to diagnose a category contrast between verbs and adjectives. However, my Hebrew consultants report judgments that support my analysis and argue against the analysis that some Hebrew active participles are verbs. In particular, PP modifiers with active participles show the same placement possibilities as adjectives, and not as finite or non-finite verbs. PP modifiers that are available with simple adjectives in Hebrew are always post-modificational (54). For finite and non-finite verbs, both pre- and post-modification are possible (55).[20] Crucially, the order PP-verb is available, while the order PP-adjective is not. For active participles, only post-modification is available, like with simple adjectives (56).

(54) yeled (*be-mikre) sameax (be-mikre)
child in-occurrence happy in-occurence
'an accidentally happy boy'

(55) a. dani (?be-zehirut) kipel (be-zehirut) et ha-kvisa (be-zehirut)
Dani in-care fold.PAST.3SG.M in-care ACC the-laundry in-care
'Dani folded the laundry carefully.'
b. xašuv (?be-zehirut) le-kapel (be-zehirut) et ha-kvisa (be-zehirut)
important in-care INF-fold in-care ACC the-laundry in-care
'It is important to fold laundry carefully.'

(56) a. hine yeled (*be-hitlahavut) mekapec (be-hitlahavut)
lo boy in-enthusiasm hop.PTCP.M.SG in-enthusiasm
'lo, the boy hopping enthusiastically'
b. dani (*be-zehirut) mekapel (be-zehirut) et ha-kvisa (be-zehirut)
Dani in-care fold.PTCP.M.SG in-care ACC the-laundry in-care
'Dani is folding the laundry carefully.'

We have shown that the English modification pattern is independent of the question of category and compatible with the claim that all participles are adjectival. In Hebrew, participles are modified in the same positions as adjectives and not verbs, as expected on an adjectival analysis.

6.3. Phasal verbs

In Meltzer-Asscher (2010), Emonds (1991) is cited for the claim that phasal verbs (*keep*, *resume*, *cease*) take only verbal, but not adjectival complements. In fact, this is not what is stated in the original paper; Emonds (1991)'s claim is that these verbs select elements with a [+V] feature, regardless of their external syntactic structure (Emonds 1991: 99–100). Nevertheless, let us evaluate Meltzer-Asscher (2010)'s argument at face value. The idea is

[20] Postverbal modification is strongly preferred if the adverb is in focus – for example, in (55b) in response to 'In what manner is it important to fold the laundry?' The preverbal order is possible if the entire sentence is new information, for instance, in response to the question, 'Which chores are important?' Information-structural manipulation does not affect the judgments with adjectives and participles.

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that (57) demonstrates that phasal verbs only take verbal, but not adjectival complements, and thus that participles (of intransitive verbs) in (58) must also be verbs.

(57) a. John kept / resumed / ceased watching / annoying me.
b. *John kept / resumed / ceased intelligent / mad at Sam.

(58) John kept / resumed / ceased walking / jumping.

A general point about this diagnostic is that it is not precise to say that the complement of these verbs 'must be a verb phrase'; in fact, these verbs specifically require *-ing* complements, and no other verb form can take their place (cf. **keep runs/ran/(to) run*).[21] Since the category of the participle is what is at issue, we cannot use this as a diagnostic for categorial status. Furthermore, it is not quite true that these verbs never combine with adjectives; for example, *keep* can have adjectival complements, as in *keep calm*, *keep busy*, *keep close*, etc.

However, it is true that *resume* and *cease* cannot take any (root-derived) adjectives as complements. If participles are (deverbal) adjectives, we still have to explain why *-ing* adjectives are allowed as complements of these verbs in (57a)–(58), whereas simple adjectives are not (57b). I would like to suggest that the *-ing* forms with *cease* and *resume* are, in fact, not participles at all, but rather nominal phrases (gerunds). The first reason to believe this is that these verbs do actually take simple nominals as their complements, as in (59a). Furthermore, (58) can be expanded to include the nominal possessor *his* with no change in meaning (59b), suggesting that the *-ing* form in (58) may be nominal as well. An additional argument for the nominal status of the *-ing* form in the complement of *cease*/*resume* comes from the fact that it can be coordinated with uncontroversial DPs, as seen in (60).[22]

(59) a. They ceased / resumed the peace talks.
b. John ceased / resumed **his** walking / jumping.

(60) He has not resumed running or actual football-related activities.

Of course, complements of *cease*/*resume* can be modified by adverbs, as in (61a), which may be taken as evidence for their verbal (or adjectival) status. However, I take the bracketed constituent in (61a) to have essentially the same structure as (61b), which is a nominalized VoiceP (see Kratzer 1996) that can appear in unambiguously nominal positions, as in (61c).

(61) a. They ceased/resumed [$_{DP}$ ∅ [$_{VoiceP}$ bombing the capital thoroughly]].
b. They ceased/resumed [$_{DP}$ their [$_{VoiceP}$ bombing the capital thoroughly]].
c. We were surprised by [$_{DP}$ their [$_{VoiceP}$ bombing the capital thoroughly]].

Even more compellingly, we can provide positive evidence that the *-ing* complements of *cease* and *resume* are not adjectival. It has long been noted that *very* modifies adjectives (though not all adjectives, see below) but not members of other categories (e.g. Brekke 1988,

[21] *Cease* can have infinitival complements, as in *Our region ceased to attract investment*, but the other two verbs in question cannot.

[22] This example is from *The Washington Post*, available here. Many such examples can be found on the internet; native speakers find them acceptable and completely unremarkable.

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Emonds 1991, Meltzer-Asscher 2010). Moreover, some active participles can be modified by *very*, showing that they are uncontroversially adjectival (62). Now compare (62) to (63), where the AP *very thriving* is the complement of the phasal verb–the result is ungrammatical. The ungrammaticality of (63) strongly indicates that the *-ing* complement of *cease* and *resume* is not adjectival, thus explaining why simple adjectives cannot appear in this position.

(62) a very thriving place

(63) *The place ceased / resumed very thriving.

Summing up, the complement-of-*keep/cease/resume* diagnostic cannot be used to determine verbhood (in English) because (i) no verb form other than the *-ing* form, whose category is in question, can appear in this position, (ii) some adjectives can appear as complements of *keep*, and (iii) *cease* and *resume* take gerundive, not participial, *-ing* complements. I have shown that participles and simple adjectives are equally impossible as complements of the verb *cease.* This is a distributional pattern that sets both apart from infinitives, lending further support to the idea that participles are adjectives.

In BCS, we again see participles patterning with adjectives and not with verbs. Namely, BCS phasal verbs never take participial or adjectival complements (64a). Instead, they can take finite and infinitival verbal complements (64b), in addition to PPs (64c), and bare nominal complements (64d).

(64) a. *Marija je počela grad-i-l-a kuću/ mir-n-a.
Mary BE.3SG started build-V-A-F.SG house calm-A-F.SG
intended: 'Mary started building a house/ feeling calm.'

b. Marija je počela grad-i-ti/ da grad-i-Ø kuću.
Mary BE.3SG started build-V-INF DA build-V–3SG house
'Mary started building a house.'

c. Marija je počela sa grad-nj-om kuće.
Mary BE.3SG started with build-N-INS house
'Mary started building a house.'

b. Marija je počela grad-nj-u kuće.
Mary BE.3SG started build-N-ACC house
'Mary started building a house.'

We have seen that complements of phasal verbs do not provide a suitable diagnostic for verbhood in English. However, phasal verbs in BCS can take both finite or infinitival verbal complements, but not participial or adjectival complements. Once again, participles can be shown to have the distribution of adjectives and not verbs. In Hebrew, phasal verbs always take infinitival complements, making the test inapplicable.

6.4. Adverbial affixation

In English, the suffix *-ly* attaches to adjectives to produce adverbs (65a). A number of authors have observed that only some active participles serve as input to *-ly* suffixation, taking this to indicate that only certain active participles can be adjectival in addition to being verbal (Fabb

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1984, Brekke 1988, Meltzer-Asscher 2010, a.o.). Meltzer-Asscher (2010: 2215) gives the lists in (65b–c) to illustrate the contrast. However, we should first of all recognize that not all simple adjectives serve as input to *-ly* suffixation either, (65d); therefore, an element that fails to combine with *-ly* may still be adjectival.

(65) a. careful-ly, slow-ly, similar-ly, absolute-ly, annual-ly, particular-ly, sad-ly, curious-ly, mature-ly, furious-ly, usual-ly, sudden-ly…
b. interestingly, surprisingly, excitingly, pleasingly, fittingly, lastingly, compromisingly, forgivingly, shiningly, glimmeringly, inspiringly…
c. *sittingly, *cryingly, *jumpingly, *walkingly, *writingly, *chewingly, *drawingly, *findingly, *foldingly…
d. *parlamentarily, *awarely, *unknownly, *pedestrianly, *bluely, *deadly, *leftly…

Perhaps even more damaging to the view that the different behavior of the participles in (65b–c) stems from a category contrast is the following: participles that allow *-ly* suffixation are not necessarily the same participles that appear in other 'adjectival' contexts. For example, *glowingly*, *cryingly* and *jumpingly* are well-formed adverbs according to the Merriam-Webster dictionary (contra Meltzer-Asscher 2010), but the underlying participles cannot appear, for example, as complements of *seem* (e.g. **The girl seemed jumping / crying / glowing*). If the category of the participle is supposed to account for both of these facts, we encounter a paradox. On the account developed here, all participles are (deverbal) adjectives. The reason that some participles cannot appear as bare complements of *seem* has to do with their meaning, not their category, as discussed in Section 6.7.2. While I am not able to provide a definitive explanation for the contrast between *cryingly* and **walkingly*, some such contrasts may also be explained by appealing to meaning. The paraphrase *in a walking manner* sounds very odd, while *in a crying manner* is acceptable, possibly because one does not quite know what doing something 'in a walking manner' would mean. However, participles describing *ways* of walking are quite productive in this construction (e.g. *in a limping/stumbling/strutting manner*), and the difference between *walking* and *limping* is unlikely to be one of category. Regardless, the contrast between *cryingly* and *limpingly* on the one hand, and **walkingly* on the other, shows that the relevant restriction on *-ly*-affixation is distinct from the restriction on the complement of *seem.* The restriction on *-ly* affixation is better understood, at least partly, as a constraint on which participles/adjectives can describe ways of doing things 'in an X manner'. Furthermore, if we concede that *-ly* attaches only to adjectives, as is standard in the literature, this means that *crying* and *limping* are (eventive) adjectives, contra Fabb (1984), Brekke (1988), Meltzer-Asscher (2010). The existence of adjectives that denote events goes against the idea that adjectival participles must be stative and that they are formed only from stative verbs (contra Meltzer-Asscher 2010).

According to Meltzer-Asscher (2010), Hebrew has a pattern similar to English *-ly* affixation, where 'adverbs can be formed periphrastically using *be-ofen Adj* ('in a Adj manner')' (Meltzer-Asscher 2010: 2215). Again, some participles can serve as input to *be-ofen*, while others cannot (66a–b), leading Meltzer-Asscher (2010) to conclude that only the participles in (66a) are adjectival. The first thing to notice is that, again, not all adjectives can appear with *be-ofen* (66c), so the unacceptability of (66b) does not provide convincing evidence for their non-adjectival status.

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(66) a. be-ofen me'anyen/ mafti'a/ merageš/ matmid
in-manner interesting surprising exciting lasting
'in an interesting / surprising / exciting / lasting manner'

b. *be-ofen boxe/ kofec/ holex/ kotev
in-manner crying jumping walking writing
intended: 'in a crying / jumping / walking / writing manner'

c. *be-ofen kachol/ xasar-xaim
in-manner blue missing-life
intended: 'in a blue / dead manner'

Additionally, *be-ofen xasar-xaim* 'in-manner missing-life' in (66c) is fine if *xasar-xaim* is interpreted metaphorically to mean 'lifeless', but not if it is interpreted literally as 'dead'. This further supports the idea that a problem may arise not because of an item's category, but because of its lexical meaning. Simply put, it is difficult to discern what exactly 'in a dead manner' is supposed to convey. I therefore take that the expression of manner in Hebrew is constrained by lexical meaning, in addition to the restriction on syntactic category; it is the lexical meaning, not category membership, that drives the contrast in (66).

6.5. Negative un-

Negative *un-* attaches to adjectives, but not to verbs. It also attaches to some, but not all, *-ing* participles, as seen in (67) from Meltzer-Asscher (2010: 2216). From this contrast, Meltzer-Asscher (2010) concludes that only the participles in (67a) are adjectives. She does acknowledge that *un-* cannot attach to all adjectives; for example, adjectives like *unsmart* and *ungood* are ill-formed, and the reasons for this ill-formedness are unclear.[23] This means that the failure of an element to combine with *un-* does not rule out its classification as an adjective.

(67) a. uninteresting, unsettling, unsurprising, unexciting, unpleasing, unfitting, uncompromising, unforgiving, unsuspecting, unassuming, unreasoning, unsparing, unrevealing

b. *uncrying, *ungrowing, *unjumping, *unwalking, *unwriting, *unchewing, *undrawing, *unstanding, *unfinding

We can use the prefix *non-*, which also attaches to adjectives (and nouns), but not verbs, to show that the contrast between (67a) and (67b) is not one between adjectives and verbs. For example, *non-suspecting* is possible alongside *unsuspecting*, and *non-jumping* (*exercises*) and *non-chewing* (*diet*) are also good, despite these participles' incompatibility with *un-*. This provides positive evidence that (at least some of) the purportedly verbal participles in (67b) are also adjectives. Moreover, not all adjectives in (67b) are bad; for example, *an uncrying baby* or *the nucleus of ungrowing cells* are attested and acceptable. This is relevant because Meltzer-Asscher (2010)'s account depends on the idea that all of her diagnostics

[23] Zimmer (1964) notes that *un-* does not attach to adjectival stems that have a negative value on an evaluative scale, but this does not explain why *unsmart* and *ungood* are impossible.

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show a split between the same two groups of participles, which we see is clearly not the case (cf. *ungrowing* and *non-growing*, but **growingly* and **very growing*).

6.6. Coordination

Meltzer-Asscher (2010) argues that it is impossible to coordinate some active participles with simple adjectives; the judgments in (68) are reported as they appear in Meltzer-Asscher (2010: 2217). From the purported unacceptability of these coordinated phrases, combined with the view that identity of category is a sufficient (though not necessary) condition for coordination, she concludes that the *-ing* participles in (68) cannot be adjectives.

(68) a. ??a crying and beautiful girl
b. ??a rude and jumping boy

The first thing to note is that, while the above examples may be somewhat odd, they are not unacceptable, especially when compared to, for example, **a rude and jump(s) boy*, which is judged as emphatically bad. Note that we would have no explanation for this contrast in acceptability on the view that both *jumping* and *jump(s)* are verbs. In fact, if *jumping* were a verb, it is not clear how one would account for the contrast between *a jumping boy* and **a jump(s) boy*, even in cases that do not involve coordination.

Furthermore, we can identify several factors that conspire to make (68) sound odd, none of which have to do with category. First off, the two attributes in (68a) stand in opposition, so using *and* is a strange way to connect them. Likewise, (69a) is strange compared to (69b), although both examples include coordinated simple adjectives; (69c) sounds much better compared to the original example in (68a).

(69) a. ??a beautiful and miserable girl
b. a beautiful but miserable girl
c. a crying but beautiful girl

The degraded nature of (68) may also be due to a common issue in English: coordinating adjectives from different semantic categories often sounds strange, as shown by (70). There are distinct lexical-semantic classes of adjectives which appear in a hierarchy that determines their order in a complex structure (Dixon 1977). In English, the default strategy for attributive adjectives from different classes is to order them according to class, without an overt coordinator.[24] Examples like (68)/(70) are perfectly acceptable without an overt coordinator (71). The same pattern carries over to the coordination of an *-ing* participle and a simple adjective (72).

(70) a. ??a hungry and Serbian girl
b. ??a pink and plastic chair

(71) a. a hungry Serbian girl
b. a pink plastic chair

[24] In Spanish, the only strategy for multiple attributive adjectives is to conjoin them with an overt coordinator. Thus, *Estamos buscando a un chico Guatemalteco y hambriento*, *lit.* 'We are looking for a hungry and Guatemalan guy' is a perfectly fine sentence.

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(72) a. ??a jumping and blue robot
b. a jumping blue robot

This is not to say two adjectives from different classes can never be coordinated in English; see (73). The same is true for active participles and simple adjectives (74), indicating that the generalization in Meltzer-Asscher (2010) is incorrect.[25]

(73) a. a quick and clever response
b. a big and valuable gem
c. a fast and modern car

(74) a. a perspiring and smelly teenager
b. all the raucous and head-banging fans
c. a ruthless and insulting lowlife

In sum, not only does coordination fail to provide evidence for the different categorial status of adjectives and active participles, it in fact shows that they pattern exactly alike (and unlike verbs). Coordination data should therefore be taken to provide positive evidence for the adjectival status of active participles.

6.7. Denoting eventualities vs. (scalar) properties

Next, we turn to tests that have been used to argue that only certain participles are adjectives (while others are verbs), but which are in fact better suited for singling out those participles that denote (scalar) properties, rather than a difference in category. To that end, I discuss modification by *very*, complements of *seem*, and the compatibility with the future copula in Hebrew. Eventuality-denoting active participles will be shown to be banned from these positions not because they are verbal, but because the position in question requires that the element occupying it be a predicate of (scalar) properties. In other words, some constructions involving active participles turn out to be syntactically well formed but unacceptable due to a semantic clash. Since this semantic difference is relevant on any account, I will argue that the categorial distinction can be dispensed with completely.

6.7.1. Modification by *very*

According to a common observation, *very* generally modifies adjectives; in fact, Brekke (1988: 169) takes modification by *very* as 'the conventional test for true adjective status' (see also Chomsky 1957). From here, it has been argued that participles which are not modifiable by *very* are not adjectives; cf. (75)–(76) from Meltzer-Asscher (2010: 2216). It is worth noting from the outset that not all simple adjectives can be modified by *very* (77), so the fact that some participles are incompatible with *very* cannot by itself be taken as evidence against their adjectival status.

[25] The fact that the *-ing* participle and the simple adjective can appear in variable order (*a jumping blue robot* and *a blue jumping robot*) suggests that the *-ing* element is not a nominal (gerund) in this construction. While nouns can sometimes appear as prenominal modifiers, they must occur closest to the head noun, as the following example from Kennedy (2013:331) illustrates: *a majestic towering* ***home run*** ball vs. **a majestic* ***home run*** *towering ball.*

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(75) a. The movie is very interesting / amusing / boring.
b. Your brother was very understanding.

(76) *Max is very jumping / growing / crying.

(77) a. *very parliamentary elections
b. *very former presidents
c. *very atomic physics

Additionally, Borer (1990) shows that the compatibility of a participle with *very* and other degree modifiers depends on semantic factors, those that determine whether the related verb related is compatible with the degree modifier *very much.* In (78)–(79), from Borer (1990: 97–98), we see that *very* is compatible with a participle only if the verb it is derived from is compatible with (the degree reading of) *very much.*[26]

(78) a. This story amazed/ interested/bothered me very much.
b. a very amazing/interesting/bothering story

(79) a. *This car jumped very much.
b. *a very jumping car.

Even more strikingly, Borer (1990) observes that Hebrew *me'od* 'very' can modify both verbs and adjectives, and yet only those verbs that can be modified by *me'od* give rise to participles that allow *me'od*-modification (80)–(81). Despite *me'od*'s ability to modify both verbs and adjectives, the split is the same as in English, suggesting that it is not the category of the modified element that is the problem. From here, Borer (1990) concludes that the contrasts we observe have nothing to do with the participles' categorial status, but rather with a meaning component that distinguishes the two types of verbs, and, by extension, the participles they give rise to.

(80) a. ha-sipur (me'od) 'inyen/ shi'amem/ hifti'a 'oti (me'od)
the-story (very) interested bored surprised me (very)
b. ha-sipur haya (me'od) me'anyen/ mesha'amem/ mafti'a (me'od)
the-story was (very) interesting boring surprising (very)

(81) a. *ha-para (me'od) kafca (me'od)
the-cow (very) jumped (very)
b. *para (me'od) kofecet (me'od)
cow (very) jumping (very)

What is this meaning component? Brekke (1988) states that the relevant component cannot be gradability because even participles related to gradable verbs such as *grow* are incompatible with *very* – for example, **a very growing child.* However, it is unclear what criteria Brekke (1988) uses to determine that *grow* (or *growing*) is gradable. In assuming that

[26] In (79), *very much* can only have the irrelevant quantity (amount) reading, and not the intensifier (degree) reading. While *very much*, like many other intensifiers, is generally ambiguous between a quantity and an intensifier reading, *very* is an intensifier only. Only those verbs that allow *very much* as an intensifier have participles that can be modified by *very*; see Bolinger (1972) for detailed discussion.

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the participle *growing* ought to be gradable, Brekke (1988) seems be thinking that, when a thing is growing, it may change along some dimension that comes in degrees. For example, a growing child may grow in weight or height. But from this, it does not follow that the growing, an event of change, also comes in degrees.

According to Bolinger (1972), degree (or scalar) verbs are those that allow modifiers like *very much* to have an intensifier (degree) reading rather than a quantity (amount) reading. Only verbs like (78a) are considered to be degree verbs, and only they give rise to participles modifiable by *very.* Since the two classes of verbs already differ in their ability to be modified for degree, the simplest explanation for the contrast in (75)–(76) and (80b)–(81b) is that the distinction in scalarity is inherited by the participles they give rise to. The simplest explanation, then, does not motivate a category difference between the two types of participles any more than it motivates a category difference between eventive and stative verbs.[27]

6.7.2. Complements of *seem*

As argued at length in Matushansky (2002), (perceptual) *seem* must combine with a complement that denotes a scalar predicate of type ⟨d, ⟨e,t⟩⟩: a function that maps degrees to functions from individuals to truth values. However, participles that embed full-fledged VoicePs are of type ⟨e, ⟨v,t⟩⟩: a function that maps individuals to functions from eventualities to truth-values. Simply put, the denotations of these participles involve eventualities, and the verb *seem* requires a complement with a different denotation, causing a semantic clash.

The fact that *seem* requires a scalar predicate as its complement also explains why the participles compatible with *very* are also able to appear as bare complements of *seem.* This is illustrated in (82); cf. (83) where the participial phrase necessarily denotes an eventuality.

(82) a. John's health seemed (very) worrying.
b. Wearing a tie seemed (very) fitting.
c. She seemed (very) loving.

(83) a. *The boy seemed (very) jumping / growing / crying / eating.
b. *John's health seemed (very) worrying me.
c. *Wearing a tie seemed (very) fitting him.
d. *She seemed (very) loving him.

This correlation between degree modification and the ability to appear in the complement of *seem* position is not restricted to participles. As Matushansky (2002) notes, only those nouns that can be modified by degree adjectives like *complete* or *utter* can be complements of *seem*, cf. (84a–b).

(84) a. He seemed a (complete/utter) fool.
b. *He seemed a (complete/utter) postman.

[27] *Very* and *me'od* are degree modifiers only; they do not have the quantity reading like *very much* does, which is why (79b) and (81) are plainly unacceptable.

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Since no one is tempted to posit a syntactic category difference between the nouns *fool* and *postman*, the pattern in (82)–(83) should not tempt us to do so for participles either. Certain positions require that the elements occupying them be scalar, and the lexical meaning of some, but not all, nouns and adjectives allows them to be understood as (predicates of) scalar properties.

6.7.3. The future copula in Hebrew

The (in)compatibility of some Hebrew participles is another pattern that may be better explained by appealing to the distinction between property- and eventuality-denoting predicates rather than to a category difference. Meltzer-Asscher (2010) shows that present participles behave non-uniformly in this context: some are able to follow the future copula (85a–b), and others not (85c). Additionally, Hebrew adjectives but not verbs can follow the future copula (86); see Doron (2003).

(85) a. ha-yeled yihiye me'anyen/ mafti'a/ meša'aše'a/ margiz
the-boy will.be interesting surprising amusing annoying
'The boy will be interesting / surprising / amusing / annoying.'

b. ha-ir tihiye mesagseget
the-town will.be flourishing
'The town will be flourishing.'

c. *ha-yeled yihiye kofec/ holex/ gadel/ boxe
the-boy will.be jumping walking growing crying
intended: 'The boy will be jumping / walking / growing / crying.'

(86) a. ha-yeled yihiye yafe/ xaxam/ xacuf
the-boy will.be beautiful smart rude
'The boy will be beautiful / smart / rude.'

b. *ha-yeled yihiye lo'es mastik/ mekapel niyarot
the-boy will.be chewing gum folding papers
intended: The boy will be chewing gum / folding papers.'

From this, Meltzer-Asscher (2010) concludes that the participles in (85a–b) are adjectives, while those in (85c) are verbs. This conclusion is premature. The same participles that allow *me'od*-modification can also appear with the future copula; see Meltzer-Asscher (2010: 2215) for details. We may therefore suspect that, like *me'od*-modification, compatibility with the future copula depends on the participle's meaning (namely, whether it denotes a property or an eventuality). In fact, it seems that the future copula in Hebrew cannot combine with eventuality-denoting predicates.

To see this, consider the following. Hebrew has a synthetic future tense, and the roots in (85a–b) can also appear in that construction – for example, (87).

(87) ha-ir tesagseg
the-town flourish.FUT
'The town will flourish.'

Is there a difference in the interpretation of (85b) and (87)? The answer seems to be 'yes'. Consider the co-occurrence of the predicate with *be-atsmo* 'by itself' in the two constructions.

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Co-occurrence with *be-atsmo* has been argued to diagnose the syntactic presence of a Cause argument (Levin and Rappaport Hovav 1995, Alexiadou and Anagnostopoulou 2004, Koontz-Garboden 2009, Alexiadou and Doron 2002, Kastner 2017, a.o.). Since the Cause argument is associated with a causing subevent, we expect it to be unavailable with predicates that do not denote eventualities. As expected on my hypothesis, *be-atsmo* is available with the Hebrew equivalent of 'flourish' in the synthetic future tense, but not when the participle combines with the future copula (88a–b). This suggests that only the participle in (88b) denotes an eventuality. Example (88a) is unacceptable even though the participle *mesagseget* can otherwise combine with *be-atsmo* (89a). It is specifically the presence of the future copula that precludes *be-atsmo*. Recall that participles like *mesagseget* are ambiguous between eventuality-denoting and property-denoting predicates; the future copula can only combine with the property-denoting participle.

(88) a. *ha-ir tihiye mesagseget be-atsm-a
the-town.F will.be flourishing from-itself-F.SG
'The town will be flourishing by itself.'
b. ha-ir tesagseg be-atsm-a
the-town.F flourish.FUT from-itself-F.SG
'The town will flourish by itself.'

(89) a. ha-ir mesagseget be-atsm-a
the-town.F flourishing from-itself-F.SG
'The town is flourishing by itself.'

The evidence clearly suggests that the predicate following the future copula cannot denote an eventuality. Eventive verbs always give rise to eventuality-denoting active participles, and they are incompatible with the future copula, as seen in (85c). Since this restriction seems to hold in addition to any c-selectional restrictions of the future copula, co-occurrence with the copula does not tell us anything about the participles' category.

7. Conclusion

In this paper, I have challenged the assumption that active participles fall into two subclasses – adjectival and verbal – which belong to separate lexical categories. I argued that interpretation is not a reliable cue for determining category membership. I also showed that both morphology and distribution indicate that active participles are externally adjectival. The adjectival/verbal distinction found in the literature is the result of applying diagnostics which (i) rely on problematic assumptions or faulty empirical generalizations, or (ii) are sensitive to the participles' semantic properties. Based on this and a number of well-grounded diagnostics, I argued that all participles in the languages under discussion are (deverbal) adjectives, that there are no 'verbal participles', and that 'participle' is not a distinct grammatical category. Adopting this conclusion, we are left with a simpler grammar which provides us with better empirical coverage, both desirable results. Since participles are argued not to be an independent category in the adult grammar, we can be relatively confident that they also do not form part of the initial state of the learner, or the inventory of *substantive universals* in the sense of Chomsky (1965).

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