# Blocking 

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## 1 Introduction

An attempted question like (1) is ungrammatical in English.
(1) *A good boy is who?

There are two ways of thinking about what this datapoint tells us. The first is that (1) is ungrammatical because that is just not the way we say things; the "right" way of saying (1) is in (2). This is perhaps the more intuitive way of thinking about this example, at least for non-linguists. The intuition here is that the two utterances are in competition with one another, whereby (2) blocks (1).
(2) Who's a good boy?

Contemporary work, particularly within DM, has another way of thinking about this contrast. Given the metaphor of the grammar as a machine generating all and only grammatical strings, this machine will simply never produce something like (1) because there is no way to generate that utterance. As Embick and Marantz (2008) put it in their discussion of this issue, "Rules Apply", but there is no rule that can give us a clause-final unstressed wh-word. On a typical syntactic analysis of questions (e.g. Adger 2003), whenever C has an unvalued [wh] feature, a DP carrying a [wh] feature moves to Spec,CP. We get clause-initial Who, and accordingly Who's. That is the rule; in-situ is who is simply not generated in this case.

Many linguists find this kind of argumentation appealing. Nevertheless, a similar argument seems to be harder to swallow when applied to single words. The past tense of (3) is not (4a) but (4b).
a. *goed
b. went

As far as traditional intuitions are concerned, *goed does not exist because it is blocked by went, and as such is a different case entirely than in-situ \#is who. After all, the latter is possible as a string in other contexts (including echo questions). But as far as work in DM is concerned, the two cases are identical. Competition holds only insofar as went is preferred to *goed as the past tense form, but the two words are not compared as wholes. As we will review below, the grammar must decide which exponent of the root $\sqrt{\text { GO }}$ to insert at Vocabulary Insertion, choosing the more specific went by Pāninian ordering ( $g o$ is the default form that would have otherwise been inserted according to the Elsewhere Principle). This is the only case in DM word-formation where some element is blocked by another: when the grammar decides which string (Vocabulary Item) to use when spelling out a specific morpheme (here the root $\sqrt{\text { GO }}$ ).

The host of phenomena assumed under "blocking" were identified by Embick (2007) as in (5), while Embick and Marantz (2008) define "standard blocking" as in (6).
(5) A case in which the existence of one form prevents the appearance of another form whose existence would otherwise be expected (all other things being equal).
(Embick 2007:5)
(6) Some forms are ungrammatical only because other forms happen to exist and win over them; competition takes place at the level of the word, phrase, or sentence. (Embick and Marantz 2008:9)
In the interest of clarity I will use "competition" for the intuitive, descriptive sense as in (6) and "blocking" to mean a grammatical mechanism regulating the appearance of competing forms; this is not necessarily the way these terms are used by different authors. Using this terminology, the only blocking in DM is selection of a VI for insertion at a node. While some authors assume or argue that the two are identical in at least some cases, under DM blocking is limited in scope and most of what is intuitively seen as competition ought to be analyzed in other terms.

In this chapter I will attempt to clear up different notions of competition and blocking at both the word and phrase level, drawing on a number of case studies. The inherent biases of such an overview should be clear: it is meant to survey how DM addresses competition when taking the DM view of blocking as axiomatic. The first case study, in Section 2, deals with individual words. The second (Section 3) discusses synthetic and analytic comparatives in English. Section 4 then compares verbal and adjectival passives in Hebrew and Latin. In all of these cases it has been claimed that certain forms compete with others; we will make sense of these proposals in light of the claim that blocking
only applies at the level of VI but not between larger units (words vs words, or words vs phrases). Section 5 concludes with some general words on "competition" and whether this concept is useful, together with some avenues for future work.

## 2 Blocking in morphology

### 2.1 Word/word competition: What inflection *teached us

The basic idea behind blocking relates to individual words, specifically in inflection, and is traditionally traced back to the invocation of Pāninian ordering by Kiparsky (1973, 1982). Affixes are assumed to have a default exponent, the Elsewhere Form (see chapters ALLOMORPHY, SUPPLETION). The English nominal plural is $-s$ and the English past tense is -ed (setting phonologically conditioned variants aside). In some cases, however, an irregular form of the affix (7c) or even the stem ( 7 d ) might be chosen. The intuition is that the specific forms in ( $7 \mathrm{c}-\mathrm{d}$ ) block usage of the default affixes seen in (7a-b).

|  |  | Regular, productive | Irregular |
| :--- | :--- | :--- | :--- |
| a. | dog | $\checkmark$ dog-s | $X$ dogg-en |
| b. | walk | $\checkmark$ walk-ed | $x$ wunk |
| c. | ox | $\times$ ox-es | $\checkmark$ ox-en |
| d. | teach | $x$ teach-ed | $\checkmark$ taught |

DM handles the Elsewhere Principle using lists. An irregular plural like -en in oxen is listed under the Vocabulary Item for [plural].

$$
\text { [PLURAL] } \leftrightarrow \begin{cases}\text { a. }-e n & / \_\sqrt{\text { OX }}  \tag{8}\\ \text { b. } \emptyset & / \overline{\text { O }}\{\sqrt{\text { SHEEP }}, \sqrt{\text { MOOSE }}, \sqrt{\text { FISH }}, \ldots\} \\ \text { c. }-s & / \text { elsewhere }\end{cases}
$$

When it is time to insert the exponent of [PLURAL], the lists in (8) are consulted and the appropriate form is chosen. Importantly, there is no reference to *oxes, *fishes or *doggen anywhere in the VIs. Oxen does not block *oxes, but -en does block -s. This kind of blocking-as part of Vocabulary Insertion, in competition regulated by the Elsewhere Principle-is the only kind of blocking as a grammatical mechanism present in DM: competition for insertion of a VI at a node.

### 2.2 Word/word competition: The curious case of deriving *gloriosity

One of the many important contributions of Aronoff (1976) was to extend the traditional idea of blocking to derivation (but see Chapter DERIVATIONAL MORPHOLOGY). To follow an oft-cited example, the adjective curious has a corresponding noun, curiousity. A straightforward account would suggest that the noun is derived by affixing -ity to the adjective, (9a-b). This would be a regular process. But the word glorious and others do not obey this rule: the most closely related noun is the unaffixed glory, (9c-f). Aronoff (1976) famously proposed that this special form blocks the productive process of default affixation. In contrast to -ity, the suffix -ness appears to be exceptionless; virtually every adjective can be nominalized using this suffix. For Aronoff (1976), this means that there are two relevant ways of forming nouns in a paradigm. The first is the -ity rule, which allows for exceptions. The second is the -ness rule, which does not. ${ }^{1}$

1. Examples (9a,c-e) are from (Aronoff 1976:44); (9b) is from Embick and Marantz (2008:18); (9f) is my own, as far as I can tell; and many others probably exist.

|  |  | Nominal process \#1 |  | Nominal process \#2 |
| :--- | :--- | :--- | :--- | :--- |
|  | Adjective | Noun (Adj + ity $)$ | Noun (short) | Noun (Adj + ness $)$ |
| a. | curious | $\checkmark$ curios-ity | $X$ cury | $\checkmark$ curious-ness |
| b. | viscous | $\checkmark$ viscos-ity | $X$ viscy | $\checkmark$ viscous-ness |
| c. | glorious | $X$ glorios-ity | $\checkmark$ glory | $\checkmark$ glorious-ness |
| d. | spacious | $X$ spacios-ity | $\checkmark$ space | $\checkmark$ spacious-ness |
| e. | furious | $X$ furios-ity | $\checkmark$ fury | $\checkmark$ furious-ness |
| f. | marvelous | $X$ marvelos-ity | $\checkmark$ marvel | $\checkmark$ marvelous-ness |

This view has immediate appeal and has been assumed in large swaths of the morphological literature. Yet theories like DM cannot express this idea on its own terms, because DM has no way of referring to relationships between words within a paradigm; there are no paradigms and no morphological trans-derivational constraints beyond syntactic structure building (cf. Chapter PARADIGM FUNCTION MORPHOLOGY). Something entirely different needs to be said.

The canonical DM analysis of these patterns was put forward by Embick and Marantz (2008). The hallmark of this analysis is that it lists irregular forms-as any analysis must-but does not introduce blocking in the Aronovian sense. The structures for the adjective, nominal form \#1 and nominal form \#2 related to curious (9a) and glorious (9c) are given next, followed by the relevant VIs.

The adjective curious is an adjective derived directly from the root $\sqrt{\text { CURIOUS }}$ (Embick and Marantz 2008:12), (10). Nominal form \#1 can be derived from the same root using the standard -ity suffix. On this analysis, there is no underlying adjective, only an underlying root, (11). It is also possible to take the adjective curious and derive nominal form \#2 using the suffix -ness, which is assumed to combine with lexicalized (categorized) adjectives, i.e. with the head little $a$, (12).

(11)

(12)


What about glory and *gloriosity? The root is now assumed to be $\sqrt{\text { GLORY }}$. First, the adjective is derived directly from the root. Now the suffix -ous must be chosen, (13). Note that this structure does not differ from that in (10); it is only the VI realizing the adjectivizing head which differs, as I show in (16)-(17) below. The noun is derived with a null suffix, (14); the -ity exponent of little $a$ is simply not listed with this root. Productive -ness can attach to the full adjective, (15).
(13)

(14)



Here are the relevant VIs. For adjectives, the different adjectivizers are inserted for different roots, (16). Similarly for nouns, $\sqrt{\text { CURIOUS }}$ and $\sqrt{\text { GLORY }}$ are placed on different lists, each with its immediate nominalizer, (17). In addition, -ness is given as the elsewhere case (17c), which can apply when something larger than a root is being nominalized. The fact that the roots/stems in (16a) end in the string -ous does not factor into the analysis, whereas it drives a blocking-based one. Additional elaboration on these rules is given in Embick and Marantz (2008).

$$
\begin{align*}
& a \leftrightarrow\left\{\begin{array}{l}
\text { a. } \emptyset \quad / \_\{\sqrt{\text { CURIOUS }}, \sqrt{\text { VISCOUS }}, \ldots\} \\
\text { b. -ous } / \ldots\{\sqrt{\text { GLORY }}, \sqrt{\text { SPACE }}, \ldots\}
\end{array}\right.  \tag{16}\\
& \mathrm{n} \leftrightarrow \begin{cases}\text { a. -ity } & / \_\{\sqrt{\text { CURIOUS }}, \sqrt{\text { VISCOUS }}, \ldots\} \\
\text { b. } \varnothing & /=\{\sqrt{\text { GLORY }}, \sqrt{\text { SPACE }}, \ldots\} \\
\text { c. -ness } & / \text { elsewhere }\end{cases} \tag{17}
\end{align*}
$$

Examining the rules, there is no way for the adjectivizer -ity to be inserted next to little $a$ realized as -ous, accounting for Aronoff's observations without blocking between words. Affixes might compete, as in (16)-(17), in which case the most highly specified one wins. But words do not. In DM, for words to be derivationally related means that one structurally contains the other. This is the case with -ness, but all that glory and glorious share is an abstract root, not a categorized word.

This brief overview necessarily left out a large number of details, of which three loose ends should be mentioned. The first is that the question of how many different little $n$ heads exist has not yet been answered authoritatively (see Chapters DERIVATIONAL MORPHOLOGY, INTERPRETATION OF STRUCTURES and ALLOSEMY, and cf. Baeskow 2012). The second is that some potential counterexamples to the English patterns exist, including attested cases of gloriosity; on these see the explicit discussion in Embick and Marantz (2008:24). Marantz (2001) also mentions pomposity, monstrosity and porosity (the meaning of the latter two is noted, in a slightly different context, in Aronoff 1976:39). The third is the possibility of "synonymy blocking" between words of different paradigms/roots in which e.g. thief ostensibly blocks \#stealer. This mechanism of blocking was suggested by Giegerich (2001) and critiqued by Embick and Marantz (2008).

### 2.3 Word/phrase competition

Another type of blocking which has been proposed is that kind that holds between a word and a phrase. Following the influential proposal of Poser (1992), this has come to be known as "Poserblocking". Simply put, Poser-blocking is meant to regulate competition between a single word and a phrase, as when comparative smarter is preferred to \#more smart: words block phrases when the word and the phrase would mean the same thing. Poser's main data came from English comparatives, Japanese causatives and Basque progressive forms. Important works discussing similar data include Di Sciullo and Williams (1987) and Andrews (1990).

How exactly this view should be formalized is a question that has received a number of different answers since Poser (1992). Bresnan (2001) proposed a view of blocking within Optimality Theory (OT, Prince and Smolensky 1993/2004) in which words and phrases can compete, introducing data from English auxiliary contraction into the mix. Hankamer and Mikkelsen (2018) have recently argued that something like Poser-blocking could exist, but only when viewed through the lens of DM-blocking, that is, as competition between an affix and a free morpheme that is decided at VI. Their Danish data are not reviewed here for reasons of space, although that debate should also be seen as an integral part of the literature on this topic.

Regardless of how the problem of formalizing these kinds of patterns is resolved, it cannot arise in a theory like DM which is architecturally skeptical about blocking. As with word/word competition, DM has by design no way of contrasting the derivation of a word with the derivation of a phrase. The rest of this chapter will be dedicated to how three cases where such blocking could be argued for have been discussed in the recent literature. First, however, I will briefly review two approaches to word/phrase competition in OT.

### 2.3.1 OT Blocking

The theory I dub OT Blocking, proposed most explicitly by Kiparsky (2005, 2010), posits competition based on two contrasting constraints, Markedness and Expressiveness. The former is a typical markedness constraint, which can be relativized to the phenomenon under discussion (as we will do in the case studies that follow). The latter is a faithfulness constraint which requires that all meaning in the input be represented in the output.
a. Markedness: Avoid complexity. This constraint was introduced as Economy in Kiparsky (2005:114) where it required that the simplest expression be chosen.
b. Expressiveness: Express the meaning of the input (Faithfulness in Kiparsky 2010:318).

For the English past tense John left, the expression of past tense morphology appears as a suffix rather than an independent auxiliary because MARKEDNESS prevents too many words from expressing the same idea.

## (19) John left:



Contrasting (19) with focused John DID leave, the theory needs to employ different MARKEDNESS and Expressiveness constraints. Kastner and Zu (2017) formalize Kiparsky's analysis of focus in English as follows. $\checkmark$ John left does not block emphatic $\checkmark$ John DID leave because the latter carries focus; indeed, Kiparsky (2010:319) suggests that blocking only holds within paradigms, when different expressions are synonymous. Kiparsky (2005:114) similarly takes competition to hold only in inflection. Assuming that pronouncing focus counts as an extra violation of Markedness, the analysis would have to index a highly-ranked Expressiveness(Focus) constraint focus constructions, beyond the general faithfulness constraint to input meaning. Otherwise the most harmonic candidate would be unmarked (20c).

John did $_{\text {FOCUS }}$ leave:

| John FOCUS PAST leave | EXPRESSIVENESS(FOCUS) | MARKEDNESS | EXPRESSIVENESS |
| :--- | :---: | :---: | :---: |
| a. John did $_{\text {FOCUS }}$ leave |  | $* *$ |  |
| b. John did leave | $*!$ | $*$ | $*$ |
| c. John left | $*!$ |  | $*$ |

### 2.3.2 Neutralization

Another formalization of competition between phrases allows competing candidates to have different meanings. This view is encapsulated in the Neutralization approach to competition, also within OT (Legendre et al. 1998; Legendre 2009; Müller 2011, 2013). In this line of work the candidate with the closest meaning to the input might be chosen.

The case of multiple wh-questions from Legendre (2009) serves to explain. Assume that each clause with a wh-question contains an operator, Op, which in English and many European languages attracts the wh-phrase. Two Op heads would then attract two distinct wh-phrases. But different languages handle multiple wh-phrases in different ways: Bulgarian fronts both, (21a), English leaves one in situ, (21b), and Chinese leaves both in situ, (21c).
(21) Input: [ $\mathrm{Op}_{1} \mathrm{Op}_{2}\left[\mathrm{DP}[\mathrm{wh}]_{1} \ldots \mathrm{~V}\right.$...DP [wh] $\left.\left.{ }_{2}\right]\right]$
a. $\boldsymbol{k o j}_{1} \boldsymbol{k a k v o}_{2}$ na kogo e da? Bulgarian
who what to whom has given
'Who gave what to whom?'
b. Who $\mathbf{o}_{1}$ bought what ${ }_{2}$ ?

English
c. lisi geile shei shenme $_{2}$ ? Mandarin

Lisi gave who what
'What did Lisi give to whom?'
(Kastner and Zu 2017:649)
In each of these languages, the right combination of markedness and faithfulness can determine how many phrases move. The combinatorics of these constraints generates the combinatorial typology in (21).

Where does Neutralization kick in? In Italian at least some speakers cannot construct multiple wh-questions at all. This means that even though the input contains two question operators, the most harmonic candidate contains only one in the output, (22).
(22) Italian (Legendre 2009)
a. *Chi ha mangiato che cosa? who has eaten which thing
(int. 'Who ate what?')
b. Che cosa ha mangiato ciascuna persona? which thing has eaten each person
'What did each person eat?'

In other words, despite the fact that the input contains two questions, the closest that a speaker can get to this construction is to ask a "regular" question with only one wh-phrase. The remaining part of the input-the second question Op-is thereby neutralized; the input contains a distinction which the grammar is unable to make.

### 2.4 Interim summary

DM posits blocking as a grammatical mechanism only within a well circumscribed environment: competition for insertion of a Vocabulary Item under the Elsewhere Principle. This view necessitates that all other cases of blocking, at any "higher" level—be it between two words, between a word and a phrase, or between two phrases-must find a different explanation. The next two sections examine a number of case studies, how these have been analyzed within DM, and what weaknesses have been identified with analyses relying on blocking.

## 3 Synthetic and analytic comparatives

The analysis of comparative and superlative forms in English has had substantial influence on theories of morphology over the past two decades. The main contrast is that which holds between the synthetic form, i.e. one phonological word (bigger, biggest), and the analytic form, i.e. two or more phonological words (more big, (the) most big). ${ }^{2}$ Almost everything I will have to say here applies equally to comparatives and superlatives, so I will focus on comparatives for simplicity.

Most of this section describes the blocking effect in more depth. For the purposes of this chapter I set aside completely the question of phonological restrictions on the form of the comparative (for example, quadrisyllabic intelligent cannot take the suffix -er, which prefers monosyllabic stems such as smart). The most recent comprehensive study of the phonology of English comparatives that I am aware of is Gouskova and Ahn (2016), which contains a useful synthesis of previous work as well. See Bobaljik (2012:Ch. 5.5) for some ideas on how to integrate the phonological findings into a theory of morphosyntax and Matushansky (2013) for a contrasting view. ${ }^{3}$

### 3.1 The blocking effect

To what extent does synthetic smarter block analytic \#more smart, and to what extent does analytic more intelligent block synthetic *intelligenter?

The general constraints dictating synthetic and analytic options are fairly well understood. For many monosyllabic gradable adjectives like big, the synthetic choice is the natural one, (23a). As noted above, for adjectives larger than a certain prosodic size, the synthetic form is not possible and the analytic one is used, (23b). For non-gradable adjectives neither the synthetic nor the analytic forms is generally possible, (23c-d).

|  | Adjective | Synthetic | Analytic | Choice |
| :--- | :--- | :--- | :--- | ---: |
| a. | big | $\checkmark$ bigger | \# more big | phonological |
| b. | intelligent | x intelligenter | $\checkmark$ more intelligent | phonological |
| c. | perfect | x perfecter | \# more perfect | semantic |
| d. | done | X doner | \# more done | semantic |

What does this general picture mean for (Poser-)blocking? We will assume that the synthetic and analytic forms involve the same comparative/superlative morpheme, Deg. Implementing an analysis in terms of Markedness and Expressiveness as summarized in Section 2.3.1, Kiparsky (2005) presents a straightforward blocking analysis. Synthetic and analytic forms are assumed to mean the same thing, hence they are equally Expressive. The analytic form is made up of two phonological words, therefore it is more Marked. All else being equal, the synthetic form is chosen:

[^1]|  | Deg + smart | MARKEDNESS | EXPRESSIVENESS |
| :--- | :--- | :---: | :---: |
| a. | smarter |  |  |
| b. | more smart | $*!$ |  |

One of the original arguments levelled against Poser-blocking was that this state of affairs cannot explain why intelligent takes only analytic comparatives. The way out with a blocking analysis would be to assume a higher-ranked markedness constraint penalizing synthetic forms with incompatible stems (Embick and Marantz 2008:33), one which I simply call MArked(PhonoCmpr); as noted in Section 2.3.1, the theory needs to allow room for additional markedness and faithfulness constraints.

|  | Deg + intelligent | MARKED(PHONOCMPR) | MARKEDNESS | EXPRESSIVENESS |
| :--- | :--- | :---: | :---: | :---: |
| a. | intelligenter | *! |  |  |
| b. | more intelligent |  | $*$ |  |

### 3.2 Comparative competition without blocking

In DM, the difference between synthetic and analytic comparatives must be viewed as competition at the VI level. The trees in (26) show the basic idea (skipping various details such as the node labels and the exact placement of the root or the categorizer): Deg will be spelled out differently depending on the adjective. We return shortly to the question of morphotactics, i.e. whether Deg will be a suffix or its own phonological word.


The phonological constraint can be translated into two lists for the purposes of VI, (27). The analytic form is the Elsewhere case, so we might say that the suffixal form of Deg blocks the standalone one for certain adjectives.


What kind of predictions does such a view make? The most immediate one is that since more is the elsewhere form of Deg, it might appear if the conditioning environment for -er is not met. A number of influential papers have explored this question, making different claims about the position of Deg and the adjective in the structure.

Embick (2007) follows Bhatt and Pancheva (2004) in assuming that DegP attaches to the adjectival phrase, here in the specifier of the adjective little $a$ :
(28)


Once VI occurs, Local Dislocation applies to create the synthetic forms (Embick and Noyer 2001 and Chapter ADJACENCY AND LINEARIZATION). The rules below are general ones, applying to all roots from the list in (27), that is, all roots that can form comparatives. Notice in particular how no reference is made to alternatives such as \#more smart or *intelligenter.
(29) VI at the lower phase, little $a$ (see Chapter CYCLICITY AND PHASEHOOD):
a. $\quad[\operatorname{Deg}[\sqrt{\text { SMART }}$ a] $] \rightarrow$ Deg + smart
b. [Deg $[\sqrt{\text { INTELLIGENT }}$ a] $] \rightarrow$ Deg + intelligent
(30) Linearization and Local Dislocation:
a. Deg + smart $\rightarrow$ smart-Deg (Local Dislocation applies)
b. Deg + intelligent $\rightarrow$ Deg-intelligent
(31) VI at Deg:
a. smart-Deg $\rightarrow$ smart-er
b. Deg-intelligent $\rightarrow$ more intelligent

Embick and Noyer (2001) and Embick (2007) predict that since the synthetic form relies on linear adjacency, it cannot arise when this adjacency is disrupted. This is exactly what happens, they argue, in cases of intervening adverbs which form part of an aP scoping under the superlative operator. Assuming that the -st in most spells out superlative Deg (e.g. Bresnan 1973; Hackl 2009), the resulting linear order is (32). Deg is not linearly adjacent to Adj, giving the patterns in (33). ${ }^{4}$

Deg + Adv + Adj
a. Mary is amazingly smart.
b. Mary is the mo-st amazingly smart person.

Deg $>$ [aP amazingly smart]
c. *Mary is the amazingly smart-est person.
d. *Mary is the amazingly most smart/intelligent person.

See Embick (2007:14) for examples with the comparative and additional discussion of alternative analyses in terms of head movement, Lowering or affixation in the lexicon. ${ }^{5}$

Where does this leave us? Eschewing reference to blocking, a theory in which competition plays no role beyond the Elsewhere Condition provides an elegant analysis of comparative and superlative alternations (the works cited also argue against alternatives, both lexicalist and syntactic). For instance, Embick and Marantz (2008) argue that the comparative alternation cannot be considered a case of word/phrase competition in which a word blocks a phrase (Poser blocking). This is because Poser blocking operates on words (syntactic constituents). Examples like (34a) have the schematic structure in (34b). Deg scopes over the entire AdjP, so that there is no single node [ ${ }_{A P}$ Deg quick] in the tree, a situation which should have led to more quick. In contrast, if the choice of form depends on rules applying under adjacency, quick-er is predicted correctly.
a. Mary is quick-er to spot counterexamples.
b. [Mary [is [ ${ }_{A P}$ Deg [ $A_{P}$ quick [ ${ }_{T P}$ to spot counterexamples]]] $]$

The next section considers a few more consequences of analyzing comparatives without reference to blocking as a morphological constraint, focusing on developments within the theory.

### 3.3 Metalinguistic comparison and suppletion

As we have just seen, deriving a synthetic comparative has been argued to require linear adjacency. But as is well known, cases of "metalinguistic comparison" like (35) involve linear adjacency of Deg and the adjective which nonetheless give rise to the analytic form. The ensuing line of argumentation holds that the structure of metalinguistic comparatives is different than that of regular comparatives, a difference which disrupts the adjacency condition in a specific way (Embick 2007).
a. It is more hot than humid.
b. *It is hotter than humid.

Owing to a number of facts about the interpretation of metalinguistic comparatives which we will not go into here, Embick argues that what is compared is a degree of appropriateness or deviation, as opposed to a degree associated with the adjective itself (as is the case in regular comparatives). The semantic property of appropriateness is invoked by the element $\kappa$ which heads its own $\kappa$ P. DegP attaches to $\kappa \mathrm{P}$, whereas in regular comparatives it attaches to the adjective, (28). The post-adjectival phrase is attached high, following Bresnan (1973). So in metalinguistic comparison, Deg combines with the adjective differently than in regular comparatives.

[^2](36) Metalinguistic comparatives (Embick 2007:22):


Given (36) it is impossible to derive a statement in which Deg and the adjective are linearly adjacent to each other, since the only possible linear concatenations are Deg- $\kappa$ and $\kappa$-lazy. As a result, Deg takes the elsewhere form more (in this case it is crucial that the null exponent of $\kappa$ is not Pruned postsyntactically; cf. Embick 2010:59). The head $\kappa$, which is responsible for the "metalinguistic" interpretation of "metalinguistic comparatives", disrupts the necessary adjacency condition.

Now let us consider what suppletive forms can teach us. In a thorough study of comparative and superlative morphology, this time from a crosslinguistic perspective, Bobaljik (2012) argued for a difference between comparatives and superlatives. Instead of assuming that CMPR and SUP are both possible values of Deg, Bobaljik put forward his Containment Hypothesis: that the superlative head Sprl is merged above the comparative head Cmpr, which in turn is merged above the adjective, (37). Support for this proposal comes from crosslinguistically robust patterns of suppletion (see Chapter SUPPLETION).
(37)


For Bobaljik, contextual allomorphy can be triggered within a morphological word ( $\mathrm{X}^{0}$ ). This means that (37) will simply be spelled out as the analytic form. In order to get the synthetic form, some morphological operation such as Lowering needs to bring the heads within the same complex head:


The next complication has to do with the fact that when both synthetic and analytic forms exist, it is only the synthetic one that can be suppletive. For example:

|  | Adj | synthetic | analytic |
| :--- | :--- | :--- | :--- |
| a. | old | old-er | more old |
| b. | good | bett-er | more good |
| c. | good | bett-er | $x$ more bett |

Matushansky (2013) highlights one theoretical consequence of these findings: Local Dislocation cannot be the right kind of analysis for comparatives, and it should be abandoned in favor of derivation via head movement in the syntax (see Chapter MOVEMENT). Two arguments are brought forward in support of this claim.

The first argument builds on Bobaljik's suggestion that change-of-state inchoative verbs are derived, crosslinguistically, from the comparative form of the adjective (rather than directly from the root), as with worsen (*badden). Since word formation happens in the syntax, the comparative must first be formed in the syntax-and hence before LD-before a verb can be derived from it.

In her second argument, Matushansky notes that in an Embick-style system, the lower adjective must spell out before the higher Deg. The basic structure is (40), repeated here from (28).


The root is sensitive to the existence of Deg, whereby the latter can condition a suppletive variant of the former.
(41) $\sqrt{\text { GOOD }} \leftrightarrow$ bett- / Deg $\qquad$
In Embick (2007), Local Dislocation (synthetic affixation, LD) and suppletion are orthogonal to each other. What this means is that four possibilities are predicted. Of these, however, only three are attested:

|  | LD | Suppletion | Adj | Cmpr/Sup |
| :--- | :--- | :--- | :--- | :--- |
| $\boldsymbol{J}$ | + | - | cute | cuter/cutest |
| $\boldsymbol{J}$ | + | + | good | better/best |
| $\boldsymbol{J}$ | - | - | intelligent | more/most intelligent |
| $\boldsymbol{x}$ | - | + | good | more/most bett |
|  |  |  | wuggal | more/most galliwug |

If a suppletive comparative form exists, an analytical form (in metalinguistic comparison or in superlatives) will still use the non-suppletive base form. Cases like wuggal $\sim$ most galliwug, with suppletion in an analytic form, do not seem to exist.

Matushansky (2013) proposes instead to build comparatives in the syntax via head movement. She proposes that Deg has an uninterpretable feature [u:degree] and that little $a$ has the interpretable [i:degree] feature. $\sqrt{\text { Root }}$ raises to adjoin to little $a$ and the $a+\sqrt{\text { Root complex raises to (affixal) Deg }}$ (if the phonology of the adjective is right). On this view, adjunction to Deg is crucial for synthetic forms, including suppletion. Therefore suppletion simply cannot happen in an analytic form, since suppletion occurs when the adjective raises to Deg and analytic forms result when Deg is spelled out separately.

Matushansky additionally provides arguments against the idea that DegP is merged in Spec,aP, a position which would be incompatible with either Lowering or head movement. See her paper for some discussion of reduplicated constructions like (43), from Jackendoff (2000).
a. smarter and smarter
b. more and more intelligent

These details are all interesting in their own right but tangential to the general question of blocking, which we now pick up again.

What I would like to emphasize in this more technical detour is that even though we have now segued to discussing specific theoretical proposals within the literature, rather than blocking in general, there is no blocking outside of VIs. No direct competition between words and phrases is to be found: standard syntactic processes such as feature checking and movement either do or do not give rise to specific forms.

Recall that metalinguistic comparison utilizes analytic comparatives. What kind of competition holds between the two possible forms? For Embick (2007) there is none because a functional head implementing the metalinguistic comparative semantics intervened between Deg and the adjective, rendering it impossible to derive a synthetic causative, as shown in (36). In an analysis implementing the difference between synthetic and analytic comparatives in the syntax, such as Matushansky's, something else needs to be said. Here again the [degree] feature is at play: if synthetic morphology arises due to this feature triggering head movement of the adjective to Deg, then we may assume that non-scalar adjectives do not bear [degree]. This much seems to be warranted, as non-scalar adjectives cannot form synthetic comparatives:
(44) *This is a realer/goldener/Frencher sword.

Nevertheless, non-scalar comparatives can form metalinguistic comparatives:
(45) a. Becky's aunt is more French/dead/wrong than Napoleon.
b. *Becky's aunt is Frencher/deader/wronger than Napoleon.

Matushansky (2013) argues that this is because the lack of [degree] on the adjective means it does not raise to Deg, and hence, does not trigger the synthetic comparative. Once again, there is no blocking regulating the two forms: certain processes apply when the semantically contentful [degree] feature, is at play, and others apply when it is not. ${ }^{6}$

### 3.4 Interim summary

This section started by considering the premise that a synthetic form like smarter blocks an analytic form like \#more smart. Generally, the separation of lexicon and syntax forces these theories into positions in which the two modules compete with one another, a situation which should not be possible in Lexicalist work. Whenever structure factors into the equation, as with intervening adverbs or metalinguistic comparison, it poses immediate problem for lexicalist, blocking-based theories. In these cases the structural theories have been argued to make the right predictions.

Our discussion spent some time going beyond the original analysis in Embick (2007), even after the basic point about non-blocking was established. One reason was in order to highlight the dialectic between adjacency analyses (e.g. Local Dislocation) and structural analyses (e.g. head movement), since this debate can be found in another empirical domain: in the recent debate surrounding the Danish definite determiner, Hankamer and Mikkelsen $(2005,2018)$ agree with the general premise of Embick and Marantz (2008) regarding blocking in DM, but in so doing shift the analysis from a Local Dislocation one to one based on competition between VIs of different kinds under syntactic sisterhood.

One last point should be made before moving on from comparatives. The literature is fairly unanimous on the idea that the synthetic and analytic forms have identical interpretations. I would like to mention the possibility that the two forms might not mean the same thing after all. For example, Matushansky (2013) notes in passing (while discussing a different issue) that in examples like (46), the synthetic forms have stronger readings than the analytic forms: the most clear evidence is clear, whereas the clearest evidence could still be murky, and similarly something subtler could still be blunt, unlike something more subtle (arguably).
(46) a. The \{most clear / clearest $\}$ evidence comes from the third trial.
b. The ending is even \{more subtle / subtler\}.

Matushansky's explanation of this suggested pattern is, however, syntactic. The synthetic forms here are scalar whereas the analytic ones are norm-related (binary, roughly speaking). This is exactly what we would expect given the [degree] feature, which triggers scalarity. Since this is the feature driving head-movement and synthetic forms, it follows that the norm-related forms are analytic and the scalar ones are synthetic.

When synthetic and analytic forms do give slightly different readings, one possible factor could be the adjectives they are associated with. Higgins (1977) found that the higher a given adjective is on a scale (e.g. huge > large), the more likely its comparative form is to presuppose the truth of the positive form. That is to say, more huge entails huge to a greater extent than larger entails large. Exactly what factors feed into this pattern remains unresolved; the less "extreme" adjectives were for the most part synthetic and also more frequent.

It may well be that there really is no difference between the two forms as such, and that any difference in reading that does arise can receive an explanation in terms natural to the system (such as Matushansky's [degree]). Nevertheless, this is an important exercise and one which we will repeat in the next section. In order to argue for blocking, one usually assumes that the competing forms mean the same thing. This has been the case for all theories discussed above, with the exception

[^3]of Neutralization. We will now see how what at first looks like blocking is in fact non-competition between two forms which do not share the same meaning. The current section examined a case where one word (the synthetic comparative) had been claimed to block a phrase (the analytic comparative). Next we will see a case where it was proposed that a phrase blocks a single word, but again we will see that there is no evidence for blocking in that sense, only DM-style blocking between VIs.

## 4 Synthetic and analytic passives

In both Modern Hebrew and Latin, a paradigm gap for a non-active synthetic verbal form finds a rough equivalent in an analytic form. It is tempting to consider the analytic form an expression of the same verb-that is, the same cell in a paradigm, or the same bundle of morphosyntactic features-in which case we would talk about blocking between the two. However, it has been argued by Kastner and Zu (2017) that neither case survives closer scrutiny and as such, the analytic forms do not block the synthetic ones, counter to existing claims.

### 4.1 The blocking effect

### 4.1.1 Hebrew

Hebrew verbal morphology makes use of different morphophonological templates (see chapter NONCONCATENATIVE MORPHOLOGY). Using X, Y and Z as stand-ins for the root consonants, and CAUS and intns as morphological elements irrelevant to current purposes, we will focus on the two dedicated passive templates, XuYaZ and huXYaZ (passive verbs in Hebrew are always synthetic). Basic active-passive alternations for both are given in (47)-(48).
(47) Active and passive pair for $\sqrt{\mathrm{j} \mathrm{vv}}$ in XiYeZ $\sim X u Y a Z$ :
a. ha-jiltonot jifv-u oto ba-negev
the-authorities settle.InTNs-3pl him in.the-Negev
'The authorities settled him in the Negev.'
b. hu jufav be-negev (al-jedej ha-filtonot)
he settled.IntNs.pass in.the-Negev by the-authorities
'He was settled in the Negev (by the authorities).' (after Alexiadou and Doron 2012:8)
(48) Active and passive pair for $\sqrt{\mathrm{kns}}$ in heXYiZ~huXYaZ:
a. ha-xavera felo hexnis-a oto la-mesiba
his-friend.F his insert.CAUS-F.SG him to.the-party
'His girlfriend got him into to the party.'
b. hu huxnas la-mesiba (al-jedej ha-xavera felo)
he inserted.caus.pass to.the-party by the-friend.f his
'He was gotten into the party (by his girlfriend).' (after Alexiadou and Doron 2012:13)
In these templates a number of systematic paradigm gaps can be found, which one may be tempted to think of in terms of competition. First, there are no passive infinitives. In order to express the same idea, an analytic paraphrase can be used, utilizing the infinitival form of the copula with a passive participle.
a. ha-misrad ratsa lejajev otam ba-Negev aval hem lo rats-u the-office wanted to.settle.INTNS them in.the-Negev but they NEG wanted-3pl * Jam
to.settle.InTNS.PASs there
(int. 'The office wanted to settle them in the Negev but they didn't want to be settled there')
b. ha-misrad ratsa lejafev otam ba-Negev aval hem lo rats-u lihiot the-office wanted to.settle.INTNS them in.the-Negev but they NEG wanted-3PL to.be mejufav-im Jam
settled.INTNS.PASSPTCP-3PL.M there
'The office wanted to settle them but they didn't want to be settled there.'
Second, there are no passive imperatives. Note that this is a morphological constraint: although the discourse in (50) is highly marked, it is in principle expressable in English, unlike in Hebrew. In order to express it in Hebrew, again an analytical form consisting of the copula and passive participle is used:
(50) a. To the bouncer:
haxnes oto la-mesiba bevakafa!
insert.CAUS him to.the-party please
'Let him into the party please'.
b. To the boyfriend:
$n u$, tare lo teuda ve-* kvar!
well show to.him certificate and-insert.CAUS.PASS already
(int. 'Well, show him some ID and get let in already!')
c. ?nu, tare lo teuda \{ve-heje / ve-tihie\} ${ }^{8}$ muxnas
well show to.him certificate and-be.IMPR and-you.will.be insert.CAUS.PASSPTCP kvar! already
'Well, show him some ID and get let in already!'

A brief summary is given in (51). There are also no dedicated passive nominalizations, a matter which might reflect a larger crosslinguistic tendency (Alexiadou 2001; Ahdout and Kastner 2018; Ahdout in prep).
(51) Different forms and gaps for Hebrew jifev 'he settled':

|  | Active | Synthetic passive | Analytic paraphrase |
| :--- | :--- | :--- | :--- |
| Past | jifev | jufav | haja mejufav |
| Infinitive | lejafev | - | lihiot mejufav |
| Imperative | jafev | - | heje/tihie mejufav |

The question is whether the analytic forms and the synthetic gaps are in competition, whereby the analytic forms block the synthetic ones. Even though there is no competition in the past tense, this is exactly what has been traditionally assumed for Latin, as we will see next.

### 4.1.2 Latin

Latin has three tenses, of which we focus on present and past, and two aspects (perfect and imperfect). Our main interest here is the affix glossed NACT, also known as the "r-passive", which appears on various non-active verbs including passives, (52), anticausatives, (53), reflexives, (54), and so on. See the characterization in Kastner and Zu (2017) and works cited there.
(52) laud-a-ba-t-ur
praise-Past-3SG-NACT
'he/she was praised'
8. Contemporary usage tends to prefer the future tense over the imperative form in general, though nothing hinges on this difference.
(53) a. vulnus claudi-t-ur
wound.NOM close-3sG-NACT
'The wound heals'
b. omnia mūta-nt-ur
all.PL change-3PL-NACT
'All (things) change'
(Ovid, Metamorphoses 17.165)
(54)
vix tene-o-r quīn dic-a-m
scarcely hold-1SG-NACT that.not say-1SG-SBJ
'I can hardly keep myself from talking'
(Plautus, Casina 239)
The examples above all show synthetic affixation of NACT. Now consider the perfect suffix. Each of the two, the nonactive and the perfect, can appear on their own as in (55)-(56). Yet the two cannot be combined. In order to express the same idea, an analytic form may be used, made up of the copula and the perfect participle and the copula, (57).
(55) laud-ā-t-ur
praise-TH-3SG-NACT
'he/she is being praised'
(56) laud- $\bar{a}-v i-t$
praise-TH-Perf-3sG
'he/she has praised'
(57)

b. laud-ā-t-us est
praise-TH-PASSPTCP-NOM is.Imperf
'he/she has been praised'
This gap, and the way it can be filled, are reminiscent of the Hebrew case above. The table in (58) summarizes.
(58) Different forms and gaps for Latin laudat 'he praises':

|  | Active | Synthetic nonactive | Analytic paraphrase |
| :--- | :--- | :--- | :--- |
| Present imperfect | laudat | laudātur | laudātus est |
| Present perfect | laudāvit | - | laudātus est $^{9}$ |

The literature-both traditional and contemporary-uniformly treats the analytic non-active perfect as part of the same paradigm as the synthetic forms. The sole outlier is Kastner and Zu (2017), who challenge the idea that any kind of paradigmatic relationship holds between the synthetic and analytic form of the non-active perfect. If they are correct, it is not possible to speak of blocking between these constructions and the gaps must receive some other kind of analysis. I recap their arguments below, first for Hebrew and then for Latin. ${ }^{10}$

### 4.2 Competition without blocking: Hebrew

Hebrew does not have infinitive and imperative verbal passives, but does have analytic paraphrases in the infinitive and imperative. The main claim made by Kastner and $\mathrm{Zu}(2017)$ is that the distinction between synthetic and analytic forms in the contexts above is comparable to the distinction between verbal and adjectival passives (see the range of work from Wasow 1977 onwards, as well as Chapter

[^4]ARGUMENT STRUCTURE): even though there are some intuitive similarities in the meaning of verbal and adjectival passives, their structure is different.

### 4.2.1 Differences between synthetic and analytic forms

As in many other languages, Hebrew verbal passives can be distinguished structurally from adjectival passives. The main resource for diagnostics distinguishing verbal and adjectival passives is the comprehensive work by Doron (2000) in Hebrew, which Kastner and Zu (2017) synthesize with observations by Kratzer (2000) and Embick (2004), and with work on Hebrew by Horvath and Siloni (2008, 2009), Sichel (2009) and Meltzer-Asscher (2011), arriving at three crucial differences.

First, while present tense forms (here with a covert copula) are ambiguous between a verbal and adjectival reading, (59a), the future copula allows for only adjectival readings, (59b).
a. ha-kontferto muklat
(synthetic)
the-concerto record.CAUS.PASS.Pres
'Someone is recording the concerto.' (verbal)
'The concert is on tape.' (adjectival)
(Doron 2000:47)
b. ha-kontferto jihie muklat
(analytic)
the-concerto will.be record.caus.PAss.Pres
'The concerto will be on tape.' (adjectival only)
The same kind of difference is maintained in inifinitives and imperatives, whereby the analytic (adjectival, stative) form does not entail that an event took place, only that the state holds, in contrast to the verbal form:
(60) a. ratsiti lihiot mesorak
I.wanted to.be comb.INTNS.PASS.Pres
'I wanted to be combed' (adjectival only)
b. (ti)hie mesorak!
(analytic) be.IMP/FUT comb.INTNS.PASs.Pres
'Be combed!' (\#'Undergo a combing event!')
Second, analytic forms may have an idiomatic reading as in (61a), while synthetic passives are always compositional, (61b).
a. ze jihie muvan me-elav
(analytic)
this will.be understand.CAUS.PASS.Pres from-to.him
'It will be understood from itself' (literal)
'It will be self-evident.' (idiomatic)
b. \#ze juvan me-elav (synthetic)
this understand.caus.pass.Fut from-to.him
(no immediate clear meaning)
Idiomatic readings of analytic passives arise in infinitives, too:
(62) ha-balfanit garm-a la-hesber me-elav ] the-linguist caused-F to.the-explanation to.be understand.CAUS.PASS.Pres from-to.him 'The linguist caused the explanation be self-evident.'
Third, and immediately related to the state vs event distinction, synthetic passives force disjoint readings: the external argument and the internal argument cannot refer to the same entity. The analytic form allows such coreference but synthetic form does not (passives are not syncretic with reflexives, unlike in Latin):
(63) a. ha-jalda hajt-a mesorek-et
(analytic)
the-girl was-F comb.INTNS.PASS.Pres-F
'The girl was combed.' (agent $=/ \neq$ theme)
b. ha-jalda sork-a
the-girl comb.INTNS.PASS.Past-F
'The girl got combed.' (agent $\neq$ theme)
This restriction holds for infinitives of synthetic passives as well:
(64)
a. ha-sapar garam la-jalda [lihiot mesorek-et ] the-stylist caused to.the-girl to.be comb.INTNS.PASS.Pres-F 'The hair stylist caused the girl to be combed.' (agent $\neq$ theme)
b. ha-jalda garma le-atsma [lihiot mesorek-et ] the-girl caused to-herself to.be comb.IntNS.PASs.Pres-F
'The girl caused herself to be combed.' (agent = theme)
Kastner and Zu (2017) conclude that the synthetic and analytic forms are not immediate variants of each other, deriving them from different structures as described next.

### 4.2.2 Sketch of the analysis

Following Alexiadou and Doron (2012), and in line with a range of work across both syntactic (Doron 2003; Borer 2013; Ahdout and Kastner 2018; Kastner 2020) and lexicalist frameworks (Reinhart and Siloni 2005; Ussishkin 2005; Laks 2011), Kastner and Zu (2017) assume that verbal passives in Hebrew are derived using a dedicated head Pass which merges above VoiceP. Recall that verbal passives exist in the past, present and future but not in infinitives and imperatives (nor is there a dedicated form in the action nominal). The generalization is that these three constructions are all non-finite, leading to the following proposed selectional constraint:
(65) In Hebrew, only finite T[FIN] licenses PassP; nonfinite T[-FIN] only selects for VoiceP or vP. (Kastner and Zu 2017:656)
Whether and how this constraint should be reduced to other processes is at this point tangential; as far as the discussion of blocking is concerned, (65) concerns itself solely with the derivation of verbal passives, correctly accounting for the behavior of three morphosyntactic contexts without making any reference to adjectival forms.

While verbal passives are derived using [Pass VoiceP], adjectival passives are derived using [a VoiceP]. Assuming that verbal passives prohibit coreference of agent and theme, however formalized (Baker et al. 1989; Spathas et al. 2015), it follows immediately that this constraint holds for synthetic forms but not for adjectival forms. Kastner and Zu (2017) do not work through the analysis of the three diagnostics explicitly; see Embick (2004) for additional illustrative derivations in English which can be transposed into Hebrew.

### 4.3 Competition without blocking: Latin

### 4.3.1 Differences between synthetic and analytic forms

Since Latin non-active voice marks anticausatives, passives and reflexives, it allows for reflexive readings by definition, rendering the argument from coreference irrelevant. Kastner and Zu (2017) argued that the two constructions have different sources, and therefore different structures.

The first step is fairly easy: the perfect participle used in analytic forms is part of the nominaladjectival system, (66), in contrast to the verbal synthetic forms in Section 4.1.2.
(66) Adjective and adjectival passive in Latin (Sadler and Spencer 2001):
a. Clodia roman-a est

Clodia Roman-3sG.F is
'Clodia is Roman.'
b. Clodia laudat-a est

Clodia praise.PTCP-3SG.F is
'Clodia is praised', 'Clodia has been praised.'
Bruening (2014) has argued that of the many differences proposed to distingush verbal passives from adjectival passives, only a few survive scrutiny. One of these more reliable differences is whether the two forms have distinct sources of derivation, and specifically whether a given form has a "missing input" (Bruening 2014:408). For instance, if some was destined for greatness they did not undergo any *destining, nor was a bearded person \#bearded by anyone: because the verb does not exist, the adjective must have been derived separately.

If the Latin forms are equivalent to each other, they ought to be derived from one underlying verb, (67). But non-active verbs would necessarily have a different source than participles with a "missing input", (68).

Common source? $\longrightarrow$ non-active verb
a. Source $1 \longrightarrow$ non-active verb
b. Source $2 \longrightarrow$ perfect participle

Kastner and Zu (2017) argue that this is precisely the case with deponents, a class of verbs showing nonactive morphology despite active syntax. Deponents appear to take the suffix NACT as some kind of "morphological artifact", since the verbs themselves are active (unergative or transitive). One typical example is verb sequor 'to follow', which differs from a regular verb like amor 'to love'; the crucial point is that there is no active form of a deponent verb.
(69) a. Regular verb, active/nonactive alternation:
$a m o-r$ 'I am loved' < amō ‘I love'
b. Deponent verb:
sequo-r 'I follow' $<$ *sequō (int. 'I follow')
Nevertheless, the perfect participle is derived as if from such a form, without NACT:
a. Regular participle, active stem:
$a m a \bar{a}-t-u s$ 'loved.PTCP' ~ $a m o ̄ ~ ‘ I ~ l o v e ' ~$
b. Deponent participle, active stem:
secū-t-us 'followed.РТСР' ~ *sequō (int. 'I follow')
The authors conclude that the perfect participle is derived independently of the active verb. Accordingly, the analytic (participial) form cannot have the exact same source as the synthetic (verbal) form, (71). The two do not stand in direct competition, manifesting (68) rather than (67). ${ }^{11}$ See Kastner and Zu (2017) for additional discussion, including further references to the substantial literature on deponency.
a. root + verbal head + NACT $\longrightarrow$ non-active verb
b. root + adjectival head $\longrightarrow$ perfect participle

### 4.3.2 Sketch of the analysis

As with Hebrew, the important point to establish was that the synthetic and analytic forms do not compete with one another. Accordingly, no blocking needs to be factored into the derivations. However, the question still remains of what rules out the synthetic gap. Kastner and Zu (2017) speculate that a particularly intricate conditioning environment for contextual allomorphy is the culprit, as I will now review.

The exponents of Voice, Perf and T+Agr vary widely from context to context, as discussed within DM by Embick (2010). The linear order of exponents can be given as (72):

[^5](72) $\sqrt{\text { root-TH-Voice/Non-active Voice-(Perf)-T }+ \text { Agr }}$

Two conditioning environments can be established, shown here schematically. The first is that the exponent of Perf is sensitive to the identity of the root, (73).
(73) Allomorphy of Perf (Kastner and Zu 2017:674)


The second is that non-active Voice is sensitive to the phi-features on $\mathrm{T}+\mathrm{Agr}$, (74).
(74) Allomorphy of non-active Voice (Kastner and Zu 2017:675)

Now consider a situation in which both Perf and non-active Voice need to be spelled out, a configuration schematized in (75). Kastner and Zu (2017) propose that in this case, overt Perf intervenes between NACT and T+Agr at the same time that overt NACT intervenes between Perf and the root. As a result, the correct allomorphs cannot be chosen and the structure is ineffable. ${ }^{12}$

## (75)

Crossing paths in Latin contextual allomorphy:


Once again, what is important for our purposes is that this view makes no reference to the analytic form; the complexities of the synthetic form are dealt with on their own terms. One way or another, they have a structural cause, namely that this gap is related to the overt Perf head which appears exactly between the position in which NACT is generated and the position it is sensitive to, $\mathrm{T}+\mathrm{Agr}$.

Having established why blocking is not necessary in order to explain the Hebrew and Latin facts, let us consider what a blocking-based analysis would look like in each case.

### 4.4 Blocking analyses: Hebrew

If the synthetic and analytic forms indeed realize different structures, then they cannot be compared under Kiparsky's OT Blocking (Section 2.3.1). This is because MARKEDNESS and EXPRESSIVENESS only regulate within-paradigm (inflectional) patterns in Kiparsky (2010), meaning that the two forms must be listed in separate paradigms. As a result there is no blocking and OT Blocking is irrelevant.

Alternatively, the Neutralization view from Section 2.3.2 accepts the premise that synthetic and analytic forms can have different meanings. Given that Neutralization allows deviations from the input meaning to be discarded ("neutralized") in the output, the question is how these deviations are assessed. Kastner and Zu (2017) argue that the answer is only straightforward with cases like whmovement and scope facts as explained earlier. If two operators have the order [Op1 Op2], whereas one candidate has [Op2 Op1] and the other [Op1], it is relatively clear what assumptions need to be made (namely quantity vs order). The case of Hebrew is far less clear: faithfulness to stativity, idiomatic interpretation and coreference must all be countenanced.

Exemplifying with the infinitival passive lihiot mesorak 'to be combed', the tableau in (76) notates each output element with the corresponding input element. Here the synthetic gap competes with the analytic adjectival passive but also with an additional candidate, a past tense passive verb, (76c).

[^6]The synthetic candidate violates whatever Markedness constraint is relevant. The adjectival passive violates three semantic faithfulness constraints which correspond to the three differences in meaning. The last candidate violates faithfulness to input tense.
(76) Analytic form in a paradigm gap for 'to be combed':

| $\mathrm{T}_{\text {[-Fin]1 }} \mathrm{PASS}_{2} \mathrm{COMB}_{3}$ | MARKEDNESS | FAITH(STATE) | FAITH(T) | FAITH(IDIOM) | FAITH(COREF) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| a. $\mathrm{F}_{1} \mathrm{~F}_{2} \mathrm{~F}_{3}$ (Synthetic, gap) | *! |  |  | I |  |
| desired $^{\text {\% }}$ ( b. lihiot ${ }_{1}$ mesorak $_{3,4}$ |  | * |  | * | * |
| actual ${ }^{1088}$ c. sorak $_{2,3,5}$ |  |  | * | , |  |

The analytic form is the eventual winner even though going by sheer number of violations, (76c) has only one violation of Faithfulness and should be most harmonic. To account for the facts, faithfulness to (nono-finite) tense would need to be ranked higher: Faith(Tense) $\gg$ Faith(Stative), Faith(Idioms), Faith(Coreference). Kastner and Zu (2017) identify two issues with this kind of blocking account.

The first is that the grouping together of the three semantic faithfulness constraints is an accident; as outlined above, the literature on adjectival passives has shown that these three differences arise because of the difference in structure between the two forms, an explanation which is lost if an account such as Neutralization disregards the structural reasoning. The second is that the factorial typology predicts that in some language, it should be possible to have the ranking FAITH(IdiOMs) $\gg$ FAITH(TENSE) $\gg$ FAITH(STATIVE), FAITH(COREFERENCE). This situation would be unexpected on a structural view like the one reviewed above.

### 4.5 Blocking analyses: Latin

In contrast to the Hebrew data, The Latin case has been discussed in the literature within a range of frameworks, including DM (Embick 2000; Bjorkman 2011, 2014; Haugen and Siddiqi 2013), Paradigm Function Morphology (Sadler and Spencer 2001) and OT Blocking (Kiparsky 2005, 2010). What these analyses all have in common is the implicit or explicit assumption of equivalence or competition of some kind between the synthetic and analytic form. More concretely, in each of these accounts, the same process that disallows the synthetic form also gives rise to the analytic form. This view stands in contrast to what was presented above.

Embick (2000), for example, proposes that a [Pass] feature on Asp[Perf] blocks adjunction of Asp to $T$, bleeding formation of the complex head $\sqrt{\text { root-TH-Asp. }}{ }^{13}$ It is crucial here that surface order is derived by head movement, (77). If Asp cannot raise to $T$, then $T+A g r$ are spelled out in a separate phonological word; an analytic form, (78). Bjorkman (2011, 2014) and Haugen and Siddiqi (2013) provide variants of this basic ideas, the details of which I will omit (but see chapter FUNCTION WORDS VS AFFIXES).
(77) Synthetic form for the active verb laudāvit 'he/she has praised', (56):

13. I leave out Theme and case nodes in the trees below.
(78) Analytic form for the non-active perfect laudātus est 'has been praised' with [Pass] on Asp, (57b):


The Asp head is thus the locus of competition: it carries the non-active feature [Pass] in verbal structures but also serves to adjectivize verbal structures into participles. It is important to note that this is not an explicit blocking analysis: the existence of the synthetic form is not ruled out because it loses the competition with the analytic form. What happens is that the synthetic form is not derivable, allowing the analytic form to surface as some kind of repair. These systems therefore allow for competition between the two forms but do not regulate it via blocking.

Kiparsky (2005) does propose a blocking explanation for the gap within OT Blocking. This analysis proposes that the MARKEDNESS violation for the synthetic form arises because too many syntactic features try to be expressed in single word. As explained in Section 2.3.1, this analysis is only coherent if the two forms are equivalent with regard to Expressiveness, which they might not be. An additional issue pointed out by Kastner and Zu (2017) is that the analysis is underdetermined regarding what constitutes a violation of MARKEDNESS; Kiparsky (2005:126) is careful to note that a combination of three features need not violate MARKEDNESS, only that a violation is likely to emerge where three features combine.

### 4.6 Summary

This section examined two cases of what we might call inverse Poser-blocking: situations in which an analytic form is used instead of a synthetic one. In both Hebrew and Latin, evidence can be found according to which a verbal synthetic non-active form exists independently of an adjectival passive. The structural differences between the two forms lead to grammatical differences, arguably indicating that the two do not actually compete and therefore do not need to be regulated by a grammatical mechanism of blocking. This point which leads us to the concluding remarks for this chapter, in which I emphasize that delimiting what kind of blocking might exist enables us to formulate falsifiable hypotheses about competition between forms.

## 5 Conclusion

Although the title of this contribution is "Blocking", most of the chapter was spent explaining why various phenomena are not, in fact, the result of blocking processes. The only part directly discussing how blocking works within DM was Section 2.1, in which we saw that the specific kind of blocking that exists in DM-that is, a grammatical mechanism regulating competition between different forms-is narrowly circumscribed to be the choice of exponent at Vocabulary Insertion. Nevertheless, it is instructive to see exactly what counts as blocking in different frameworks, as this comparison serves to highlight their similarities, differences, and the potential points in which one can be preferred or rejected.

Since DM eschews blocking in almost all senses in which the term is otherwise used in the morphological literature, this chapter has been inherently biased against the non-DM works it summarizes. Nevertheless, making the claims explicit can only help in advancing our understanding of blocking
and competition. Two final points are now worth making: what this all means for competition in grammar, and what kind of work remains to be done.

### 5.1 Competition

This chapter summarized work exploring the view that blocking is regulated by the grammar (be it syntax, semantics or morphophonology), whereas competition is not. To be sure, the concept of competition can be invoked with insightful results when it is properly defined (Sichel 2014). What I would like to advocate is simply a more precise use of this term and of "blocking" when using them as explanatory tools.

What the brief history of blocking in DM shows is that when competition is posited between two forms, in particular between a synthetic and an analytic one, their equivalence in syntactic or semantic terms cannot be assumed; it must be argued for. The lack of blocking beyond the VI level follows directly from the basic principles of DM. The immediate consequence is that where cases of word-level or phrase-level blocking/competition are claimed to exist, investigating them more closely will have a number of benefits. We will perhaps find support for the hypothesis explored in this chapter, or we will be able to falsify it in favor of something like OT Blocking. After all, if a language were found in which synthetic and analytic forms truly are equivalent in meaning, then they would be equivalent in terms of Expressiveness. That kind of finding is not predicted to be found on a strong reading of the approach outlined here, but is compatible with OT Blocking.

The type of analysis promoted in this chapter also leads us to ask more in-depth questions about the synthetic and analytic forms separately from each other, leading to additional discoveries. I conclude by highlighting a number of cases that invite additional study.

### 5.2 Prospects for future work

A few phenomena have received in-depth treatments in the past few decades, settling for the most part on accounts that do not invoke blocking in order to explain competition or competition-like phenomena. These are the case of Japanese causatives, which have lexical and syntactic readings (Miyagawa 1998; Harley 2008; Oseki 2017; Nie 2020); the Danish definite determiner and the argument for or against Poser-blocking, already mentioned earlier (Embick and Noyer 2001; Embick and Marantz 2008; Hankamer and Mikkelsen 2002, 2005, 2018; Katzir 2011; Norris et al. 2014); and French anticausatives with or without the reflexive clitic se (Labelle 1992; Labelle and Doron 2010; Martin and Schäfer 2014; Legendre et al. 2016).

Less discussed, but no less interesting, are various cases in which a relationship can be proposed between synthetic and analytic forms (Bonami 2015; Lee and Ackerman 2017; Fenger 2018) or between members of different paradigms (Laks 2014, 2018), as well as analyses of synthetic compounds and particle verbs (Ackema and Neeleman 2001, 2004) or competition across agreement positions (Halle 1997; McGinnis 2008, 2013). The literature discussing free variation and how it might turn out to have certain organizing principles may also be relevant (Dressler et al. 2014; Mondorf 2014; Levshina 2018; and chapter MORPHOLOGICAL VARIATION). And finally, some recent work within DM has attempted to carve out a distinct place for competition, proposing a learnability-based constraint on homophony (Bobaljik 2012) or arguing that some competition holds at an extra-grammatical level with grammatical consequences (Martin and Schäfer 2014; Ahdout and Kastner 2018; Ahdout in prep). In all of these cases, as well as the cases surveyed in this chapter, progress can be and has been made once we treat the notion of competition between forms skeptically, in line with the basic principles of DM.

## References

Ackema, Peter. 1999. Issues in morphosynax. Amsterdam and Philadelphia: John Benjamins. 15
Ackema, Peter, and Ad Neeleman. 2001. Competition between syntax and morphology. In Optimalitytheoretic syntax, ed. Géraldine Legendre, Jane Grimshaw, and Sten Vikner, 29-60. MIT Press. 22

Ackema, Peter, and Ad Neeleman. 2004. Beyond morphology: Interface conditions on word formation. Oxford: Oxford University Press. 22
Adger, David. 2003. Core syntax: A Minimalist approach. Oxford: Oxford University Press. 2
Ahdout, Odelia. in prep. Nominalizations in Hebrew and beyond. Doctoral Dissertation, HumboldtUniversität zu Berlin, Berlin. 14, 22
Ahdout, Odelia, and Itamar Kastner. 2018. The interaction of nominalization and Voice. In NELS 49. 14, 17, 22

Alexiadou, Artemis. 2001. Functional structure in nominals: Nominalization and ergativity. Philadelphia, PA: John Benjamins. 14
Alexiadou, Artemis, and Edit Doron. 2012. The syntactic construction of two non-active Voices: Passive and middle. Journal of Linguistics 48:1-34. 13, 17
Andrews, Avery. 1990. Unification and morphological blocking. Natural Language and Linguistic Theory 8:507-57. 5
Aronoff, Mark. 1976. Word formation in generative grammar. Cambridge, MA: MIT Press. 3, 5
Aronoff, Mark, and Mark Lindsay. 2014. Partial organization in languages: la langue est un systéme oú la plupart se tient. In Proceedings of Décembrettes 8, ed. Sandra Augendre, Graziella CouasnonTorlois, Déborah Lebon, Clément Michard, Gilles Boyé, and Fabio Montermini, number 22 in Rapport Interne de CLLE-ERSS, 1-14. 7
Baeskow, Heike. 2012. -Ness and -ity: Phonological exponents of n or meaningful nominalizers of different adjectival domains? Journal of English Linguistics 40:6-40. 5
Baker, Mark, Kyle Johnson, and Ian Roberts. 1989. Passive arguments raised. Linguistic Inquiry 20:219-251. 17
Bhatt, Rajesh, and Roumyana Pancheva. 2004. Late merger of degree clauses. Linguistic Inquiry 35:1-45. 8
Bjorkman, Bronwyn. 2011. BE-ing default: The morphosyntax of auxiliaries. Doctoral Dissertation, Massachusetts Institute of Technology. 20
Bjorkman, Bronwyn. 2014. Verbal inflection and overflow auxiliaries. Ms. University of Toronto. 15, 20
Bobaljik, Jonathan David. 2012. Universals in comparative morphology. Cambridge, MA: MIT Press. 7, 10, 22
Bonami, Olivier. 2015. Periphrasis as collocation. Morphology 25. 22
Borer, Hagit. 2013. Structuring sense, vol. 3: Taking form. Oxford: Oxford University Press. 17
Bresnan, Joan. 1973. Syntax of the comparative clause construction in English. Linguistic Inquiry 4:275-344. 9
Bresnan, Joan. 2001. Explaining morphosyntactic competition. In Handbook of contemporary syntactic theory, ed. Mark Baltin and Chris Collins, 1-44. Blackwell. 5
Brown, Dunstan, Marina Chumakina, Greville G. Corbett, and Harley Quilliam. 2010. Surrey periphrasis database. University of Surrey. http://dx.doi.org/10.15126/SMG.22/1. 7
Bruening, Benjamin. 2014. Word formation is syntactic: Adjectival passives in English. Natural Language \& Linguistic Theory 32:363-422. 18
Burton, Philip. 2016. Analytic passives and deponents in classical and later Latin. In Early and late latin: Continuity or change?, ed. J. N. Adams and Nigel Vincent, 163-179. Cambridge: Cambridge University Press. 15
Di Sciullo, Anna Maria, and Edwin Williams. 1987. On the definition of word. Number 14 in Linguistic Inquiry Monographs. Cambridge, MA: MIT Press. 5
Doron, Edit. 2000. habeynoni hasavil [the passive participle]. Balshanut Ivrit [Hebrew Linguistics] 47:39-62. 16
Doron, Edit. 2003. Agency and voice: The semantics of the Semitic templates. Natural Language Semantics 11:1-67. 17
Dressler, Wolfgang U., Gary Libben, and Katharina Korecky-Kröll. 2014. Conflicting vs. convergent vs. interdependent motivations in morphology. In Competing motivations in grammar and usage, ed. Brian MacWhinney, Andrej Malchukov, and Edith Moravcsik. Oxford: Oxford University Press. 22
Embick, David. 2000. Features, syntax and categories in the Latin perfect. Linguistic Inquiry 31:185230. 15, 20

Embick, David. 2004. On the structure of resultative participles in English. Linguistic Inquiry 35:355392. 16, 17

Embick, David. 2007. Blocking effects and analytic/synthetic alternations. Natural Language and Linguistic Theory 25:1-37. 2, 8, 9, 10, 11, 12
Embick, David. 2010. Localism versus globalism in morphology and phonology. Number 60 in Linguistic Inquiry Monographs. Cambridge, MA: MIT Press. 10, 18
Embick, David, and Alec Marantz. 2008. Architecture and blocking. Linguistic Inquiry 39:1-53. 2, 3, $4,5,8,9,12,22$
Embick, David, and Rolf Noyer. 2001. Movement operations after syntax. Linguistic Inquiry 32:555595. 8, 9, 22

Fenger, Paula. 2018. Size matters: auxiliary formation in the morpho-syntax and morpho-phonology. In NELS 49. 22
Giegerich, Heinz J. 2001. Synonymy blocking and the elsewhere condition: lexical morphology and the speaker. Transactions of the Philological Society 99:65-98. 5
Gildersleeve, Basil, and Gonzalez Lodge. 1903. Latin grammar. London: Macmillan, 3 edition. 15
Gouskova, Maria, and Suzy Ahn. 2016. Sublexical phonotactics and English comparatives. Ms., NYU. 7
Hackl, Martin. 2009. On the grammar and processing of proportional quantifiers: most versus more than half. Natural Language Semantics 17:63-98. 9
Halle, Morris. 1997. Distributed Morphology: Impoverishment and Fission. In MIT working papers in linguistics 30: PF: Papers at the interface, ed. Benjamin Bruening, Yoonjung Kang, and Martha McGinnis, 425-449. MIT Press. 22
Hankamer, Jorge, and Line Mikkelsen. 2002. A morphological analysis of definite nouns in Danish. Journal of Germanic Linguistics 14:137-175. 22
Hankamer, Jorge, and Line Mikkelsen. 2005. When movement must be blocked: A reply to Embick and Noyer. Linguistic Inquiry 36:85-125. 12, 22
Hankamer, Jorge, and Line Mikkelsen. 2018. Structure, architecture, and blocking. Linguistic Inquiry 49:61-84. 5, 12, 22
Harley, Heidi. 2008. On the causative construction. In The Oxford handbook of Japanese linguistics, ed. Shigeru Miyagawa and Mamoru Saito, 20-53. Oxford: Oxford University Press. 22
Haugen, Jason D., and Daniel Siddiqi. 2013. Roots and the derivation. Linguistic Inquiry 44:493-517. 20
Haverling, Gerd V. M. 2010. Actionality, tense, and viewpoint. In New perspectives on historical latin syntax, ed. Philip Baldi and Pierluigi Cuzzolin, volume 2, 277-524. Mouton de Gruyter. 15
Higgins, E. Tory. 1977. The varying presuppositional nature of comparatives. Journal of Psycholinguistic Research 6:203-222. 12
Hilpert, Martin. 2008. The English comparative - language structure and language use. English Language and Linguistics 12:395-417. 7
Horvath, Julia, and Tal Siloni. 2008. Active lexicon: Adjectival and verbal passives. In Current issues in Generative Hebrew linguistics, ed. Sharon Armon-Lotem, Gabi Danon, and Susan Rothstein, 105-134. Amsterdam and Philadelphia: John Benjamins. 16
Horvath, Julia, and Tal Siloni. 2009. Hebrew idioms: The organization of the lexical component. Brill's Annual of Afroasiatic Languages and Linguistics 1:283-310. 16
Jackendoff, Ray. 2000. Curiouser and curiouser. Snippets 1. 11
Kastner, Itamar. 2020. Voice at the interfaces: The syntax, semantics and morphology of the Hebrew verb. Number 8 in Open Generative Syntax. Language Science Press. 17
Kastner, Itamar, and Vera Zu. 2017. Blocking and paradigm gaps. Morphology 27:643-684. 6, 13, $14,15,16,17,18,19,20,21$
Katzir, Roni. 2011. Morphosemantic mismatches, structural economy, and licensing. Linguistic Inquiry 45-82. 22
Kiparsky, Paul. 1973. "Elsewhere" in phonology. In A festschrift for morris halle, ed. Stephen R. Anderson and Paul Kiparsky, 93-106. Holt, Rinehart, and Winston. 3
Kiparsky, Paul. 1982. Lexical morphology and phonology. In Linguistics in the morning calm, ed. I.-S. Yang, 3-91. Seoul: Hanshin. 3

Kiparsky, Paul. 2005. Blocking and periphrasis in inflectional paradigms. Yearbook of Morphology 2004 113-135. 5, 6, 7, 9, 20, 21
Kiparsky, Paul. 2010. Dvandvas, blocking, and the associative: The bumpy ride from phrase to word. Language 86:302-331. 5, 6, 19, 20
Kratzer, Angelika. 2000. Building statives. In Proceedings of the twenty-sixth annual meeting of the Berkeley Linguistics Society, ed. Lisa J. Conathan, Jeff Good, Darya Kavitskaya, Alyssa B. Wulf, and Alan C. L. Yu, 385-399. Berkeley, CA: University of California, Berkeley Linguistics Society. 16
Labelle, Marie. 1992. Change of state and valency. Journal of Linguistics 28:375-414. 22
Labelle, Marie, and Edit Doron. 2010. Anticausative derivations (and other valency alternations) in French. Probus 22:303-316. 22
Laks, Lior. 2011. Morpho-phonological and morpho-thematic relations in Hebrew and Arabic verb formation. Doctoral Dissertation, Tel Aviv University, Tel Aviv. 17
Laks, Lior. 2014. Morpho-thematic mismatches in Hebrew: What happens when morphological and thematic criteria collide? Lingua 138:107-127. 22
Laks, Lior. 2018. Morphological compensation for empty paradigm cells. Lingue e linguaggio 17:233260. 22

Lee, Leslie, and Farrell Ackerman. 2017. Word-based morphology-syntax interdependencies: Thai passives. Journal of Linguistics 53:359-406. 22
Legendre, Géraldine. 2009. The neutralization approach to ineffability in syntax. In Modeling ungrammaticality in Optimality Theory, ed. Curt Rice and Sylvia Blaho, Equinox. London: Equinox. 6

Legendre, Géraldine, Paul Smolensky, and Jennifer Culbertson. 2016. Blocking effects at the lexicon/semantics interface and bidirectional optimization in French. In Optimality-theoretic syntax, semantics, and pragmatics: From uni- to bidirectional optimization, ed. Géraldine Legendre, Michael T. Putnam, Henriëtte de Swart, and Erin Zaroukian. Oxford: Oxford University Press. 22
Legendre, Géraldine, Paul Smolensky, and Colin Wilson. 1998. When is less more? faithfulness and minimal links in wh-chains. In Is the best good enough? optimality and competition in syntax, ed. Pilar Barbosa, Danny Fox, Paul Hagstrom, Martha McGinnis, and David Pesetsky, 249-289. Cambridge, MA: MIT Press. 6
Levshina, Natalia. 2018. Probabilistic grammar and constructional predictability: Bayesian generalized additive models of help $+(t)$ infinitive in varieties of web-based English. Glossa 3. 22
Marantz, Alec. 2001. Words. In The 20th West Coast Conference on Formal Linguistics (WCCFL 20). Los Angeles, CA. 5
Martin, Fabienne, and Florian Schäfer. 2014. Anticausatives compete but do not differ in meaning: a French case study. In Proceedings of congrés mondial de linguistique fran caise (CMLF 2014), ed. Franck Neveu, Peter Blumenthal, Linda Hriba, Annette Gerstenberg, Judith Meinschaefer, and Sophie Prévost, volume 8, 2485-2500. 22
Matushansky, Ora. 2013. More or better: on the derivation of synthetic comparatives and superlatives in English. In Distributed Morphology Today: Morphemes for Morris Halle, ed. Alec Marantz and Ora Matushansky, 59-78. Cambridge, MA: MIT Press. 7, 9, 10, 11, 12
McGinnis, Martha. 2008. Phi-feature competition in morphology and syntax. In Phi-theory: Phi features across modules and interfaces, ed. Daniel Harbour, David Adger, and Susana Béjar, Oxford Studies in Theoretical Linguistics, 155-184. Oxford: Oxford University Press. 22
McGinnis, Martha. 2013. Agree and fission in Georgian plurals. In Distributed Morphology today: Morphemes for Morris Halle, ed. Ora Matushansky and Alec Marantz, 39-58. Cambridge, MA: MIT Press. 22
Meltzer-Asscher, Aya. 2011. Adjectival passives in Hebrew: Evidence for parallelism between the adjectival and verbal systems. Natural Language \& Linguistic Theory 29:815-855. 16
Miyagawa, Shigeru. 1998. (S)ase as an elsewhere causative and the syntactic nature of words. Journal of Japanese Linguistics 16:67-110. 22
Mondorf, Britta. 2014. Apparently competing motivations in morphosyntactic variation. In Competing motivations in grammar and usage, ed. Brian MacWhinney, Andrej Malchukov, , and Edith Moravcsik. Oxford: Oxford University Press. 22

Müller, Gereon. 2011. Syncretism without underspecification in optimality theory: the role of leading forms. Word Structure 4:53-103. 6
Müller, Gereon. 2013. Approaches to deponency. Language and Linguistics Compass 7:351-369. 6
Nie, Yining. 2020. Licensing arguments. Doctoral Dissertation, New York University, New York, NY. 22
Norris, Mark, Line Mikkelsen, and Jorge Hankamer. 2014. Licensing trouble. Linguistic Inquiry 45:617-653. 22
Oseki, Yohei. 2017. Voice morphology in Japanese transitivity alternations. Ms., NYU. lingbuzz/003374. 22
Pietraszko, Asia. 2020. Cyclic selection: Auxiliaries are merged, not inserted. Ms, Rochester. lingbuzz/005194. 7
Poser, Bill. 1992. Blocking of phrasal constructions by lexical items. In Lexical matters, ed. Ivan A. Sag and Anna Szabolcsi, 111-130. Stanford, CA: CSLI. 5
Prince, Alan, and Paul Smolensky. 1993/2004. Optimality theory: Constraint interaction in generative grammar. Malden, MA, and Oxford: Blackwell. Revision of 1993 technical report, Rutgers University Center for Cognitive Science. ROA 537. 5
Reinhart, Tanya, and Tal Siloni. 2005. The lexicon-syntax parameter: Reflexivization and other arity operations. Linguistic Inquiry 36:389-436. 17
Sadler, Louisa, and Andrew Spencer. 2001. Syntax as an exponent of morphological features. Yearbook of Morphology 2000 71-96. 17, 18, 20
Sichel, Ivy. 2009. New evidence for the structural realization of the implicit external argument in nominalizations. Linguistic Inquiry 40:712-723. 16
Sichel, Ivy. 2014. Resumptive pronouns and competition. Linguistic Inquiry 45:655-693. 22
Spathas, Giorgos, Artemis Alexiadou, and Florian Schäfer. 2015. Middle Voice and reflexive interpretations: afto-prefixation in Greek. Natural Language \& Linguistic Theory 33:1293-1350. 17
Ussishkin, Adam. 2005. A fixed prosodic theory of nonconcatenative templatic morphology. Natural Language \& Linguistic Theory 23:169-218. 17
Wasow, Thomas. 1977. Transformations and the lexicon. In Formal syntax, ed. Peter Culicover, Thomas Wasow, and Adrian Akmajian, 327-360. New York, NY: Academic Press. 15


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[^1]:    2. These are sometimes referred to as "morphological" and "periphrastic", e.g. by Brown et al. (2010), Bobaljik (2012), Pietraszko (2020) and in Chapter VERBAL INFLECTION.
    3. I assume throughout that contexts which allow one variant exclude the other. Hilpert (2008) and Aronoff and Lindsay (2014) present challenges to this view.
[^2]:    4. How these facts should be understood is a matter that has been discussed at considerable length by Kiparsky (2005), Embick (2007), Embick and Marantz (2008) and Matushansky (2013).
    5. This appearance of more/most can be compared to do-support, also in the implementation of Embick and Noyer (2001).
[^3]:    6. What this part of Matushansky (2013) leaves out, it seems to me, is an explanation for why the [degree]-less forms in (i) are ruled out even as analytic comparatives with no head movement:
    (i)* This is a more \{real/golden/French\} sword.

    One possible explanation is that coercion, of the kind necessary to force a non-scalar adjective into metalinguistic comparison, is simply not available in environments with no explicit object of comparison such as (i). Matushansky (p.c.) speculates that the problem might lie with this being an identificational statement.

[^4]:    9. The choice of tense and aspect for the copula sum is a complex topic, which this table idealizes. For additional detail see Gildersleeve and Lodge (1903:§250), Embick (2000:189ff6), Haverling (2010), Bjorkman (2014:31ff28), and especially the recent discussion by Burton (2016). Thanks to Jaume Mateu for the literature pointers.
    10. See (Ackema 1999:Ch. 3) for additional discussion of synthetic and analytic forms in Romance and Germanic, including diachronic processes such as deflexion.
[^5]:    11. Sadler and Spencer (2001) argue for an analysis that flips this approach on its head, claiming that the analytic form is borrowed to fill in an empty paradigm cell.
[^6]:    12. One question which arises is why the default forms of these morphemes are not chosen. It is possible that the various allomorphic interactions make it difficult for the learner to establish one default form in each case.
