

# SUSPENSION ACROSS DOMAINS<sup>\*</sup>

JONATHAN DAVID BOBALJIK

SUSI WURMBRAND

*University of Connecticut*

## 1 Shifting Domains

The notion of a cyclic derivation, defining (sub)-domains in a grammatical derivation to which rules apply dates from some of the earliest work in modern linguistics, and is a recurring theme in the work of Morris Halle (see, famously, Chomsky and Halle 1968). In phonology, it is recognized that not all morpheme concatenation triggers cyclic rule application, but that certain morphemes are designated triggers of cyclic rules (see, e.g., Halle and Vergnaud 1987 for one approach). A related idea pervades the history of syntax, holding that there are cyclic domains defined (at least in part) with reference to particular heads/projections, and that these cycles enforce

---

\* For feedback on some of the ideas presented here, we are grateful to audience members at *ETI 1* (McGill), *ZAS* (Berlin), *NELS 42* (Toronto), to seminar participants at UConn and MIT, and to the editors and reviewers for this volume.

locality conditions on syntactic dependencies (see, e.g., Ross 1967; Chomsky 1973, 1986). Within the intermodular perspective of Distributed Morphology (Halle and Marantz 1993) various authors have raised the question of how the domains (e.g., cycles, phases) of one module (syntax, morphology, semantics) interact with those of others (see also Scheer 2008 and related work).

In this short paper, we explore one small aspect of this large puzzle. Specifically, we propose a general rubric that allows for some slippage in otherwise well-established locality domains—cases in which a well-motivated cyclic domain appears to be suspended, allowing dependencies to span a larger structure than they normally may. To the extent that this is on the right track, it bolsters arguments that cyclic domains constrain the locality of operations across modules and thus constitute a deep property of grammar. Specifically, we suggest that the following *Domain Suspension* principle holds across modules, and present two applications, one from suppletion in morphology, the other from quantifier raising (QR), suggesting the potentially broad applicability of the principle.<sup>1</sup>

- (1) In the following configuration (linear order irrelevant), where the projection of Y would normally close off a domain, formation of such a domain is *suspended* just in case Y depends on X for its interpretation.

$$[ X [Y^n Y ] ]$$


---

<sup>1</sup> To keep within the scope (and page limits) of this short paper, we do not consider other domains here, including, for instance, interactions across phonological domains (as raised by reviewers).

Although (1) could be implemented in various ways, we conceive of suspension not as an operation, but as a condition restricting (or defining exceptions to) the algorithm(s) that determine(s) derivationally whether a given maximal projection will or will not constitute (or close off) a domain. Various terms in this general scheme (notably ‘domain’, ‘interpretation’) are relativized to some extent, to the module under consideration, accounting for a slight difference in the ways in which (1) plays out in the different components of grammar. For the cases to be considered here, the algorithms subject to Domain Suspension in the structure in (1) include:

- (2) a. Morphology: if X is a cyclic head, then  $Y^n$  is a Spell-Out Domain, unless Y depends on X for its interpretation.
- b. Syntax: if  $Y^n$  is the highest projection of a (potential) cyclic domain, then  $Y^n$  constitutes a phase, unless Y depends on X for its interpretation.

We illustrate these in turn.

## **1 *Optimal* suspension: superlative suppletion**

The first case of (1) that we consider is in the morphology, and is drawn from the study of adjectival suppletion in Bobaljik 2012. We limit ourselves to a brief presentation here and refer the reader to the work cited for additional detail and important qualifications.

In a comprehensive survey of suppletion in adjectival gradation (*good – better – best*), encompassing some 116 distinct suppletive cognate triples (POSITIVE – COMPARATIVE – SUPERLATIVE) from more than 70 languages, Bobaljik reports the following patterns.

(3) regular	A	A	A	<i>big – bigger – biggest</i>
suppletive	A	B	B	<i>good – better – best</i>
doubly-suppletive	A	B	C	<i>bonus – melior – optimus</i>
unattested:	A	B	A	<i>*good – better – goodest</i>
	A	A	B	<i>*good – gooder – best</i>

Bobaljik argues that the (relative) superlative is universally built from the comparative, hence the underlying structure is (hierarchically) [ [ [ ROOT ] CMPR ] SPRL ]. The structure is transparent in many languages, illustrated in (4), but obscured by a null comparative allomorph in the superlative in some (such as English). That is, we assume that even in English, the superlative has the structure [[[ big ] Ø<sub>ER</sub> ] est] (Bobaljik 2012 constitutes an extended defense of this analysis; see also Stateva 2002).<sup>2</sup>

(4)	POS	CMPR	SPRL	GLOSS
a. Persian	bozorg	bozorg-tar	bozorg-tar-in	‘big’
b. Cimbrian	šüa	šüan-ar	šüan-ar-ste	‘pretty’
c. Czech:	mlad-ý	mlad-ší	nej-mlad-ší	‘young’
d. Hungarian:	nagy	nagy-obb	leg-nagy-obb	‘big’

<sup>2</sup> Sources for these examples are: Persian – Mace 2003, Cimbrian – Schweizer 2008, Czech – Janda and Townsend 2000, Hungarian – Kiefer 2001, Latvian – University of Latvia 1999, Ubykh – Dumézil 1931.

e. Latvian:	zil-ais	zil-âk-ais	vis-zil-âk-ais	‘grey’
f. Ubykh:	nüs°ə	ç’a-nüs°ə	a-ç’a-nüs°ə	‘pretty’

This nested structure, along with the assumption that suppletion is the result of contextual allomorphy of the root, as in (5), explains the absence of the ABA pattern: in the absence of a more specific rule, the Subset Principle (Halle 1997) ensures that (5a) will bleed (5b) in the comparative, and in the superlative (as the environment for application is met in both instances).

- (5) a. GOOD → *be(tt)* / [ \_\_ ] CMPR  
 b. GOOD → *good* / <elsewhere>

A simple explanation for the complete absence of the AAB pattern, which we assume is essentially correct, supplements the account just given with the additional assumption that the CMPR node is cyclic, i.e., domain-defining, and that the SPRL morpheme is thus insufficiently local to be able to serve as the context triggering a suppletive root (see Embick 2010 and Bobaljik 2012 for different views on the interaction of cyclicity and locality for allomorphy).<sup>3</sup> Recall that, by hypothesis, the superlative is derived from the comparative. At the intermediate point in this derivation where the comparative head is introduced, the representation is as in (6a).

- (6) a. [ [√ ROOT ] CMPR ]  
 b. [ [ [√ ROOT ] CMPR ] SPRL ]

---

<sup>3</sup> That CMPR is cyclic does not follow from any prior assumptions, although it may be related to the assumption that category-changing morphology is cyclic (e.g., Embick 2010). Hints to that effect are provided by Russian comparatives, which are morphologically in essence adverbs (i.e., invariant short neuter adjectives) and the neutralization of the adjective/adverb distinction in English comparatives.

We assume CMPR is cyclic, and thus it triggers Spell-Out of its complement. That is, the complement of CMPR is a Spell-Out Domain, which we take to mean, at a minimum, that rules of exponence/vocabulary insertion apply at this stage. For an adjective such as *big* that lacks a suppletive comparative allomorph along the lines of (5a), Spell-Out will apply and insert the default form of the root. When the SPRL morpheme is subsequently added (as in (6b)), it is too late to trigger a special rule at the root cycle, since the form of the root has already been fixed.

Attractive as it may seem (especially in that the \*AAB pattern is robustly unattested, constituting zero of the 116 suppletive triples in Bobaljik's sample), it is factually incorrect that the superlative cannot govern a suppletive root allomorph. The Latin ABC triple *bonus – melior – optimus* 'good – better – best' shows this to be the case (there are a handful of other such patterns, including in Welsh and Middle Persian). The generalization appears to be this: the superlative head is accessible as a context for root allomorphy just in case the comparative also triggers root allomorphy (ABC), but if the comparative is regular, then so too must the superlative be regular: (AAX → AAA). Domain Suspension in (1) explains why this is so, as follows.

We take (7) to be the representation of the Latin 'good' root allomorphs.<sup>4</sup>

---

<sup>4</sup> Note that (7a) is presented as a portmanteau (cumulative exponent), and thus represents vocabulary insertion at a node that dominates both the root and the comparative head/feature. This can be achieved via insertion at non-terminal nodes (see Caha 2009; Radkevich 2010) or equivalently via the prior application of a rule of *Fusion* joining two terminal nodes into a single locus of exponence (Halle and Marantz 1993; Chung 2007). Theoretically, treating *opt-* as a portmanteau allows vocabulary insertion to target a node that is adjacent (both structurally and linearly) to SPRL, a condition on contextual allomorphy that is perhaps general (Embick 2010). Empirically, this explains why the *-iss-* element of the superlative (a reflex of the comparative) is missing in *opt-imus* (\**opt-iss-imus*), cf. *beatus – beat-ior – beat-iss-imus* = 'happy-CMPR-SPRL'. See Bobaljik 2012.

- (7) a. GOOD, CMPR → *opt-* / \_\_ ] SPRL  
b. GOOD → *mel-* / \_\_ ] CMPR  
c. GOOD → *bon-* / <elsewhere>

A root like *big* that does not have a comparative allomorph does not depend on the node CMPR for its interpretation, i.e., for the choice of exponent. This allows such roots to be spelled out on the cycle introduced by CMPR as indicated above. By contrast, the Latin (7) and English (5) roots meaning ‘good’ *do* depend on the head CMPR—the exponent to be selected in a derivation cannot be determined without reference to this head. As such, Domain Suspension is triggered and Spell-Out is delayed (as it were) until the next higher cycle. At the next higher cycle, the head SPRL is introduced, and is thus available to trigger allomorphy (perhaps subject to an adjacency requirement, and thus permitting only portmanteau allomorphy for the root plus CMPR as in (7a)).

Note, importantly, that Domain Suspension, as formulated, does not permit of a hypothetical Latin’, just like (7) but omitting (7b), and yielding the unattested AAB pattern: *\*bonus – bonior – optimus*. Establishment of a Spell-Out Domain is only suspended if the head of the erstwhile domain depends on the cyclic head for its interpretation. A rule like (7b) thus establishes exactly the right type of dependency to suspend the domain, but a rule like (7a), which only indirectly affects the form of the adjectival root, but does not operate on the root node as such, does not.

In sum, the idea that locality is defined (at least in part) in terms of (cyclic) domains, provides, in the case at hand, a straightforward account of an exceptionless cross-linguistic generalization, namely, the absence of \*AAB patterns in adjectival suppletion. Patterns of this sort simply do not exist. On the other hand, the Domain Suspension Principle in (1) provides a loophole, allowing for a very narrow class of cases in which locality is weakened and where suppletion of (a constituent including) the root may be governed by the superlative. Domain Suspension re-

quires, correctly, that these cases have certain hallmark properties—at a minimum, they must constitute ABC patterns, in which the comparative is independently suppletive, since it is exactly the rule that yields comparative suppletion that prevents the establishment of an opaque (i.e., cyclic) domain including the root.

## 2 Tense dependencies: phase suspension and QR

We now explore the analog of (1) in syntax. In this component, we take phases to be the crucial locality domain regulating the locality of various dependencies. It is well-established that infinitives and subjunctives, in contrast to finite indicative clauses, are transparent for various properties cross-linguistically (e.g., long distance reflexive binding, Condition B transparency, NPI-licensing, Case licensing, A-movement, control, scope, and others). The degree of porosity of the embedded clauses often goes along the following continuum: *finite* » *subjunctive* » *infinitive* » *raising*. QR in English poses an odd puzzle: it is possible from control and ECM infinitives, as well as subjunctive clauses, but not from finite clauses (at one end of this continuum), nor from raising constructions, which are often assumed to be the most transparent configurations. This is illustrated by the examples in (8) (see Kayne 1981, 1998; Longobardi 1992; Lebeaux 1995; Bayer 1996; Kennedy 1997; Fox 1999, 2000; Johnson 2000, among others, for further examples, qualifications, and controls).

- (8) a. # Someone said that Sue is married to every man.  $*\forall \gg \exists$  (finite)  
b. She has requested that they read only Aspects. *only*  $\gg$  *request* (subjunctive)  
c. A different student decided to report on every article.  $\forall \gg \exists$  (infinitive)  
d. Someone expects Sue to marry every boy.  $\forall \gg \exists$  (infinitive)  
e. # This soldier seems to someone to be likely to die in every battle.  $*\forall \gg \exists$  (raising)

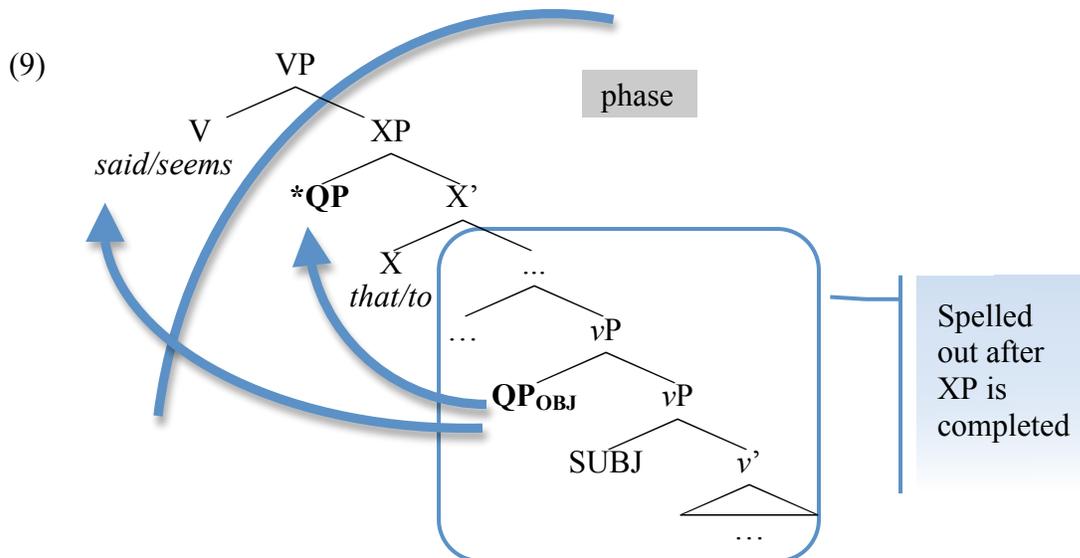
Wurmbrand (to appear) adopts a cyclic spell-out model according to which completed cycles (phases) are subject to transfer followed by (LF and PF) Spell-Out of the complement of the phase head. Since, per common assumption, a *spelled-out* domain is inaccessible for further syntactic operations (such as movement), this model has as a consequence that movement (whether overt or covert) is phase-bound (see also Cecchetto 2003, 2004; Takahashi 2010). The main proposal regarding the distribution of QR in (8) is that finite clauses and raising infinitives involve a solid phasal domain, hence block QR, whereas control and ECM infinitives trigger domain suspension in (1), hence allow QR.

A simplified structure for finite and raising complements is given in (9).<sup>5</sup> In finite embedded complements, XP corresponds to CP, in raising infinitives to AspP (see Wurmbrand 2011). Crucially, in both constructions, we argue, XP constitutes a phase. Following ideas in Bobaljik and Wurmbrand 2005 and Bošković 2010, we pursue a dynamic phasehood view; specifically we propose that the highest projection of a clause, no matter what category or label, constitutes a

---

<sup>5</sup> As we discuss below, the claim about the phasehood of a particular type of clausal complement is not about whether a structure involves raising, control, or ECM, but rather about the temporal and mood properties of the complement and how the complement combines with the matrix verb. To the extent these (in)dependencies correlate with properties such as raising, etc., we may use these familiar construction names to designate classes of clausal complements. But see footnote 8 for further details and qualifications.

phase. This is responsible for making the CP of a finite clause as well as the AspP of a raising infinitive a phase, hence a locality domain for movement.



Before laying out how exactly phasehood is determined in this dynamic phasehood model, consider the effects of the assumption that XP in (9) is a phase. First, a derivation that involves movement of a QP from the complement of the phase head X across XP is excluded. Since the complement of X is a Spell-Out domain, any material within that domain will be inaccessible for further operations. Second, a derivation involving successive cyclic movement of a QP to Spec,XP is excluded by Fox's (2000) *Scope Economy* condition. Scope Economy is essentially a last resort condition for covert movement which states that each step of QR must be semantically motivated and cannot be semantically vacuous. Since movement of a QP to Spec,XP does not yield a different interpretation, it is excluded by Scope Economy. For an embedded QP to take matrix scope, however, movement through Spec,XP would be necessary, since otherwise the QP is trapped in a Spell-Out domain. But since successive cyclic movement is not available, QR to the matrix clause is excluded. Thus, the dynamic phase view proposed here unifies the clause-boundedness effects found in English finite indicative clauses and raising infinitives.

While phasehood of finite CPs is uncontroversial, the claim that raising infinitives are phases is less obvious. One piece of motivation is provided by the binding properties in (10) (due to Fox, cited in Grohmann, Drury and Castillo 2000; Bošković 2002; Pesetsky and Torrego 2007; Castillo, Drury and Grohmann 2009, among others). If the top projection of a raising infinitive (typically assumed to be TP, but see Wurmbrand 2011 for reasons to assume it is an aspectual projection) is a phase, movement of the subject always has to proceed through the specifier of the top projection, AspP in (10). The existence of a copy of the subject in Spec,AspP then correctly accounts for the fact that the anaphors in these examples always have to be bound by the subject rather than the higher experiencer.<sup>6</sup>

- (10) a. [John seems to Mary [AspP ~~John~~ to appear to himself [vP ~~John~~ to be...]]]  
b. \* [Mary seems to John [AspP ~~Mary~~ to appear to himself [vP ~~Mary~~ to be ...]]]

Assuming the dynamic phase approach above, the obvious question now is why control and ECM infinitives, as well as finite subjunctive complements, are not phases—that is, why phasehood is suspended in these cases but not in finite complements and raising infinitives. As stated in (1), we propose that domain establishment is suspended just in case the lower head (in the cases at hand, the top head of the embedded clause) depends on the head that combines with it

---

<sup>6</sup> Note that overt movement is subject to a general Last Resort condition that allows movement only when necessary for feature licensing. Since the subject of a raising infinitive requires Case licensing by the matrix T, movement is permitted under, for instance, the Last Resort condition in Bošković 2007, 610: X undergoes movement iff without the movement, the structure will crash (with crash evaluated locally). Similarly, successive cyclic *wh*-movement is allowed since it involves a feature licensing relation between an interrogative C and a *wh*-phrase.

for its interpretation. In order to flesh this out, we must first return to a point put aside above, namely the question of how phasehood is determined in a dynamic phase model in general.

In contrast to Chomsky 2000, 2001 where certain designated projections—only (strong)  $\nu$ P and CP (maybe also DP, PP)—are phases, we argue that it is particular domains that determine phases, and that it is the highest projection of these domains (again whatever their category or size) that normally constitutes a phase. These potential cyclic domains (i.e., potential phases) are specified as follows (see Wurmbrand 2012 for evidence for this view from ellipsis, among others):<sup>7</sup>

- (11) a. Aspect domain: theta-domain plus any event structure/Aktionsart dependent aspect (progressive, perfective, imperfective)
- b. T+C-domain: discourse domain, mood, tense, modal domain

Under this approach, no phrase is inherently a phase and the lack of a CP or  $\nu$ P does not entail the lack of phase (that is, unaccusative and passive VPs also qualify as phases, which is motivated by the binding and reconstruction properties discussed in Legate 2003 and Sauerland 2003). How then does a syntactic object ‘know’ whether it is a phase or not? We propose that phasehood is determined strictly derivationally: when an XP merges with a head Y, XP becomes a phase if Y is part of the next (potential) cyclic domain (e.g., if  $\nu$ P merges with T,  $\nu$ P becomes a phase). As a result, XP is subject to Transfer at this point. On the other hand, if XP merges with a head Y which is part of the same (potential) cyclic domain as XP (e.g., if  $\nu$ P merges with a pro-

---

<sup>7</sup> Ora Matushansky (pers. comm.) suggests that the dynamic phasehood view, in particular the effect that the complement of a lexical head is a phase whatever its category/size, may be unified with the cycle-defining nature of category-changing morphology (see fn. 3). We leave pursuit of this intriguing idea for future work.

gressive head), XP does not become a phase but its cyclic domain is extended to YP (and potentially further) and Transfer does not occur yet.

With this system in place, we are now in a position to tackle domain suspension in control/ECM and subjunctive clauses. The crucial idea is that merging a control, ECM, or subjunctive verb with its complement involves a particular semantic dependency, specifically, a featural dependency spanning the domain boundary, which suspends phasehood of the complement. Although the complement constitutes a separate potential cyclic domain in the sense of (11), the dependency in question blocks the establishment of an actual domain of cyclic rule application—a syntactic phase—in these cases, with consequences for the locality of movement.

To see what kind of dependency this is, a short detour to the tense properties of infinitives is necessary. In addition to raising infinitives, which, we argue, involve aspect but no tense, there are two types of infinitives in English that differ regarding their tense properties: future irrealis infinitives and simultaneous propositional infinitives. In Wurmbrand 2011, it is shown that both types of infinitives can be realized as control and ECM constructions, and it is proposed that future irrealis infinitives involve an abstract future modal *woll* but no tense. By contrast, simultaneous propositional infinitives involve a *zero* tense, representing the attitude's holder 'now' (Kratzer 1998; Abusch 2004). The major evidence comes from sequence of tense phenomena (Ogihara 1995, 1996, 2007; Abusch 1997; Enç 2004) and the distribution of eventive predicates, that is, non-stative, non-generic, episodic predicates (Pesetsky 1992; Bošković 1996, 1997; Martin 1996, 2001). We briefly illustrate the latter property. As shown in (12), future infinitives, like finite future contexts, allow eventive predicates, whereas simultaneous propositional infinitives, like present tense contexts, prohibit eventive predicates (see Abusch 2004; Wurmbrand 2011 for several further examples).

- |         |   |               |
|---------|---|---------------|
| (12) a. | Leo decided/plans to bring the toys tomorrow.                     | Control       |
| b.      | The printer is expected to work again tomorrow.                   | ECM           |
| c.      | Leo will leave tomorrow.  | Finite future |
| d.      | Yesterday, John claimed to *leave/✓be leaving (right then).       | Control       |
| e.      | Yesterday, John believed Mary to *leave/✓be leaving (right then). | ECM           |
| f.      | Leo *sings/✓is singing right now.                                 | Present       |

Wurmbrand (2011) proposes that the distribution of eventive predicates is an effect of aspect. Specifically, it is argued that present tense and zero tense are only compatible with imperfective aspect, which, in English, corresponds to the *-ing* form. Perfective aspect (which is not realized morphologically in English), requires that the event time interval is included in the reference time interval, which is not possible in present and zero tense contexts, since the reference time interval (the utterance time or the attitude holder's now) is too short. Future contexts, on the other hand, involve the modal *will*, which extends the reference time, and hence allows a perfective interpretation—an interpretation where the event time interval is included in the reference time interval. Assuming that propositional infinitives involve a zero tense and future infinitives a future modal *will* thus allows a unified account of the distribution of eventive predicates based on the interaction of tense and aspect.

The tense properties of control and ECM infinitives play a crucial role in our account of domain suspension in these contexts (as well as subjunctive complements) in English. Comparing the tense/mood/aspect properties of the different types of embedded structures, one clear difference arises: in control/ECM infinitives and subjunctive complements, the specific semantic value of the highest head is selected by the matrix verb (as part of its lexical properties). In finite clauses and raising infinitives, on the other hand, no such selectional relation exists.

The examples in (13) illustrate the dependency between specific matrix predicates and the temporal/mood composition of the complement: *demand* (vs. *say*) selects subjunctive, *decide* selects a future infinitive, and *claim* (also *believe*) selects a simultaneous infinitive. Finite complements of *say*, on the other hand, show no tense restriction imposed by the higher verb, (14a). Similarly, aspect in raising infinitives (which are semantically tenseless) is not a property of the verb *seem* but a combination of the type of embedded predicate (stative vs. non-stative) and the higher tense, (14b).

- (13) a. I demand/\*said that he listen to this.  
b. Mary decided to leave tomorrow/to become/get/#to be pregnant.  
(only if future state)  
c. Mary claimed to {be/\*become/\*get} pregnant/\*to leave tomorrow.

- (14) a. John said that he ate/is eating/will eat a cookie.  
b. John seems to be sleeping/\*to sleep right now/to sleep whenever he's tired.

More abstractly, we assume that the dependencies in (13) are dependencies between an under-specified (or unvalued) feature of the potential phase head and a lexical value of the verb the clause combines with, whereas there is no feature dependency in (14). The schemas here illustrate the relevant portions of the corresponding examples above:

- (13')a. *demand*<sub>SUBJ</sub> [XP=potential phase X<sub>F</sub>: \_\_\_ ... ]  
b. *decide*<sub>FUT.IRR</sub> [XP=potential phase X<sub>F</sub>: \_\_\_ ... ]  
c. *claim*<sub>SIM</sub> [XP=potential phase X<sub>F</sub>: \_\_\_ ... ]  
(14')a. *say* [XP=phase X<sub>F</sub>: val ... ]

b. *seem*            [XP=phase            XF: val    ... ]

It is this feature selection dependency, we argue, that suspends phasehood and thus also Spell-Out.<sup>8</sup> The feature values under consideration are all values that need to be visible in semantics to properly interpret the structure. Thus, in jargon, the features that show a value dependency in (13) are all interpretable features. The intuition behind (1) is then that a (potential) cyclic domain which is incomplete in a crucial semantic way (that is, the topmost head is semantically underspecified and only interpretable in conjunction with the selecting head) cannot be transferred, and Spell-Out is suspended.

A specific technical implementation of value selection is given in Wurmbrand (to appear). It is assumed there that verbs that impose a value selection restriction on their complements are lexically specified with an uninterpretable valued feature encoding the specific value. For instance *decide*, *expect* are specified for  $uF: \textit{woll}$ , whereas *claim*, *believe* are specified for  $uF: \emptyset_T$ , and subjunctive taking verbs like *demand* are specified for  $uF: \textit{subjunctive}$ . The topmost head of the complement, on the other hand, is underspecified in that it comes unvalued. Crucially, since those heads encode semantic information (tense, mood, modality), these features are still interpretable features. If an interpretable feature is sent to LF without a value, LF could not assign an

---

<sup>8</sup> As mentioned in fn. 5, the claim that English raising infinitives are phases does not entail that raising constructions cross-linguistically are phases. Rather, phasehood is dependent on the selectional properties between a verb and its complement. In Wurmbrand, Alexiadou, and Anagnostopoulou 2012, we suggest, for instance, that raising constructions in Greek, Romanian, and Spanish are value selected subjunctives or infinitives, and hence do not constitute phases, which, in contrast to English raising, allows phase-bound operations to apply across them. Furthermore, modal constructions, which can also involve raising (see Wurmbrand 1999; Bhatt 2000), show different QR properties than *seem* constructions in English, since modals originate in the tense domain and movement from the edge of the lower phase (Spec,vP) across a modal is allowed by Scope Economy.

interpretation, and the structure would not be interpretable. Thus, the only way the structure will converge is if the unvalued features are valued via Agree before LF.

The features as specified above have the effect that a mutual dependency is established between certain verbs and corresponding types of complements. The unvalued features of the top clausal projection need to enter an Agree relation with a higher verb that has an  $uF: val$ . Similarly, the uninterpretable feature of the selecting verb also becomes dependent on a specific complement, as desired. Following Pesetsky and Torrego (2007), uninterpretable features (whether valued or unvalued) need to be licensed, specifically, they need to be connected to a corresponding interpretable feature (cf. the proposal of the *Thesis of Radical Interpretability*, Brody 1997).

The feature specification proposed allows us to address the question of why complements that are value-selected are not phases. There are two ways to implement this, and we will leave the choice between the two options open here. First, it could be assumed that valuation suspends phasehood. Since the unvalued features under consideration are interpretable features, these units would be interpretationally incomplete (before valuation takes place), and hence at the point where the clauses are completed, these units would not qualify as objects that are useable by the semantics. Alternatively, it could be assumed that the heads with the unvalued features undergo head-movement, which causes phase extension (see den Dikken 2007) or phase sliding (see Gallego 2005, 2010; Gallego and Uriagereka 2006), although note that these latter proposals, unlike Domain Suspension as we have defined it, do not obviously extend to the morphological cases discussed in section 1.

### **3 Conclusions**

In (13), the head X head is deficient, in the sense that it depends on the next head up for its (temporal) interpretation. Empirically, this is manifested as a type of selection relation—verbs like *demand* and *decide* require a particular temporal interpretation of their (infinitival) complement, where verbs selecting raising and finite complements do not. This dependency makes subjunctive, control, and ECM complements special. One aspect of their special nature being that they fail to constitute a phase (domain), and thus do not restrict movement in the way phases do—they do not require an element moving across them to land in their periphery. QR has the perfect properties to show this effect. Since (long) QR is not driven by feature-checking needs, it is subject to Scope Economy, and thus, effectively, cannot escape a phase. Long QR is thus only possible where no phase intervenes, and serves as an excellent phase-detector.

In (5) and (7), the adjectival root is deficient, in the sense that it depends on the next head up for its (phonological) interpretation. Empirically, this is manifested as a selection relation—for suppletive adjectives, the comparative requires a particular allomorph of the root, where for non-suppletive adjectives, no such selection relation obtains. This dependency (suppletion) makes roots with comparative allomorphs special—one aspect of their special nature being that they fail to be ‘closed off’ to further suppletion, and may thus have yet more allomorphs governed by more peripheral heads. An adjective lacking a suppletive comparative (such as *big* - *bigger*...) can only be continued in the superlative by regular forms; while an adjective like *good* - *better*... could in principle maintain the comparative root (*best*) or be yet further suppletive (*optimus*; subject to the condition that further suppletion involve a portmanteau). Both patterns (ABB, ABC) are indeed attested, with further suppletion unsurprisingly the rarer of the two.

We have attempted, in this paper, to express what we see as a tantalizing similarity across

two phenomena that are otherwise completely unrelated, and we have proposed the principle in (1) to express this generalization. If we are right and the generalization is not spurious, then the observations here contribute to a characterization of a general property of language. Fundamentally, this property is the cyclic nature of derivations: rules apply in inner constituents before they apply in outer ones, with certain internal properties of inner/smaller constituents periodically ‘fixed’ or ‘frozen’ and thus inaccessible to later derivational steps (e.g., Bracket Erasure in Chomsky and Halle 1968, the PIC in Chomsky 2000, 2001 or the reformulated accessibility condition on spelled-out domains). Our proposal, in line with references cited above, is that the formation of these impenetrable domains is suspended under certain conditions, but more specifically, that the conditions under which Domain Suspension applies themselves generalize across components, spanning the domains of morpho-phonology and syntax-semantics.

## References

- Abusch, Dorit. 1997. Sequence of tense and temporal de re. *Linguistics and Philosophy* 20,1-50.
- Abusch, Dorit. 2004. On the temporal composition of infinitives. In *The syntax of time*, ed. by Jacqueline Guéron and Jacqueline Lecarme, 27-53. Cambridge, MA: MIT Press.
- Bayer, Josef. 1996. *Directionality and logical form*. Dordrecht: Kluwer Academic Publishers.
- Bhatt, Rajesh. 2000. Covert modality in non-finite contexts. Ph.D. thesis, University of Pennsylvania, Philadelphia.
- Bobaljik, Jonathan David. 2012. *Universals in Comparative Morphology: Suppletion, Superlatives, and the Structure of Words*. Cambridge, MA: MIT Press.

- Bobaljik, Jonathan D., and Susi Wurmbrand. 2005. The domain of agreement. *Natural Language and Linguistic Theory* 23, 809-865.
- Bošković, Željko. 1996. Selection and the categorial status of Infinitival Complements. *Natural Language and Linguistic Theory* 14, 269-304.
- Bošković, Željko. 1997. *The syntax of nonfinite complementation: An economy approach*. Cambridge, MA: MIT Press.
- Bošković, Željko. 2002. A-Movement and the EPP. *Syntax* 5, 167-218.
- Bošković, Željko. 2007. On the locality and motivation of Move and Agree: An even more minimal theory. *Linguistic Inquiry* 38, 589-644.
- Bošković, Željko. 2010. Phases beyond clauses. Ms., University of Connecticut. Storrs.
- Brody, Michael. 1997. Perfect chains. In *Elements of grammar: Handbook of generative syntax*, ed. by Liliane Haegeman, 139-167. Dordrecht: Kluwer Academic Publishers.
- Caha, Pavel. 2009. The Nanosyntax of case. Ph.D. thesis, CASTL Tromsø.
- Castillo, Juan Carlos, John E. Drury, and Kleanthes K. Grohmann. 2009. Merge Over Move and the Extended Projection Principle: MOM and the EPP Revisited. *Iberia: An International Journal of Theoretical Linguistics* 1.1, 53-114.
- Cecchetto, Carlo. 2003. QR in the Theory of Phases. In *Proceedings of the 22nd West Coast Conference on Formal Linguistics (WCCFL)*, ed. by Gina Garding and Mimu Tsujimura, 123-136. Somerville, MA: Cascadilla.
- Cecchetto, Carlo. 2004. Explaining the locality conditions of QR: Consequences for the theory of phases. *Natural Language Semantics* 12, 345-397.

- Chomsky, Noam. 1973. Conditions on Transformations. In *A Festschrift for Morris Halle*, ed. by Stephen R. Anderson & Paul Kiparsky. New York: Holt, Rinehart and Winston, 232–286.
- Chomsky, Noam. 1986. *Barriers*. Cambridge MA: MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, ed. by Roger Martin, David Michaels and Juan Uriagereka, 89-155. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. by Michael Kenstowicz, 1-52. Cambridge, MA: MIT Press.
- Chomsky, Noam & Morris Halle. 1968. *The Sound Pattern of English*. New York: Harper and Row.
- Chung, Inkie. 2007. Suppletive negation in Korean and Distributed Morphology. *Lingua* 117, 95–148.
- Dikken, Marcel den. 2007. Phase Extension: Contours of a Theory of the Role of Head Movement in Phrasal Extraction. *Theoretical Linguistics* 33,1-41.
- Dumézil, George. 1931. *La langue des oubykhs*. Paris: Honoré Champion.
- Embick, David. 2010. *Localism versus Globalism in Morphology and Phonology*. Cambridge, MA: MIT Press.
- Enç, Mürvet. 2004. Rethinking Past tense. In *The syntax of time*, ed. by Jacqueline Guéron and Jacqueline Lecarme, 203-215. Cambridge, MA: MIT Press.
- Fox, Danny. 1999. Reconstruction, binding theory, and the interpretation of chains. *Linguistic Inquiry* 30, 157-196.

- Fox, Danny. 2000. *Economy and semantic interpretation*. Cambridge, MA: MIT Press/MITWPL.
- Gallego, Ángel. 2005. Phase sliding. Ms., University of Barcelona and University of Maryland, College Park.
- Gallego, Ángel. 2010. *Phase theory*. Amsterdam/Philadelphia: John Benjamins.
- Gallego, Ángel, and Juan Uriagereka. 2006. Sub-extraction from subjects. Ms., University of Barcelona and University of Maryland, College Park.
- Grohmann, Kleanthes K., John Drury, and Juan Carlos Castillo. 2000. No More EPP. In *Proceedings of the 19th West Coast Conference on Formal Linguistics (WCCFL)*, ed. by Roger Billerey and Brook Danielle Lillehaugen, 153-166. Somerville, MA: Cascadilla.
- Halle, Morris. 1997. Distributed Morphology: Impoverishment and Fission. In *MIT Working Papers in Linguistics vol 30: Papers at the Interface*, ed. by Benjamin Bruening, Yoonjung Kang, and Martha McGinnis. Cambridge, MA, 425–449.
- Halle, Morris & Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In *The view from Building 20: Essays in Linguistics in honour of Sylvain Bromberger*, ed. by Ken Hale & Samuel Jay Keyser, 111–176. Cambridge, MA: MIT Press.
- Halle, Morris & Jean Roger Vergnaud. 1987. *An essay on stress*. Cambridge, MA: MIT Press.
- Janda, Laura A. & Charles Townsend. 2000. *Czech*. Berlin: Lincom Europa.
- Johnson, Kyle. 2000. How Far Will Quantifiers Go? In *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by Roger Martin, David Michaels and Juan Uriagereka, 187-210. Cambridge, MA: MIT Press.
- Kayne, Richard. 1981. Two notes on the NIC. In *Theory of markedness in generative grammar*, ed. by Adriana Belletti and Luigi Rizzi, 317-346. Pisa: Scuole Normale Superiore.

- Kayne, Richard. 1998. Overt vs. covert movement. *Syntax* 1, 128-191.
- Kennedy, Christopher. 1997. Antecedent-contained deletion and the syntax of quantification. *Linguistic Inquiry* 28, 662-688.
- Kiefer, Ferenc. 2001. Morphology and pragmatics. In *The Handbook of Morphology*, ed. by Andrew Spencer & Arnold M. Zwicky, 272–279. Oxford: Blackwell.
- Kratzer, Angelika. 1998. More structural analogies between pronouns and tenses. In *Proceedings from Semantics and Linguistic Theory (SALT) VIII*, ed. by D. Strolovitch and A. Lawson, 92-110. Ithaca, NY: Cornell University, CLC Publications.
- Lebeaux, David. 1995. Where does binding theory apply? In *Papers in Syntax, Syntax-Semantics Interface and Phonology*, ed. by Ricardo Echeperé and Viola Miglio, 63-88. College Park: University of Maryland Working Papers in Linguistics.
- Legate, Julie Anne. 2003. Some interface properties of the phase. *Linguistic Inquiry* 34, 506-516.
- Longobardi, Giuseppe. 1992. In defense of the correspondence hypothesis: Island effects and parasitic constructions in logical form. In *Logical structure and linguistic structure: Cross-linguistic perspectives*, ed. by C. T. James Huang and Robert May, 149–196. Dordrecht: Kluwer Academic Publishers.
- Mace, John. 2003. *Persian Grammar*. London: Routledge Curzon.
- Martin, Roger Andrew. 1996. A minimalist theory of PRO and control. Ph.D. thesis, University of Connecticut, Storrs.
- Martin, Roger Andrew. 2001. Null case and the distribution of PRO. *Linguistic Inquiry* 32, 141-166.
- Ogihara, Toshiyuki. 1995. The Semantics of Tense in Embedded Clauses. *Linguistic Inquiry* 26, 663-679.

- Ogihara, Toshiyuki. 1996. *Tense, attitude, and scope*. Dordrecht: Kluwer Academic Publishers.
- Ogihara, Toshiyuki. 2007. Tense and Aspect in Truth-Conditional Semantics. *Lingua* 117, 392-418.
- Pesetsky, David. 1992. Zero syntax II: An essay on infinitives. Ms., MIT. Cambridge, MA.
- Pesetsky, David, and Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In *Phrasal and clausal architecture*, ed. by Simin Karimi, Vida Samiian and Wendy Wilkins, 262-294. Amsterdam: John Benjamins.
- Radkevich, Nina. 2010. On Location: The structure of case and adpositions. Ph.D. thesis, University of Connecticut, Storrs.
- Ross, John Robert. 1967. Constraints on Variables in Syntax. Ph.D. thesis, MIT, Cambridge, MA.
- Sauerland, Uli. 2003. Intermediate adjunction with A-movement. *Linguistic Inquiry* 34, 308-314.
- Scheer, Tobias. 2008. Spell Out Your Sister! In *Proceedings of the 27th West Coast Conference on Formal Linguistics (WCCFL)*, ed. by Natasha Abner & Jason Bishop, 379–387. Somerville, MA: Cascadilla Proceedings Project.
- Schweizer, Bruno. 2008. *Zimbrische Gesamtgrammatik*. Stuttgart: Franz Steiner Verlag.
- Stateva, Penka. 2002. How different are different degree constructions? Ph.D. thesis, University of Connecticut, Storrs.
- Takahashi, Masahiko. 2010. Case, phases, and nominative/accusative conversion in Japanese. *Journal of East Asian Linguistics* 19, 319-355.
- University of Latvia. 1999. *Latvian Grammar* (online). [<http://www.ailab.lv/valoda/v1.htm>].

Wurmbrand, Susi. 1999. Modal verbs must be raising verbs. In *Proceedings of the 18th West Coast Conference on Formal Linguistics (WCCFL)*, ed. by Sonya Bird, Andrew Carnie, Jason D. Haugen and Peter Norquest, 599-612. Somerville, MA: Cascadilla Press.

Wurmbrand, Susi. 2011. Tense and aspect in English infinitives. Ms., University of Connecticut Storrs. [<http://wurmbrand.uconn.edu/Susi/Infinitives.html>].

Wurmbrand, Susi, Artemis Alexiadou, and Elena Anagnostopoulou. 2012. Disappearing phases: evidence from raising constructions cross-linguistically. Paper presented at the *5th Conference on Syntax, Phonology and Language Analysis (SinFonJA)*, Vienna, Austria, September 2012.

Wurmbrand, Susi. 2012. Agreement: Looking up or looking down? Lecture given in Agreement seminar, MIT, Cambridge, Mass, March 2012.

[<http://wurmbrand.uconn.edu/Papers/MIT-2012.pdf>].

Wurmbrand, Susi. To appear. QR and selection: Covert evidence for phasehood. In *Proceedings of the North Eastern Linguistics Society (NELS) Annual Meeting 42*, ed. by Stefan Keine and Shayne Sloggett. Amherst: University of Massachusetts, GLSA.

[<http://wurmbrand.uconn.edu/Papers/NELS42.pdf>].