Lexically selected PPs can vary by template in Semitic

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Abstract. This squib documents a novel empirical generalization from selection in Semitic: lexically selected arguments can vary by (verbal) template. This discovery is problematic for current analyses which take (lexically) selected arguments to either be introduced by the root (Harley 2014) or by the categorizing head (Merchant 2019), both of which are lower than the functional heads realized as Semitic templates. Templates can induce alternations in argument structure (e.g. causativization) and diathesis (e.g. passivization)—characteristics typically associated with *v* and Voice. A solution is sketched whereby PPs can be jointly selected by the root, categorizing head, and template-defining head.

Keywords. selection; lexical selection; templates; roots; Semitic

1 Introduction

Roots may impose idiosyncratic, lexically specified requirements on the identity of the heads of the internal arguments they co-occur with, a phenomenon known as 'l(exical) selection' (see Pesetsky 1991: 9–11; Everaert 1991, 2010). Where exactly these l-selected arguments are introduced has been subject to recent debate. On the one hand, the observation that l-selection often remains invariant across different categorial realizations of a root may be taken as strong evidence that roots are acategorial and that roots themselves select for their arguments (see Harley 2014 for arguments that roots select). Consider in this regard the English root $\sqrt{\text{RELI}}$ in (1) and the Syrian Arabic root $\sqrt{\text{fxr}}$ in (2); the former systematically appears with a PP headed by *on* and the latter with a PP headed by *b-* 'in'.[1] I will henceforth refer to these PPs as *on*P and *b*P, respectively.

(1) *English category-independent selection with* $\sqrt{\text{RELI}}$
   a. They rely$_V$ **on/*in/*of** oil.

*All Syrian and Tunisian Arabic data are from my fieldwork, for which I would like to thank Layla Aboukhater and Zeineb Sellami, respectively. I am also grateful to Karlos Arregi, Jason Merchant, and Erik Zyman for helpful comments. All remaining errors are my own.

[1] In the variety of Syrian Arabic spoken by my consultant, the stem *fi* is used with pronominal objects, while *b-* is used elsewhere. This variation is indicated throughout.

b. Their reliance$_N$ **on/*in/*of** oil is well-known.

c. They are reliant$_A$ **on/*in/*of** oil. (adapted from Merchant 2019: 327, (3))

(2) *Syrian Arabic category-independent selection with* $\sqrt{\text{fxr}}$

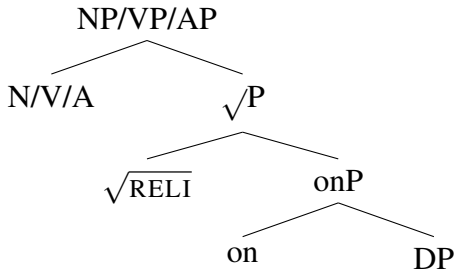
a. bftaxir$_V$ **b-/*ʕala/*mən** zakaːʔ-i.
be.proud.1.SG **in-/*over/*from** intelligence-my
'I pride myself on my intelligence.'

b. ʕand-i faxr$_N$ **b-/*ʕala/*mən** zakaːʔ-i.
at-me pride **in-/*over/*from** intelligence-my
'I have pride in my intelligence.'

c. ʔana faxuːre$_A$ **b-/*ʕala/*mən** zakaːʔ-i.
I proud **in-/*over/*from** intelligence-my
'I am proud of my intelligence.'

Under this view, the root combines directly with its argument and forms a $\sqrt{}$P, on top of which a categorizing head is merged, as shown in (3) and (4). Crucially, additional, categorizing, functional structure is predicted not to interfere with the selectional relationship established lower down between the root and its complement.[2]

(3)



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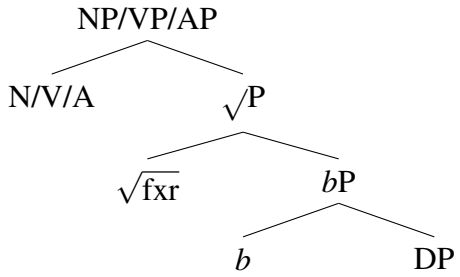


On the other hand, Merchant (2019) identifies a subset of English roots whose selectional properties are in fact category-*dependent*. This is shown for the root $\sqrt{\text{PRD}}$ in (5).

(5) *English category-dependent selection with* $\sqrt{\text{PRD}}$

a. She prides$_V$ herself **on/*in/*of** her thoroughness.

b. Her pride$_N$ **in/*on/*of** her thoroughness is understandable.

c. She is proud$_A$ **of/*on/*in** her thoroughness. (Merchant 2019: 329, (12))

Similar facts hold for Syrian Arabic, where verbal and nominal realizations of a root may license different l-selected PPs.[3]

[2] I follow Arregi and Nevins (2014) and Merchant (2019) in representing categorizing heads with 'big' N/V/A, rather than with their 'little', Marantzian counterparts *n/v/a* (see Marantz 1995, 1997, 2001; Arad 2003, 2005; Embick and Noyer 2007; and others). I reserve *v* for outer argument-introducing heads.

[3] Other examples of category-dependent l-selection in Syrian Arabic include: $\sqrt{\text{ħb}}$ *ħabb$_V$ (*la-) NP* 'loved

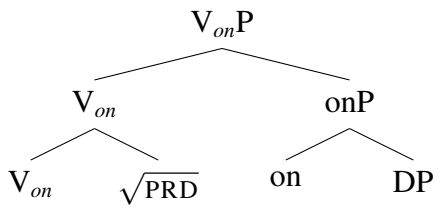
(6) *Syrian Arabic category-dependent selection with* $\sqrt{\text{brk}}$

a. baːraku$_V$-ni **b-/*ʕa(la)** l-walad
they.congratulated-me **in-/*over** the-baby
'They congratulated me on the baby.'

b. baʕtu-li mbaːrake$_N$ **ʕa(la)/*b-** l-walad
they.sent-to.me congratulations **over/*in-** the-baby
'They sent me congratulations on the baby.'

Category-dependent selection poses a serious problem for layering approaches to selection. The categorizing head and l-selected argument in (3) and (4) are too far apart to enter into a selectional relationship, assuming that a head H is able to subcategorize for an XP only if XP merges with H or with a projection of H (though see Svenonius 1994 and Pietraszko 2017 for arguments for non-local selection). Merchant (2019) argues instead that these facts indicate that categorizing heads, not roots, are the selectors. Merchant proposes the structure in (7) to account for verbal *pride*$_V$: the categorizing head merges first with the root, projects, and then merges with the l-selected PP.[4]

(7) pride$_V$ (oneself) on



Both accounts of l-selection crucially rely on some notion of locality. If roots l-select, then they select directly for their complements. If categorizing heads l-select, then they select directly for roots and the PPs those roots appear with. Seemingly long-distance selectional relations can be reanalyzed as local ones by reconfiguring the geometry of the root, categorizing head, and internal argument. These analyses, then, make a clear and testable prediction: syntactic heads merged higher in the clausal spine than the root/categorizing head

NP', *ħubb$_N$ *(la-) NP* 'love of NP'; $\sqrt{\text{ħs}}$ *tħassas$_V$ mən/*la- NP* 'was allergic to NP', *ħasaːsijje$_N$ mən/la- NP* 'allergy to NP'; $\sqrt{\text{ħwʤ}}$ *ħtaːʤ$_V$ (la-) NP* 'needed NP', *ħaːʤe$_N$ *(la-) NP* 'need of NP', *məħtaːʤ (la-) NP* 'needy for NP'; $\sqrt{\text{wfj}}$ *wafaː$_V$ b-/*la- NP* 'fulfilled NP', *wafiːje$_A$ la-/*b- NP* 'faithful to NP'.

[4]I abstract away from the obligatory presence of the reflexive anaphor.

(e.g. *v*, Voice, and T in the verbal domain) should not interact in any way with l-selectional requirements, which by hypothesis are imposed at or below the level of the categorizer.

I argue that this prediction is incorrect on the basis of novel data from Semitic in which l-selection is determined by the identity of the root in conjunction with the verbal *template*. Semitic templates frequently track argument structure alternations for a given root. This suggests that they are the realization of *v*/Voice, either directly (see Arad 2005) or indirectly via templatic morphophonology (see Tucker 2011; Wallace 2013; and Kastner 2019, 2020). Consequently, I argue that l-selectional properties must be visible above the VP at the level of the template-defining head. My proposed solution is to posit joint selection of the PP by the root, categorizing head, and template-defining head.

2 Semitic templates and template-independent l-selection

According to the traditional view of Semitic non-concatenative morphology, verbs such as Modern Standard Arabic (MSA) *katabnaː* 'we wrote' can be decomposed into: (i) an acategorial, consonantal root $\sqrt{\text{ktb}}$ which can be used to create nouns, verbs, and adjectives, (ii) a vocalic melody /a,a/, (iii) a CV-skeleton which arranges the consonants and vowels into the verbal template *XaYaZ*[5] and renders the word pronounceable, and (iv) a subject agreement affix, in this case the suffix -/naː/ realizing 1st person plural features (Marantz 2001; Arad 2005; Kastner and Tucker 2019; see also McCarthy 1979, 1981). The inventory of templates and their prosodic shapes vary from language to language, though the basic system is common throughout. The ten most common MSA verbal templates are given in (8). Citation forms bear 3rd person masculine singular past tense inflection expressed via the suffix *-a*.

[5]Templates are also referred to as *binyanim* or *awzaːn*. Following Kastner (2016, 2019, 2020) and Kastner and Tucker (2019), I elect to designate root consonants with the abstract characters $\sqrt{\text{XYZ}}$, rather than with the more traditional citation roots, as these vary from language to language.

(8) Modern Standard Arabic verbal templates (Kastner and Tucker 2019: 4)

Template	*Example*	*Translation*
XaYaZ	kataba	'he wrote'
XaYYaZ	kattaba	'he made [someone] write'
Xa:YaZ	ka:taba	'he corresponded'
ʔaXYaZ	ʔaktaba	'he dictated'
taXaYYaZ	takassara	'he broke'
taXa:YaZ	taka:taba	'he wrote (reciprocal)'
inXaYaZ	inkataba	'he subscribed'
iXtaYaZ	iktataba	'he copied'
iXYaZZ	iswadda	'he became black'
istaXYaZ	istaktaba	'he asked [someone] to write'

As the examples in (8) illustrate, a single root such as $\sqrt{\text{ktb}}$ may appear in more than one template. Template alternations for a single root often invoke concomitant valency alternations. For instance, the root $\sqrt{\text{ktb}}$ in the *XaYaZ* template is transitive 'write', while this same root in *XaYYaZ* is causative 'make [someone] write'. Not all root-template pairings give rise to predictable meanings, however (see Schwarzwald 1973), an issue which has prompted many attempts at accounting for the regularities of the template system as in (9) while affording it enough flexibility to capture more semantically opaque alternations as in (10) (see, e.g., Arad 2005; Tucker 2011; Al Kaabi 2015; Kastner 2020).

(9) Semantically transparent alternations, Hebrew $\sqrt{\text{ktb}}$ (Kastner and Tucker 2019: 12)

	Template	*Verb*	*Gloss*	*Note*
a.	*XaYaZ*	katav	'wrote'	unmarked/transitive
b.	*niXYaZ*	nixtav	'was written'	anticausative of *XaYaZ*
c.	*hiXYiZ*	hixtiv	'dictated'	causative of *XaYaZ*

(10) Semantically opaque alternations, Hebrew $\sqrt{\text{pkd}}$ (Kastner and Tucker 2019: 13)

	Template	*Verb*	*Gloss*	*Note*
a.	*XaYaZ*	pakad	'ordered'	unmarked/transitive
b.	*niXYaZ*	nifkad	'was absent'	not an anticausative of *XaYaZ*
c.	*hiXYiZ*	hifkid	'deposited'	not a causative of *XaYaZ*

It is not my goal here to resolve the debate which seeks to map (parts of) templates to functional heads. Rather, I will assume for simplicity that Semitic templates realize a head or series of heads capable of inducing changes in adicity, presumably *v* and Voice, and I will

set aside the irreducible idiosyncrasies of the system.

Parallel to the uniform selectional behavior of some roots across categories, many Semitic roots preserve their l-selectional properties across templates. Some examples of template-insensitive l-selection are provided in (11) for three varieties of Arabic.

(11) *Template-independent l-selection in Semitic*

a. Tunisian Arabic $\sqrt{\text{xwf}}$

i. *XYaZ*
xaːf **min** NP_1
feared **from** NP_1
'feared NP_1'

ii. *XaYYəZ*
xawwəf NP_2 **min** NP_1
made.fear NP_2 **from** NP_1
'made NP_2 fear NP_1'

b. Syrian Arabic $\sqrt{\text{dwr}}$

i. *XaYaZ*
daːr **b-** NP_1
visited in- NP_1
'visited NP_1'

ii. *XaYYaZ*
dawwar NP_2 **b-** NP_1
made.visit NP_2 **in-** NP_1
'made NP_2 visit NP_1'

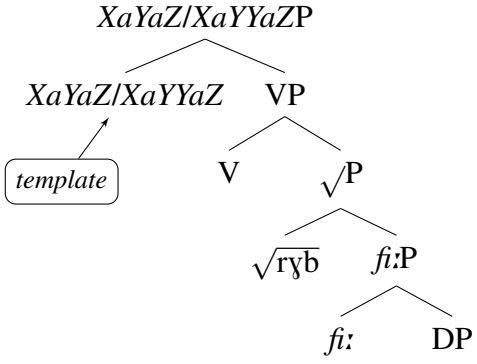
c. MSA $\sqrt{\text{rɣb}}$

i. *XaYaZ*
raɣiba **fiː** NP_1
wanted **in** NP_1
'wanted NP_1'

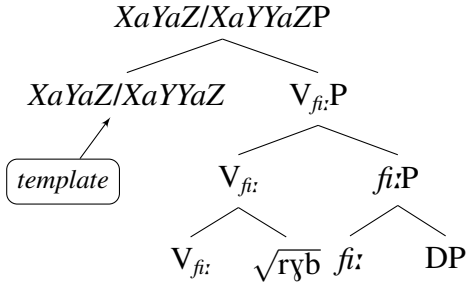
ii. *XaYYaZ*
raɣɣaba NP_2 **fiː** NP_1
made.want NP_2 **in** NP_1
'made NP_2 want NP_1'

For all three roots in (11), a verb in *XaYaZ* alternates with a causative verb in *XaYYaZ* which introduces a causer argument above the subject of the caused event. The identity of the l-selected PP—*min*P, *b*P, and *fiː*P, respectively—is stable across templatic realizations of the root. If templates are introduced above the VP, these facts will be accounted for by any analysis in which l-selected arguments are introduced fairly low—either as sisters to roots (see Harley 2014), as in (12a), or to low categorizing heads (Merchant 2019), as in (12b).

(12) a. L-selection by the root



b. L-selection by the categorizing head



Since the identity of functional material merged above VP is irrelevant for l-selection under either approach, we neatly account for the data in (11).

3 L-selection can vary by template in Semitic

Things are not so simple, however. The present paper reports the following discovery: there exists a class of roots in several Semitic languages whose l-selectional properties are template-*dependent*. Consider the alternations in (13). In each case, an l-selected PP varies by root-template pairing. In Tunisian Arabic, for example, the root $\sqrt{\text{krh}}$ cannot appear with the preposition *fi* 'in' in *XYaZ*, but can (and indeed, must) appear with *fi* in *XaYYəZ*.

(13) *Template-dependent l-selection in Semitic*

a. Tunisian Arabic $\sqrt{\text{krh}}$

i. *XYaZ*
krah (***fi**) NP_1
hated (***in**) NP_1
'hated NP_1'

ii. *XaYYəZ*
karrəh NP_2 *(**fi**) NP_1
made.hate NP_2 *(**in**) NP_1
'made NP_2 hate NP_1'

b. Syrian Arabic $\sqrt{\text{ws}ʔ}$

i. *XaYaZ*
wasaʔ *(**b-**) NP
trusted *(**in-**) NP
'trusted in NP'

ii. *XaYYaZ*
wassaʔ (***b-**) NP
notarized (***in-**) NP
'notarized NP'

c. MSA $\sqrt{ʔ\theta\text{r}}$

i. *XaYYaZ*
ʔaθθara **fiː/??bi-** NP
influenced **in/??in-** NP
'influenced NP'

ii. *istaXYaZ*
istaʔθara **bi-/*fiː** NP
monopolized **in-/*in** NP
'monopolized NP'

This variation is lexically determined, hence unpredictable. L-selected PPs may be present in one template, but absent from another, and few clear patterns seem to constrain the system.[6] Roots may, for instance, exhibit multiple selectional idiosyncrasies across their templatic realizations, as with the Syrian Arabic root $\sqrt{\text{ħkm}}$ in (14).

[6] Additional roots which exhibit template-dependent l-selectional properties are:

(i) Tunisian Arabic: $\sqrt{\text{ʕml}}$ *ʕmal NP* 'did NP', *ʕammәl ʕla NP* 'depended on NP'; $\sqrt{\text{ʕrðˤ}}$ *ʕruðˤ NP* 'met NP by chance', *ʕarrəðˤ ʕla/l- NP* 'met NP on purpose'; $\sqrt{\text{dfʕ}}$ *dfaʕ NP* 'spent NP', *daːfaʕ ʕla NP* 'defended NP'; $\sqrt{\text{hʒm}}$ *hʒəm ʕla NP* 'devoured NP', *haːʒəm NP* 'attacked NP'; $\sqrt{\text{klm}}$ *kalləm NP$_2$ ʕla/*fi NP$_1$* 'talked to NP_2 about NP_1', *tkalləm ʕla/fi NP$_1$* 'talked about NP_1'; $\sqrt{\text{sbħ}}$ *sbaħ* 'woke up', *sabbaħ ʕla NP* 'said good morning to NP'; $\sqrt{\text{wħʃ}}$ *waħħəʃ NP$_2$ fi NP$_1$* 'made NP_2 miss NP_1', *twaħħəʃ NP$_1$* 'missed NP_1'

(ii) Syrian Arabic: $\sqrt{ʔ\text{sr}}$ *ʔassar ʕala NP* 'influenced NP', *tʔassar b- NP* 'was influenced by NP'; $\sqrt{\text{ʕbr}}$ *ʕabbar ʕan NP$_1$* 'expressed NP_1', *ʕtabar NP$_1$ NP$_2$* 'considered NP_1 NP_2'; $\sqrt{\text{ʕmd}}$ *ʕammad NP* 'baptized NP', *ʕtamad ʕala NP* 'relied on NP'; $\sqrt{\text{ħfzˤ}}$ *ħafazˤ NP* 'memorized NP', *ħaːfazˤ ʕala NP* 'preserved NP', *ħtafazˤ b-/ʕala NP* 'kept NP'; $\sqrt{\text{ħsˤl}}$ *ħasˤal ʕala NP* 'obtained NP', *ħasˤsˤal NP* 'got NP (e.g., grades)'; $\sqrt{\text{ʃkw}}$ *ʃaka NP$_1$ la- NP$_2$* 'tattled on NP_1 to NP_2', *ʃakka b- NP$_1$* 'suspected NP_1', *tʃakka ʕan NP$_1$* 'complained about NP_1', *ʃtaka ʕala/ʕan NP$_1$* 'formally complained about NP_1'

(14) Syrian Arabic l-selection with $\sqrt{\text{ħkm}}$ across templates

XaYaZ	*XaYYaZ*	*Xa:YaZ*	*tXaYYaZ*	*XtaYaZ*
ħakam **ʕala** NP_1 (**b-** NP_2) 'sentenced NP_1 (to NP_2)'	ħakkam 'was a referee'	ħa:kam NP 'sentenced NP (as a judge)'	tħakkam **b-** NP 'controlled NP'	ħtakam **ʕala** NP 'decided on NP'

Crucially, this variation in subcategorization should not be attributed to the existence of distinct, homophonous roots $\sqrt{\text{ħkm}}_1$, $\sqrt{\text{ħkm}}_2$, etc., each with its own l-selectional properties. Bloating the lexicon in this way would miss two important generalizations. First, the meanings of the verbs in (14) all have a clear (if somewhat abstract) shared meaning component: each has to do with 'judging' or 'controlling' in some way.[7] Second, positing several homophonous roots would fail to explain their apparently mutually exclusive distribution. Under the homophonous-roots analysis, the root $\sqrt{\text{ħkm}}_1$ which occurs in *XaYaZ* and occurs with l-selected *ʕala*P and *b*P would inexplicably lack a causative verb in *XaYYaZ*, and likewise, *mutatis mutandis* for $\sqrt{\text{ħkm}}_2$, etc (see Kastner 2020: 144–46 for a similar argument). For these reasons, I conclude that template-dependent l-selection must reference the identity of the template in addition to that of the root.

Template-dependent l-selection is attested irrespective of whether the alternation in verb meaning is semantically transparent or not. Consider the case of passivization. In Syrian Arabic, verbs in *XaYaZ* and *XaYYaZ* are productively passivized in the templates *nXaYaZ* and *tXaYYaZ*, respectively.[8] For some roots which co-occur with an l-selected PP in *XaYaZ* or *XaYYaZ*, the alternation produces an impersonal passive with 3rd person masculine singular agreement, as in (15a) and (16a). With other roots, passivization changes the l-selectional properties associated with the active verb, as in (15b) and (16b). With a final class of roots, the same template alternation is more semantically opaque, yet still leads to variation in l-selection, as in (15c) and (16c).

[7]This argument is bolstered by the cases of semantically transparent passive and causative alternations discussed below which nevertheless exhibit template-dependent l-selection.

[8]Note that each of these passive templates involves a prefix—either /n/ or /t/—stacked outside of the active template it alternates with. See Al Kaabi (2015) and Al Kaabi and Ntelitheos (2019) for discussion.

(15) Syrian Arabic l-selection in *XaYaZ*∼*nXaYaZ* alternations

	XaYaZ	*nXaYaZ*
a.	wasaʔ **b-** NP ‘trusted in NP’	nwasaʔ **b-** NP ‘NP was trusted in’
b.	ʕafa **ʕan/*ʕala** NP ‘forgave NP’	nʕafa **ʕan/(ʔ)ʕala** NP ‘NP was forgiven’
c.	ʃaka NP_1 **la-** NP_2 ‘tattled on NP_1 to NP_2’	nʃaka **ʕala** NP ‘NP was (formally) complained about’

(16) Syrian Arabic l-selection in *XaYYaZ*∼*tXaYYaZ* alternations

	XaYYaZ	*tXaYYaZ*
a.	dawwar **ʕala** NP ‘looked for NP’	ddawwar **ʕala** NP ‘NP was looked for’
b.	ʃawwaʔ NP_2 **ʕala/*la-** NP_1 ‘made NP_2 excited for NP_1’	tʃawwaʔ **ʕala/la-** NP_1 ‘was excited for NP_1’
c.	ħakkam ‘was a referee’	tħakkam **b-** NP ‘controlled NP’

Hebrew attests an additional pattern of template-dependent l-selection in passivization. Though Hebrew lacks an impersonal passive strategy for intransitive verbs with l-selected PPs like Syrian Arabic *nwasaʔ b- NP* ‘NP was trusted in’, a class of verbs may be passivized by suppressing the l-selected preposition, as in (17)–(19) (see Berman 1978: 127–9, Hazout 1995: 381–2, Borer 2013: 214–22; see also Postal 1986: chapter 2 for related facts from French).[9] Note that the passives in *XuYaZ* and *huXYaZ* are only characterized by ablaut (/i,e/ ∼ /u,a/ and /i,i/ ∼ /u,a/, respectively) without a concomitant change in the consonantal or syllabic composition of the template.[10]

(17) Hebrew $\sqrt{\text{ʔzr}}$

a. *XaYaZ*
ʔazar **le-** NP
helped **to-** NP
‘helped NP’

b. *niXYaZ*
NP neʔezar
NP was.helped
‘NP was helped’

(18) Hebrew $\sqrt{\text{ṭpl}}$

a. *XiYeZ*
ṭipel **be-** NP
treated **in-** NP
‘treated NP’

b. *XuYaZ*
NP ṭupal
NP was.treated
‘NP was treated’

(19) Hebrew $\sqrt{\text{špʕ}}$

a. *hiXYiZ*
hišpia **al** NP
influenced **over** NP
‘influenced NP’

b. *huXYaZ*
NP hušpa
NP was.influenced
‘NP was influenced’

Similar issues arise in the context of causativization and l-selection. In Tunisian Arabic, causatives of *XYaZ* are formed with the *XaYYəZ* template, and even semantically transparent

[9]Somewhat differently Doron (2017: 5–7) shows that many object experiencer psych verbs in *XiYeZ* have corresponding subject experiencer verbs in the middle template *hitXaYeZ* which l-select a PP corresponding to the theme or subject matter of the psychological state (see Merchant 2019: 338 for related observations from English).

[10]The vocalic melody /u,a/ shared by the passive templates *XuYaZ* and *huXYaZ* is often assumed to realize a high Passive head merged above Voice in layering approaches (see, e.g., Doron 2003, 2014).

'make'-causatives may trigger changes in l-selection, as shown in (20).

(20) Tunisian Arabic l-selection in *XYaZ*∼*XaYYəZ* alternations

	Root	*XYaZ*	*XaYYəZ*
a.	$\sqrt{\text{dwr}}$	dar **b-/*ʕla** NP_1 'encircled NP_1'	dawwər NP_2 **ʕla/*bi** NP_1 'made NP_2 encircle NP_1'
b.	$\sqrt{\text{ħb}}$	ħabb **ʕla/*fi** NP_1 'wanted NP_1'	ħabbəb NP_2 **fi/*ʕla** NP_1 'made NP_2 want NP_1'
c.	$\sqrt{\text{krh}}$	krah (***fi**) NP_1 'hated NP_1'	karrəh NP_2 *(**fi**) NP_1 'made NP_2 hate NP_1'

The challenge that the data in (13)–(20) present for previous accounts of l-selection is clear: l-selectional properties associated with a root only become fixed once both the category and template have been determined, hence selection by the root or categorizing head as in (12a) or (12b) is too early. The solution I pursue starts from loosening the assumption that strict subcategorization is a relation between a head and its dependents. In order to ensure that template-defining heads communicate with the root to determine l-selection, I adopt Merchant's (2015b) mechanism of 'joint selection'. Merchant proposes that higher heads may activate features on lower heads, where I define feature activation as follows:

(21) **Activate(X,Y;F)** (read: 'X activates F on Y') =$_{def}$
For any syntactic objects X and Y in a phrase marker, where X bears a category feature c and Y bears an inactive feature F^C, where C is an ordered n-tuple of category features $\langle c_1, \ldots, c_n \rangle$, and X c-commands Y,
a. if $n > 1$, let $C = \langle c_2, \ldots, c_n \rangle$, else let $F^C = F$ (adapted from Merchant 2015b: 18)

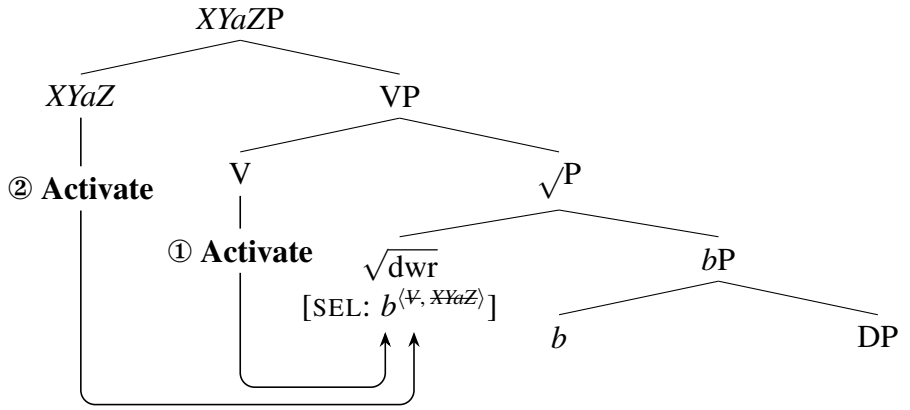
Feature activation according to my definition is essentially a belated form of feature licensing. Crucially, all inactive features must be activated if the derivation is to converge. In other words, inactive features are what Preminger (2014) calls derivational time-bombs.[11]

Consider how the pieces of Tunisian Arabic *dar b-* 'encircled' and *dawwər ʕla* 'made [something] encircle' come together in this system. In the case of *dar b-*, the root $\sqrt{\text{dwr}}$

[11] An alternative that I do not discuss for the sake of space involves a minimal extension of Merchant's (2019) analysis of category-dependent l-selection and a rethinking of Semitic clause structure. Since l-selected arguments must be visible at the point at which the template is determined, we might propose that the template-defining heads *v* and Voice are the ultimate selectors, selecting for (at least) the root, categorizer, and any internal arguments, in that order. In doing so, this analysis accounts for a longstanding issue in Semitic templatic morphology—namely, that most roots occur in only a subset of templates. Under this view, co-occurrence restrictions on root-template pairs would simply reflect the lexical distribution of selectional features on template-defining heads.

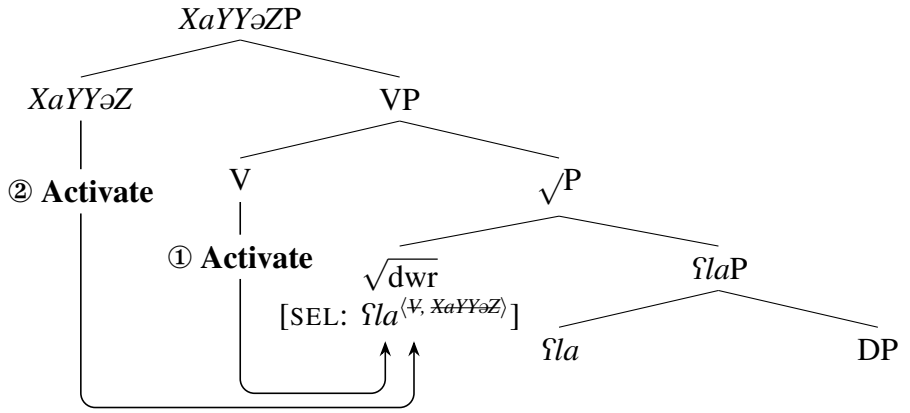
bearing the set of selectional features [SEL: $\{b^{\langle V,XYaZ\rangle}, \text{ʕ}la^{\langle V,XaYY\text{ə}Z\rangle}\}$] combines with its complement *b*P. Next, the categorizing head V is merged in, partially activating the selectional feature on the root by eliminating the category feature *V* from its list. Finally, the template-defining head *XYaZ* is introduced and Activate applies once more, eliminating the *XYaZ* category sub-feature from the root and rendering its selectional feature fully active.

(22) dar b- 'encircled'



Merging in *XaYYəZ* instead of *XYaZ* will license the root's selectional feature for ʕ*la*.

(23) dawwər ʕla 'made [something] encircle'



The present analysis thus successfully accounts for the observation that l-selection in Semitic is dependent on the identities of at least three heads in the clause: the root, the categorizing head, and the template defining head.

Nonetheless, in its present formulation in (21), Activate is an immensely powerful operation. In particular, without clearly formulated locality conditions, Activate severely over-

generates insofar as very high functional heads such as Asp, T, and C—in contrast to low categorizing and template-defining heads—never seem to influence l-selection at the level of the root, at least not in Semitic. There are several conceivable ways to restrict the range of joint selectors, two of which I will sketch briefly here. First, Activate could be defined to operate only over spans—contiguous sequences of heads in an extended projection (see Svenonius 2012; Merchant 2015a; Merchant and Pavlou 2017). Such an analysis would predict that non-local heads are able to influence l-selection at the level of the root only if all intervening heads are crucially involved as well. Second, it is possible that joint selectors must occur within the same (local) phase domain. This analysis receives some preliminary support if Semitic templates realize a series of heads including *v* and Voice, as I have assumed, since *v* and Voice have both been argued to be phase heads. In contrast to the span-based approach, this analysis could accommodate instances of non-local joint selection skipping over selectionally inert intermediate heads, so long as the joint selectors are sufficiently local, i.e. occur in the same phase. Deciding between these and other approaches to the locality problem in joint selection is an open issue which I leave for future research.

4 Conclusion

In addition to being category-dependent, l-selection is template-dependent for a class of roots in several Semitic languages. This discovery presents a significant challenge for local theories of selection given two widely held assumptions: the pieces of Semitic templates realize *v* and/or Voice (Arad 2003, 2005; Kastner 2016, 2020; Doron 2017), and (l-)selection is enforced at the level of the root and/or the categorizing head (Harley 2014; Merchant 2019). In light of this tension, I have proposed that a series of functional heads including the root may jointly select for the complement of the root. This proposal retains the assumption that clauses are uniformly built up from an acategorial root, though at the expense of slightly expanding the inventory of syntactic operations.

References

Al Kaabi, Meera. 2015. The anatomy of Arabic words: The role of the root in representations and processing. Doctoral Dissertation, New York University.

Al Kaabi, Meera, and Dimitrios Ntelitheos. 2019. Rethinking templates: A syntactic analysis of verbal morphology in Emirati Arabic. *Glossa* 4:1–46.

Arad, Maya. 2003. Locality constraints on the interpretation of roots: The case of Hebrew denominal verbs. *Natural Language & Linguistic Theory* 21:737–778.

Arad, Maya. 2005. *Roots and Patterns: Hebrew Morpho-syntax*. Dordrecht: Springer.

Arregi, Karlos, and Andrew Nevins. 2014. A monoradical approach to some cases of disuppletion. *Theoretical Linguistics* 40:311–330.

Berman, Ruth Aronson. 1978. *Modern Hebrew Structure*. Tel Aviv: University Publishing Projects.

Borer, Hagit. 2013. *Structuring Sense.* Vol. 3*, Taking Form*. Oxford: Oxford University Press.

Doron, Edit. 2003. Agency and voice: The semantics of the Semitic templates. *Natural Language Semantics* 11:1–67.

Doron, Edit. 2014. The interaction of adjectival passive and Voice. In *The syntax of roots and the roots of syntax*, ed. Artemis Alexiadou, Hagit Borer, and Florian Schäfer, 164–191. Oxford: Oxford University Press.

Doron, Edit. 2017. The causative component of locative and psychological verbs. Paper presented at Linguistic Perspectives on Causation, The Language, Logic and Cognition Center, The Hebrew University of Jerusalem, June.

Embick, David, and Rolf Noyer. 2007. Distributed Morphology and the syntax–morphology interface. In *The Oxford Handbook of Linguistic Interfaces*, ed. Gillian Ramchand and Charles Reiss, 289–324. Oxford: Oxford University Press.

Everaert, Martin. 1991. The lexical representation of idioms and the morphology-syntax interface. Ms., Utrecht University.

Everaert, Martin. 2010. The lexical encoding of idioms. In *Lexical Semantics, Syntax, and Event Structure*, ed. Malka Rappaport Hovav, Edit Doron, and Ivy Sichel, 76–98. Oxford: Oxford University Press.

Harley, Heidi. 2014. On the identity of roots. *Theoretical linguistics* 40:225–276.

Hazout, Ilan. 1995. Action nominalizations and the lexicalist hypothesis. *Natural Language & Linguistic Theory* 13:355–404.

Kastner, Itamar. 2016. Form and meaning in the Hebrew verb. Doctoral Dissertation, New York University.

Kastner, Itamar. 2019. Templatic morphology as an emergent property. *Natural Language & Linguistic Theory* 37:571–619.

Kastner, Itamar. 2020. *Voice at the Interfaces: The Syntax, Semantics, and Morphology of the Hebrew Verb*, volume 99 of *Open Generative Syntax*. Berlin: Language Science Press.

Kastner, Itamar, and Matthew A. Tucker. 2019. Non-concatenative morphology. Ms., Humboldt-Universität zu Berlin and Oakland University.

Marantz, Alec. 1995. "Cat" as a phrasal idiom: Consequences of late insertion in Distributed Morphology. Ms., MIT.

Marantz, Alec. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. In *University of Pennsylvania Working Papers in Linguistics 4*, ed. Alexis Dimitriadis, Laura Siegel, Clarissa Surek-Clark, and Alexander Williams, 2, 201–225. Philadelphia: University of Pennsylvania.

Marantz, Alec. 2001. Words. WCCFL XX handout, University of Southern California, February 2001.

McCarthy, John. 1979. Formal problems in Semitic phonology and morphology. Doctoral Dissertation, MIT.

McCarthy, John. 1981. A prosodic theory of nonconcatenative morphology. *Linguistic Inquiry* 12:373–418.

Merchant, Jason. 2015a. How much context is enough? Two cases of span-conditioned stem allomorphy. *Linguistic Inquiry* 46:273–303.

Merchant, Jason. 2015b. Joint selection. Talk presented at Cornell University, February.

Merchant, Jason. 2019. Roots don't select, categorial heads do: lexical-selection of PPs may vary by category. *The Linguistic Review* 36:325–341.

Merchant, Jason, and Natalia Pavlou. 2017. The morphosyntax of the periphrastic future under negation in Cypriot Greek. *Journal of Greek Linguistics* 17:233–262.

Pesetsky, David. 1991. Zero syntax: Vol. 2: Infinitives. Ms., MIT.

Pietraszko, Joanna. 2017. Inflectional dependencies: A study of complex verbal expressions in Ndebele. Doctoral Dissertation, The University of Chicago.

Postal, Paul M. 1986. *Studies of Passive Clauses*. Albany: State University of New York Press.

Preminger, Omer. 2014. *Agreement and Its Failures*. Cambridge, MA: MIT Press.

Schwarzwald, Ora R. 1973. Roots and patterns in the Modern Hebrew lexicon. *Hebrew Abstracts* 14:95–96.

Svenonius, Peter. 1994. C-selection as feature-checking. *Studia linguistica* 48:133–155.

Svenonius, Peter. 2012. Spanning. Ms., University of Tromsø, CASTL.

Tucker, Matthew A. 2011. The morphosyntax of the Arabic verb: Toward a unified syntax-prosody. In *Morphology at Santa Cruz: Papers in Honor of Jorge Hankamer*, ed. Nicholas LaCara, Anie Thompson, and Matthew A. Tucker, 177–211. Santa Cruz, CA: LRC Publications.

Wallace, Katherine. 2013. A concatenative approach to Semitic templatic morphology. Ms., New York University. Available online at ⟨https://ling.auf.net/lingbuzz/002299⟩.