

Non-Active Verbs in Hebrew and the Input to Nominalization

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1. Introduction

In this paper, we set out to explore nominalizations of intransitive verbs. Since Chomsky 1970, many works have studied the relations between verbs and corresponding nominalizations, namely argument-event structure preservation or lack thereof in the deverbal noun compared to the base verb. However, these studies focus on active/transitive verbs, and less works directly address non-active verbs.

Hebrew is a language in which the active/non-active alternation is associated with different morphological marking, and as such allows a more fine-grained mapping between underlying syntax and morphological marking than does English. Based on a comprehensive survey of more than 3000 Hebrew verbs, we conclude the following with regards to the availability of an Event Nominal: [i] Unaccusatives are compatible with nominalization, and produce event nominalizations rather freely. [ii] Passives are incompatible with nominalization.

We examine two morphological classes of passives in the language: one which includes a passive head in the input structure, and another, in which such a head is absent. We suggest that for the former class, an account based on selectional restriction may be implemented, wherein the passive head is incompatible with nominalization. However, for the latter class of passives, no passive head is present in the derivation as to impose such restrictions, and the scarcity of nominalization is rather a result of competition with the nominal derivative of the Active counterpart form. In other words, the lack of nominalizations in this class is not to do with grammar, but with performance/processing factors.

1.1. Nominalization

We focus on nominals which denote events/processes (*ASNs*, *Argument Structure Nominals* in Borer 2013, *Complex Event Nominals* in Grimshaw 1990). ASNs, unlike

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most simple, non-deverbal nouns, convey an event meaning, which corresponds to that expressed by the base verb.

To qualify as an ASN, the nominal should pass the main ASN diagnostics (Grimshaw 1990 and subsequent literature):

- [1] Allow event (*constant, frequent*) and aspectual (*in/for X time*) modification.
- [2] Require an internal argument (under the ASN reading, for non-eventive readings in nominals, see among others Grimshaw 1990, Alexiadou 2001, 2009, Harley 2009, Borer 2013, 2014, Ahdout in preparation).
- [3] Take *by*-phrases (for nominals derived from transitive verbs).

1.2. Database

Our database consists of 3,272 Hebrew verbs, categorized according to the seven morphological templates of Hebrew (Ahdout, in preparation). The original list of verbs is provided by Ehrenfeld 2012. Verbs were then coded for their Vendler class and argument structure (unaccusative, unergative, transitive, etc.). For each verb, it was checked whether a nominal derivative exists, and whether this nominal indeed has the ASN properties described in the previous section. For this purpose, speaker judgments, as well as corpora consultations were used (Itai and Wintner 2008, heTenTen, Google).

1.3. Transitive nominalizations

Transitive verbs in English usually produce ASNs which keep the argument realization pattern of the base verb, (1). However, an important difference between verbal clauses and nominal clauses is that the latter never require an overt external argument (2).

- (1) The volunteers rehabilitated the forest.
- (2)
 - a. The rehabilitation of the forest.
 - b. The rehabilitation of the forest (by the volunteers).
 - c. The (volunteers') rehabilitation of the forest.

In Hebrew, two structures are associated with nominalization. The first, (4a), corresponds to the English one in (2b) above. A possessor DP such as the English (2c) is unavailable in Hebrew. Finally a second type of nominal clause in Hebrew, (4b), differs from English in general, as it obligatorily requires the realization of the external argument and marks with accusative marking its internal argument.

- (3)

| | | | |
|--------------------------------------------|------------------------------------------|-----------|-----------------|
| <i>ha-mitnadvim</i> | <i>fikmu</i> | <i>et</i> | <i>ha-ja'ar</i> |
| the-volunteers | rehabilitated.INTNS.ACT.3PL ¹ | ACC | the-forest |
| ‘The volunteers rehabilitated the forest’. | | | |

- (4)

| | | | |
|---------------------------|------------|-----------------|------------------|
| a. <u><i>ha-fikum</i></u> | <i>fel</i> | <i>ha-ja'ar</i> | <i>(al jedej</i> |
|---------------------------|------------|-----------------|------------------|

¹ *X, Y, Z* in template names represent Semitic root consonants; SMPL.ACT stands for the (traditionally known as) *qal/pa'al* verbal templatic form (*XaYaZ*), CAUS for the *hif'il* template (*hiXYiZ*), INTNS.ACT for *pi'el* (*XiYeZ*), INTNS.MID for *hitpa'el* (*hitXaYeZ*), SMPL.MID for *nif'al* (*niXYaZ*).

the-rehabilitation.INTNS.ACT of the-forest by

ha-mitnadvim)

the- volunteers

‘The rehabilitation of the forest by the volunteers’.

- b. *ha-fikum* *fel* *ha-mitnadvim* *et*
 the-rehabilitation.INTNS.ACT of the-volunteers ACC

ha-ja'ar

the-forest

‘The volunteers’ rehabilitation of the forest’.

Naturally, as the structure in (4b) requires an external argument, it is only available for input structures which include one to begin with. As in this paper we focus on intransitive verbs, i.e. input structures which lack an external arguments, we leave this structure aside. For further discussion, we refer the reader to Ahdout (in preparation).

The non-obligatory status of the external argument in English ASNs, together with the surfacing of *by*-phrases in some nominal constructions, has led many to propose that nominalized verbs and passivized verbs are alike:

[1] The two processes share the suppression of the external argument (Grimshaw 1990, Alexiadou 2001, 2017).

[2] When not realized, the agent is implicit, and has been claimed to be a null *pro* subject (Sichel 2009, 2010, Bruening 2013, Alexiadou, Anagnostopoulou, and Schäfer 2015).

We explore the nominalization patterns for base verbs which lack an external argument (unaccusatives) or an overtly projected one (passives), with data and examples from our database.

2. Non-active verbs and nominalization: unaccusative verbs

Our focus is on two main groups of non-actives: unaccusatives (this section) and passives (Section 3). Unergatives with non-active morphology were also checked, but will not be discussed here (see Ahdout and Kastner, in preparation). The (limited) literature on nominals derived from non-active verbs suggests that:

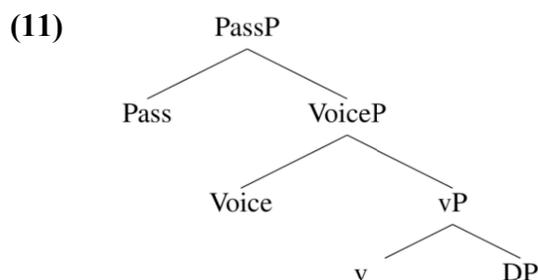
- (5) Unaccusatives produce ASNs.

Alexiadou notes that for Greek, Catalan and Italian unaccusatives derive event nominals 2001: 40-42, 82, 84-85. This claim stands contra the system in Grimshaw 1990:112, where it is required that a nominalization have an external argument to suppress, thus predicting that unaccusatives cannot produce an ASN. The following example is from Catalan:

- (6) a. *la* *tornada* *dels* *turistes* *durant l'estiu*
 the returning of.the tourists during the summer

In Hebrew, unaccusative verbs are hosted in several *templates* (morphological verbal classes); on the verbal system of Hebrew see Doron 2003, Arad 2005, Kastner

syntax (Reinhart and Siloni 2005). In syntax-based theories such as Distributed Morphology (which we assume here; Halle and Marantz 1993), it has been proposed that these verbs are derived using **the Pass(ive) head** (Alexiadou and Doron 2012, Kastner and Zu 2017) or a similar functor (Borer 2013):



We note that positing a Pass head above Voice in the (9), (10) cases correctly predicts that:

- [1] A passive verb is always built on the basis of an active one (see above).
- [2] The semantics is transparent and compositional: an existentially closed-over version of the active form (Doron 2003 and subsequent literature).
- [3] The unique **u-a** vocalic pattern exemplified in (9), (10) is accounted for (Arad 2005, Kastner 2018).

Nominalization of Pass-passives? The absence of corresponding nominals for the passive templates is categorical: no nominal derivative associated with these verbal templates exist (nor has such forms existed in earlier stages of the language). Kastner and Zu 2017 show that the Pass-passives in Hebrew also lack an infinitive form and an imperative form:

(12) *Paradigm gaps in Hebrew verbal derivatives (Kastner and Zu 2017:654)*

| | Template | Gloss | Infinitive | Imperative | Nominal |
|---|-----------------------------------|-------------------|-------------------|-------------------|-----------------------------|
| 1 | <i>XaYaZ</i> SMPL.ACT | ‘order’ | <i>lifkod</i> | <i>pkod</i> | <i>pkida</i> |
| 2 | <i>niXYaZ</i> SMPL.MID | ‘be absent’ | <i>lehipaked</i> | <i>hipaked</i> | <i>hipakdut</i> |
| 3 | <i>XiYeZ</i> INTNS.ACT | ‘command’ | <i>lefaked</i> | <i>paked</i> | <i>pikud</i> |
| 4 | <i>XuYaZ</i> INTNS.PASS | ‘be commanded’ | — | — | — |
| 5 | <i>hiXYiZ</i> CAUS.ACT | ‘deposit’ | <i>lehafkid</i> | <i>hafked</i> | <i>hafkada</i> |
| 6 | <i>huXYaZ</i> CAUS.PASS | ‘be deposited’ | — | — | — |
| 7 | <i>hitXaYeZ</i> INTNS.MID | ‘ally himself’ | <i>lehitpaked</i> | <i>hitpaked</i> | <i>hitpakdu</i> <i>t</i> |

They attribute the gaps associated with the passive templates to the presence of Pass. This head selects finite environments, and as nominalizations are non-finite, they are excluded.

To account for the lack of nominalizations associated with the passive templates, we adopt the selectional restrictions account, where the ban on the attachment of the nominalizing head in Pass-passives is purely grammatical and categorical. However, this kind of account cannot be implemented for the second class of passives in the language, as shown immediately below.

3.2. *NonAct-passives: derived in Medio-passive template niXYaZ nif'al*

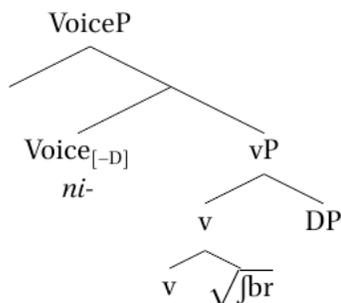
Traditionally, the *niXYaZ* template is morphologically classified as marking “**Middle**” Voice (Doron 2003). This reflects the nature of the verbal structures associated with this template: syntactically, *niXYaZ* verbs are strictly intransitive. The main subgroups are unaccusatives, passives, and certain kinds of unergatives, with many verbs being ambiguous between several of the aforementioned intransitive readings.

(13) *niXYaZ* verbs (passive readings in bold):

- a. Unaccusative
ha-kise nijbar etmol be-ta'ut
 the-chair broke.SMPL.MID yesterday by.mistake
- b. Unergative
ha-pofe'a nimlat me-ha-kele
 the-criminal escaped.SMPL.MID from-the-prison
- c. **Passive**
ha-pofe'a nircax al jedej mitnakfim
 the-criminal was.murdered.SMPL.MID by assassins
- d. Ambiguous, e.g. unaccusative,
ha-delet nisgera (me-ha-ru'ax ha-xazaka)
 the-door closed.SMPL.MID from-the-wind the-strong.SG.F
- ... or **passive**
delet ha-kita nisgara al jedej ha-more
 door (of) the-classroom closed.SMPL.MID by the-teacher

Previous literature on the *niXYaZ* template characterizes it as an instantiation of non-active Voice (Doron 2003, Schäfer 2008, Alexiadou and Doron 2012, Kastner 2017), which together with the active Voice template in the “simple” paradigm, constitutes a two-way Voice marking, comparable to that generally found in Modern Greek (Alexiadou, Anagnostopoulou, and Schäfer 2015).

(14) (unaccusative) verb *nijbar* ‘broke’:



In our system (following Kastner 2018), the Voice head has a [-D] feature, which blocks a DP from merging in the specifier of Voice (“expletive Voice” of Schäfer 2008, Alexiadou, Anagnostopoulou, and Schäfer 2015). The structure in (14) represents 3 different types of non-active verbs that are associated with *niXYaZ*:

[1] Unaccusative (as in the tree example)

[2] **passive only**, our focus subgroup (13c).

[3] Medio-passive (verbs which alternate between unaccusative and passive readings), (13)d.

Semantically, there are two possible interpretations associated with the Voice_[-D] head: Thematic vs. Expletive Voice in Alexiadou, Anagnostopoulou, and Schäfer 2015, or contextual allosemy of Voice as in Kastner 2017, Myler 2016:

- (15) $\llbracket \text{Voice}_{[-D]} \rrbracket$ = $\lambda P \lambda e \exists x.e \ \& \ \text{Agent}(x,e) \ \& \ \text{Theme}(\dots) / \{ \sqrt{\text{rcx}} \text{ ‘murder’}, \sqrt{\text{amr}} \text{ ‘say’ } (\dots) \}$
 = $\lambda P.P$ (elsewhere = unaccusative)

We will refer to passive verbs/readings in this template as *NonAct-passives*, to highlight the nature of the morphological pattern hosting them. See section 5 for motivations to not associate *niXYaZ* with a Passive head.

Nominalization of NonAct-passives? Unlike Pass-passives, the nominalization pattern for NonAct-passives is non-categorical:

- (16) From the various subgroups of verbs in *niXYaZ* (13), **passives nominalize the least** – and very rarely.

As mentioned above, in some cases, *niXYaZ* verbs are passive-only, and in others, ambiguous. First, for non-ambiguous verbs, the nominalization is degraded, as in (17) below:

- (17) **Non-ambiguous passives:**

- a. *nikba* ‘be set by’
 #hikab’ut ‘being set by’
- b. *nixat* ‘be blackmailed/squeezed by’
 #hisaxtut ‘being blackmailed/squeezed by’.

Regarding **ambiguous verbs** with a passive reading, e.g. the unaccusative/passive verb *nim’ax* ‘get/be squished (by)’, we find that the passive reading is not preserved in the nominal, while the unaccusative reading is preserved:

- (18) *Unaccusative verb, OK:*

- a. *ha-uga nim’exa* *b-a-tik*
 the-cake got.squished.SMPL.MID.3SG.F in-the-bag
 ‘The cake got squished in the bag’.

Passive verb, OK:

- b. *ha-psolet nim 'exa* *al jedej ha-mexona*
 the-waste got.squashed.SMPL.MID.3SG.F **by** the-machine
 'The waste was squished using a machine'.

(19) *Unaccusative nominal, OK:*

- a. *ha-hima 'axut* *fel ha-uga* *b-a-tik*
 the-squishing.SMPL.MID of the-cake in-the-bag

Passive nominal, #:

- b. #*ha-hima 'axut* *fel* *ha-psolet* ***al jedej***
 the-squishing.SMPL.MID of the-waste by

ha-mexona
 the-machine

The overall picture is that passive readings are rarely found in the corresponding nominalization. The percentages of ASNs per syntactic subgroups are given below:

(20) *niXYaZ verbs and rate of nominalization*

| | Structure | Pass | Unacc | Unerg | Nominals/verbs per subgroup | % |
|---|------------------------|------|-------|-------|-----------------------------|------|
| a | Passive | + | - | - | 7/172 | 4% |
| b | Medio-passive | + | + | - | 11/78 | 14% |
| c | Unaccusative | - | + | - | 25/91 | 27% |
| d | Active/unergative | - | - | + | 19/32 | 59% |
| e | Ambiguous ² | - | + | + | 12/17 | 71% |
| f | | + | - | + | 12/15 | 80% |
| g | | + | + | + | 10/10 | 100% |

The table quantitatively shows that passive verbs are the least likely to derive a corresponding nominalization. Below we offer an account for this finding, suggesting that in passive verbs, the active nominalization is in competition with the more complex, Middle-marked nominalization in *niXYaZ*.

4. A competition account of NonAct-passives

We account for the scarcity of nominalized NonAct-passives using a processing-performance view based on competition between forms (e.g. Martin and Schäfer 2014, cf. Embick and Marantz 2008).

Hebrew has a morpho-syntactic Voice alternation between **active/transitive** and non-active (unaccusative or passive) forms, in both verbs and nominals. In this alternation, the non-active (Middle) form is derived from the active form (see among others Doron 2003, Arad 2005, Kastner 2017):

² Overall, for ambiguous verbs, it is usually either the unaccusative or (more often), the unergative reading that is attested – but never the passive one. Example for ambiguous verbs for lines e-g are (in accordance), e.g. *nismad (le-)* 'attached to', *nitla* 'hung on to/be hanged (by)', *niftax* 'open up/get/be opened (by)'.

- (21) a. *oman fvejcar* *jacar* *et ha-pesel*
 artist Swiss created.SMPL.ACT ACC the-sculpture
 ‘A Swiss artist **created** the sculpture’
- b. *ha-pesel nocar al jedej oman fvejcar*
 the-sculpture created.SMPL.MID by artist Swiss
 ‘The sculpture **was created by** a Swiss artist.’
- (22) a. *ha-jovef jacar et ha-sedek*
 the-dryness created.SMPL.ACT ACC the-crack
 ‘The dryness created the crack’
- b. *ha-sedek nocar (me-ha- ovef/me-acmo)*
 the-crack formed.SMPL.MID from-the-dryness/by.itself
 ‘The crack formed due to dryness/by itself’.

Here, we focus on the two readings available for *niXYaZ* verbs/nominals, passive (21b) and unaccusative (22b).

(23) *Voice alternation and nominal derivatives (for the “simple” paradigm)*

| Voice marking, <i>template</i> | Verb | Nominal |
|---------------------------------------------|----------------------------------------|--------------------------------------------------|
| ACT, <i>XaYaZ</i> (trans. reading) | <i>jacar</i> ‘create’ | <i>jecira</i> ‘creating, creation’ |
| MID, <i>niXYaZ</i> (unacc/pass. reading) | <i>nocar</i> ‘be created (from/by)’ | <i>hivacrut</i> ‘being created (from/#by)’ |

We claim that in the nominal domain, the active and Middle forms are in competition, under certain circumstances. First, we assume that the choice of reading (unaccusative or passive), as well as whether the speaker chooses to express it in a nominal form rather than a verbal form, lies at the **discourse level** and is not a matter of the grammar.

For the **passive** reading, an agent is either realized or implied, as is the case for a passive verb. We will show that only for this reading do the active and Middle forms compete. Under the **unaccusative** reading, a change of state takes place in the object, but no agentive force is implied. For the unaccusative reading, no competition takes place. We begin with describing the latter case.

4.1. Unaccusative readings

Suppose the speaker wishes to express an unaccusative reading. As in (22b), the Middle form in *niXYaX* is associated with an unaccusative structure. The nominalization derived from the Middle (*hivacrut*) accordingly conveys the same unaccusative reading, where no agent is implied (as diagnosed with 'by itself').

- (24) *hivacrut sedek be-xazit ha-binyan (me-acmo)*
 formation.SMPL.MID crack in-front the-building **by.itself**

‘The formation of a crack in the front part of the building (by itself)’.
(Adapted from Siloni and Preminger 2009:369)

Contrastingly, the **active** nominal (25a), derived from the active-transitive verb *jacar* ‘create’, (23a), entails an agent, and cannot be interpreted as unaccusative, just like English (26b):

- (25) a. *jecirat* *sedek be-xazit* *ha-binyan* (**me-acmo*)
the.creation.SMPL.ACT crack in-front the-building **by.itself**
- b. The destruction of the city (*by itself)/by the enemy.

Thus, if the speaker wishes to express an “agentless” nominalization of the event, she will only be able to use the nominalization of the **Middle** form, as in (24) above.

4.2. Passive readings

For passive readings – these which obligatorily imply an agent – we claim that competition between the active and Middle nominal forms does exist, and derives the scarcity of NonAct-passives in the nominal incarnation.

In contrast to unaccusative readings, in the **nominal** domain, both active (26a) (cf. (25b)) and Middle (26b) forms are, in principle, valid when the speaker wishes to convey the passive reading, and are thus interchangeable:

- (26) a. *jecirat* *ha-pesel* (*al jedej oman fvejcar*)
the.creation.SMPL.ACT the-sculpture **by** **artist Swiss**
- b. #*hivacrut* *ha-pesel* *al jedej* *oman fvejcar*
creation.SMPL.MID the-sculpture **by** **artist Swiss**
(Siloni and Preminger 2009:369)
- c. The destruction of the city (by the enemy).

What then makes the Middle form degraded compared to the active form? We suggest that this has to do with on-line usage preferences of a simplex form over a complex one, and not with purely grammatical considerations. As claimed in the literature (Doron 2003, Arad 2005, Kastner 2017), the non-active verb is derived from the active verb, hence choosing the nominal based on the non-derived verb requires less processing. This preference is again, related to the differences in (syntactic and morpho-phonological) structures of the two forms at hand, but is not in itself ruled out because of incongruence between the nominalizer with the underlying structure of the Middle/non-active verb.

To conclude, we repeat again the observation that unlike Pass-passives, the low rate of nominalization for NonAct-passives is not categorical, a fact that is reflected in our treatment of the degradedness of nominals derived from NonAct-passives as stemming from performance – rather than grammatical – reasons.

4.3. Prediction

Non-active verbs and the input to nominalization

This account predicts that NonAct-passives can derive nominalizations if the meaning of this nominal is different than the meaning of the nominal derived from the active form (since in this case the two nominals will serve different discourse functions, simply by virtue of meaning different things). To test this, we turn to examine a few corpus examples of nominalizations derived from **NonAct-passives**, showing that when the active and Middle forms are **not** interchangeable due to lexical semantic/aspectual grounds, the Middle form, typically degraded, is instead deemed acceptable.

In (27)-(29) below, the use of the Middle form allows a semantic contrast with the Active form, such that in these cases the forms are not interchangeable, and thus the NonAct form is not blocked.

In (27), there appears to be some lexical semantic contrast between using the Active versus the Middle nominals, e.g. that the latter is used in a fantastic context, where the former would be odd:

- (27) a. #*axila* *b-a-xaim* *al jedej* *miflecet*
 eating.SMPL.ACT in-the-life by a.monster
- b. *he'axlut* *b-a-xaim* *al jedej* *miflecet*
 being.eaten.SMPL.MID in-the-life by a.monster
 ‘Being eaten alive by a monster’.
- (Itai and Wintner 2008)

In (28), using the Active form in (28a) would sound odd, as the noun *plita* is associated with involuntary omission of gas or liquids (e.g. by babies), which is not the case in the event denoted in (28):

- (28) a. #*le-axar* *plita* *me-ha-matos* *al jedej*
 after emission.SMPL.ACT from-the-plane by
 manoa *raketi*
 engine rocket
- b. *le-axar* *hipaltut* *me-ha-matos* *al jedej*
 after being.emitted.SMPL.MID from-the-plane by
 manoa *raketi*
 engine rocket
 ‘...After being ejected from the plane by a rocket engine’.
- (Itai and Wintner 2008)

In (29), the use of the different morphological forms seems to entail different values of telicity, with the Middle form restricted to a non-telic reading, a restriction which the Active form does not show:

- (29) a. *ha-grira* *fel* *ha-oto (l-a-musax)* *al jedej*
 the-towing.SMPL.ACT of the-car to-the-garage by
- masa'it* *(be-tox)* *fa'a)/be-mefex* *fa'a*
 a.truck in a.hour/in-duration (of) an.hour
- b. *ha-higarerut* *fel* *ha-oto (l-a-musax)* *al jedej*

the-being.towed.SMPL.MID of the-car to-the-garage by
*masa'it (*be-tox fa'a)/be-mefex fa'a*
 a.truck in an.hour /in-duration (of) an.hour
 'The towing of the car by a truck in an hour to the garage/for an hour'.

We next briefly consider an alternative analysis which does not make reference to competition.

5. Alternative account: Pass head for NonAct-passives?

Could *niXYaZ* NonAct-passives be Pass-passives in disguise, with a silent Pass head, and thus show the same selectional restrictions described for Pass?

We claim that the answer is **no**. Unlike “true” passive templates...

- The ban on nominalizations in Pass-passives is categorical, but we saw evidence for discourse-related leeway with NonAct-passives.
- Unlike Pass-passives, which differ from their active counterparts only in their vocalic pattern (9), the NonAct form *niXYaZ* is morpho-phonologically independent of other (active) forms: *niXYaZ* is not a variation of any other template. (Ussishkin 2005, Kastner 2018).
- Pass-passives were shown to exhibit paradigm gaps in infinitives and imperatives (12), as well as in nominals. However, infinitive forms *are* attested for *niXYaZ* NonAct-passives:

- (30) a. *ne'exal* 'be eaten (by)'
ex ze margif le-he'axel al jedej dov?
 how it feels **to-be.eaten**.SMPL.MID by a.bear
 'How does it feel to be eaten by a bear?' (www)
- b. *nikba* 'be set (by)'
ha-seder ha-'olam-i lo carix le-hikaba
 the-order the-world-ly NEG should **to-be.set**.SMPL.MID
al jedej medina axat
 by state one
 'World order shouldn't be determined by one country'. (www)

These data lead us to conclude that there is no motivation to posit a Passive head in NonAct-Passives, and as such to rule out a syntactic explanation for our finding.

6. Conclusions

Our goal in this paper was to address the nominalization patterns of non-active verbs: unaccusatives and passives. We used Hebrew, a language which allows fine-grained correspondence between verbs and nominals, due to Voice distinctions being carried on to the nominal domain.

In accordance with existing literature, we showed that unaccusatives produce ASNs. Passives, however, were shown to be incompatible with nominalization.

For Pass-passives (with a Passive head in their underlying structure), a selectional restriction account could be opted for, but we claimed that a similar account is incompatible with NonAct-passives, for which a Pass head is absent. For these NonAct-passives, we suggested an explanation in terms of competition, where the more simplex active nominalization is preferred over the complex NonAct/Middle form, thus accounting for the scarcity of NonAct-passive nominals.

References

- Ahdout, Odelia. In preparation. *Nominalization in Hebrew and Beyond*. Doctoral dissertation, Humboldt Universität zu Berlin.
- Ahdout, Odelia, and Itamar Kastner. 2018. The interaction of nominalization and Voice. Ms., Humboldt Universität zu Berlin.
- Alexiadou, Artemis. 2001. *Functional Structure in Nominals: Nominalization and Ergativity*. Amsterdam: John Benjamins.
- Alexiadou, Artemis. 2009. On the role of syntactic locality in morphological processes: the case of (Greek) derived nominals. In *Quantification, definiteness and nominalization*, ed. by Anastasia Giannakidou and Monika Rathert, 253–280. Oxford: Oxford University Press.
- Alexiadou, Artemis. 2017. Ergativity in nominalization. In *Oxford Handbook on Ergativity*, ed. by Jessica Coon, Diane Massam, and Lisa deMena Travis, 355–372. Oxford: Oxford University Press.
- Alexiadou, Artemis, and Edit Doron. 2012. The syntactic construction of two non-active voices: Passive and middle. *Journal of Linguistics* 48:1–34.
- Alexiadou, Artemis, Elena Anagnostopoulou, and Florian Schäfer. 2015. *External arguments in transitivity alternations: A layering approach*. Oxford Studies in Theoretical Linguistics 55. Oxford: Oxford University Press.
- Arad, Maya. 2005. *Roots and patterns: Hebrew morpho-syntax*. Studies in Natural Language and Linguistic Theory 63. Dordrecht: Springer Science & Business Media.
- Borer, Hagit. 2013. *Taking form: structuring sense*. Vol. III, Oxford: Oxford University Press.
- Borer, Hagit. 2014. Derived nominals and the domain of content. *Lingua* 141:71–96.
- Bruening, Benjamin. 2013. By phrases in passives and nominals. *Syntax* 16:1–41.
- Chomsky, Noam. 1970. Remarks on Nominalization. In *Readings in English Transformational Grammar*, ed. by Roderick A. Jacobs and Peter S. Rosenbaum, 184–221. Boston: Ginn.
- Doron, Edit. 2003. Agency and voice: The semantics of the Semitic templates. *Natural Language Semantics* 11(1):1–67.
- Ehrenfeld, Lior. 2012. *The morphology of the Hebrew causative alternation*. Master's thesis, Hebrew University of Jerusalem.
- Embick, David and Alec Marantz. 2008. Architecture and blocking. *Linguistic Inquiry*, 39(1):1–53.
- Grimshaw, Jane. 1990. *Argument structure*. Cambridge, MA: Massachusetts Institute of Technology Press.

- Halle, Morris, and Alec Marantz. 1993. Distributed morphology and the pieces of inflection. *The View from Building*, ed. by Ken Hale and Samuel J. Keyser, 20: 111–176. Cambridge, MA: Massachusetts Institute of Technology Press.
- Harley, Heidi. 2009. The morphology of nominalizations and the syntax of *vP*. In *Quantification, definiteness and nominalization*, ed. by Anastasia Giannakidou and Monika Rathert, 321–343. Oxford: Oxford University Press.
- Itai, Alon and Shuly Wintner. 2008. Language Resources for Hebrew. *Language Resources and Evaluation*, 42:75–98.
- Kastner, Itamar. 2016. *Form and Meaning in the Hebrew Verb*. Doctoral dissertation, New York University.
- Kastner, Itamar. 2017. Reflexive verbs in Hebrew: Deep unaccusativity meets lexical semantics. *Glossa* 2(1).
- Kastner, Itamar. 2018. Templatic morphology as an emergent property: Roots and functional heads in Hebrew. *Natural Language and Linguistic Theory*.
- Kastner, Itamar, and Vera Zu. 2017. Blocking and paradigm gaps. *Morphology* 27:643–684.
- Martin, Fabienne, and Florian Schäfer. 2014. Anticausatives compete but do not differ in meaning: a French case study. In *SHS Web of Conferences* 8:2485–2500. EDP Sciences.
- Myler, Neil. 2016. *Building and interpreting possession sentences*. Cambridge, MA: Massachusetts Institute of Technology Press.
- Reinhart, Tanya and Tal Siloni. 2005. The lexicon-syntax parameter: Reflexivization and other arity operations. *Linguistic inquiry*, 36(3):389–436.
- Schäfer, Florian. 2008. *The syntax of (anti-) causatives: External arguments in change-of-state contexts*. Amsterdam/Philadelphia: John Benjamins.
- Sichel, Ivy. 2010. Event structure constraints in nominalization. In *The syntax of nominalizations across languages and frameworks*, ed. by Artemis Alexiadou and Monika Rathert, 151–190. Berlin & New York: Mouton de Gruyter.
- Sichel, Ivy. 2009. New evidence for the structural realization of the implicit external argument in nominalizations. *Linguistic Inquiry* 40(4):712–723.
- Siloni, Tal, and Omer Preminger. 2009. Nominal voices. In *Quantification, Definiteness and Nominalizations*, ed. by Anastasia Giannakidou and Monika Rathert, 365–385. Oxford: Oxford University Press.
- Ussishkin, Adam. 2005. A fixed prosodic theory of nonconcatenative templatic morphology. *Natural Language and Linguistic Theory* 23:169–218.

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