

What is go-ing on?

Morphological sensitivity (and lack thereof) in the incorporation of -ing ending loanwords in French and Hebrew



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What is it all about?

- Quand on **fait du shopping_N** il y a certaines choses à garder en tête
'When one **does shopping**, there are a few things to keep in mind'

- im atem mexapsim efo **laasot šoping_N** be-prag - ze bišvilxem
'If you are looking for where to **do shopping** in Prague - this is for you'

What is it all about?

- Bien **shopper_v** pendant les soldes, ça s'apprend.
'To **shop** well during the sales can be learned'
- gam al i boded emca efo **lešapeng_v**
'also on an isolated island I will find where **to do shopping**'
- devenir copines...boire des verres, prendre l'air, **shoppinguer_v**!
'become friends...have a drink, get some fresh air, **shopping_v**!'

Outline

- Borrowed nouns as source of newly coined verbs and their word families
- Two different morphological systems are compared
- Loan words are English *-ing* action nouns borrowed in French and Hebrew,
 - Nouns are taken from large scale resources
- Different strategies to satisfy the same needs

ten Hacken & Panocová 2020,
Wohlgemuth 2009

Data collection

- Corpus-based search to collect *-ing* ending loan action nouns that enter the Hebrew and French lexicons
- French: 1M tokens 2022 Leipzig Corpora Collection
 - 426,578 different wordforms + frequencies from French newspapers

<https://wortschatz.uni-leipzig.de/en/download/French>

- Hebrew: 2,7 billion tokens heTenTen corpus

<https://www.sketchengine.eu/hetenten-hebrew-corpus/>

French

Extraction of *-ing* nouns

- Only dynamic nouns are kept
 - "*faire Xing_N*" (to do Xing_N) "*Pendant Xing_N*" (during Xing_N)

Barque et al, 2020

- **403** different *-ing* nouns
 - All compatible with verbal periphrastic constructions
- Is each *-ing* noun the base for newly coined verb(s)?
 - Generate candidate verbforms morphologically related to the noun
 - Verify online their existence

Which structure for candidate verbs?

- $Xing_N \rightarrow Xinguiser_V$ suffixation:
 - action nouns semantically inappropriate bases for *-iser* verbs?
 - **shoppinguiser*

- $Xing_N \leftrightarrow Xinguer_V$ conversion:
 - *shopping/shoppinguer*
- $Xing_N \rightarrow Xer_V$ backformation process (otherwise not so natural):
 - *shopping/shopper*

Bauer, 1983, Becker, 1993,
Plag 1999, Tribout 2010,
Štekauer, 2015

Results

- 200/403 *-ing* nouns are bases of new attested verb(s)
 - 155 Xer_V cooking_N/**cooker**_V
 - 46 Xer_V + $Xinguer_V$ bashing_N/**basher**_V/**bashinguer**_V
 - 2 $Xinguer_V$ planning_N/**planninguer**_V
- Xer_V and $Xinguer_V$ not mutually exclusive
- $Xinguer_V$: lower token frequency
- Backformation: the most productive process

Why do Xer_V outnumber $Xinguer_V$?

- *-ing* is understood as the exponent of a suffixation process forming action nouns
 - like *-ion, -age, -ment* ... in French
- need for paradigm regularization
 - "where there is a suffixed action noun, there is a (morphologically simpler) related verb"
- The optimal verb structure must be such that its relation with $Xing_N$ is aligned with regular relations between a V and a suffixed N_{act} : $X_V/Xion_N$, $X_V/Xage_N$, $X_V/Xment_N$
 - Back-formation is the best way

Bonami & Strnadová, 2019,
Hathout & Namer, 2022

What explains $Xinguer_V$ (at all)?

- Same content as Xer_V , lower frequency
- Never attested when Xer_V is not:

brainstorming_N -- brainstormer_V
 brainstorminguer_V

- Rare exceptions:

planning_N -- planninguer_V

– *planner_V* 'do a planning' blocked by homophonic,
long time recorded *planer_V* ('to glide')

What explains $Xinguer_V$ (at all)?

- Does not depend on token frequency ($Xing_N$, Xer_V)
- Does not depend on $Xing_N$ complexity
 - $storytelling_N$ – $auto-storytellinguer_V$
 - $binge-watching_N$ – $binge-watchinguer_V$
 - $binge-drinking_N$ – \emptyset
- Unaffected by morphophonological constraints
 - $jogging_N$ – $jogginguer_V$
- Playful nonce-formations?
 - Explains low frequency and systematic violation of constraints

Family expansion

- $Xing_N/Xer_V$ and $Xing_N/Xer_V/Xinguer_V$ n-uplets are often the starting point of families realizing Action Networks:

MALE AGENT	<i>un "serial shoppeur_N"</i>
FEMALE AGENT	<i>Quelle shoppeuse_N êtes-vous ?</i>
INSTRUMENT	<i>un mulcheur_N stellaire</i>
LOCATION	<i>construire une cocoonerie_N</i>
ITERATION	<i>(re)binge-watcher_V L'Arme fatale</i>
(NEGATION OF) POTENTIAL PROPERTY	<i>Bookez l'imbookable_A</i>
(ANOTHER) ACTION	<i>Le mulchage_N permet de limiter l'arrosage</i>
(ANOTHER) ACTION + MULTIPLE MARKING	<i>shoppinguage_N intensif entre nanas</i>

Hebrew

Non-concatenative morphology

- Semitic word formation relies highly on non-concatenative/ non-linear morphology
- Formation via **root and pattern** (Berman 1978, Bolozky 1978, Schwarzwald 1981, Ravid 1990, Aronoff 1994).

Non-concatenative morphology

- Patterns consist of:

- prosodic structure

- vocalic melody

- possible affixes

CiCeC - **kiv^eec** 'shrink X' (active, transitive)

CuCaC - **ku^vac** 'be shrunk' (passive, intransitive)

hitCaCeC - **hitka^vec** 'become shrunk' (inchoative, intransitive)

(Berman 1978, Bolozky 1978, McCarthy 1981, Schwarzwald, 1981, Ravid 1990, 1995, Bat-El 1994, 2017 Aronoff 1994, Doron 1999, 2003, Borer 1991, 2013)

Non-concatenative morphology

- Every verb that enters Hebrew, regardless of its origin, must conform to one of the existing patterns.
- Most new verbs are formed in the **CiCeC** pattern.

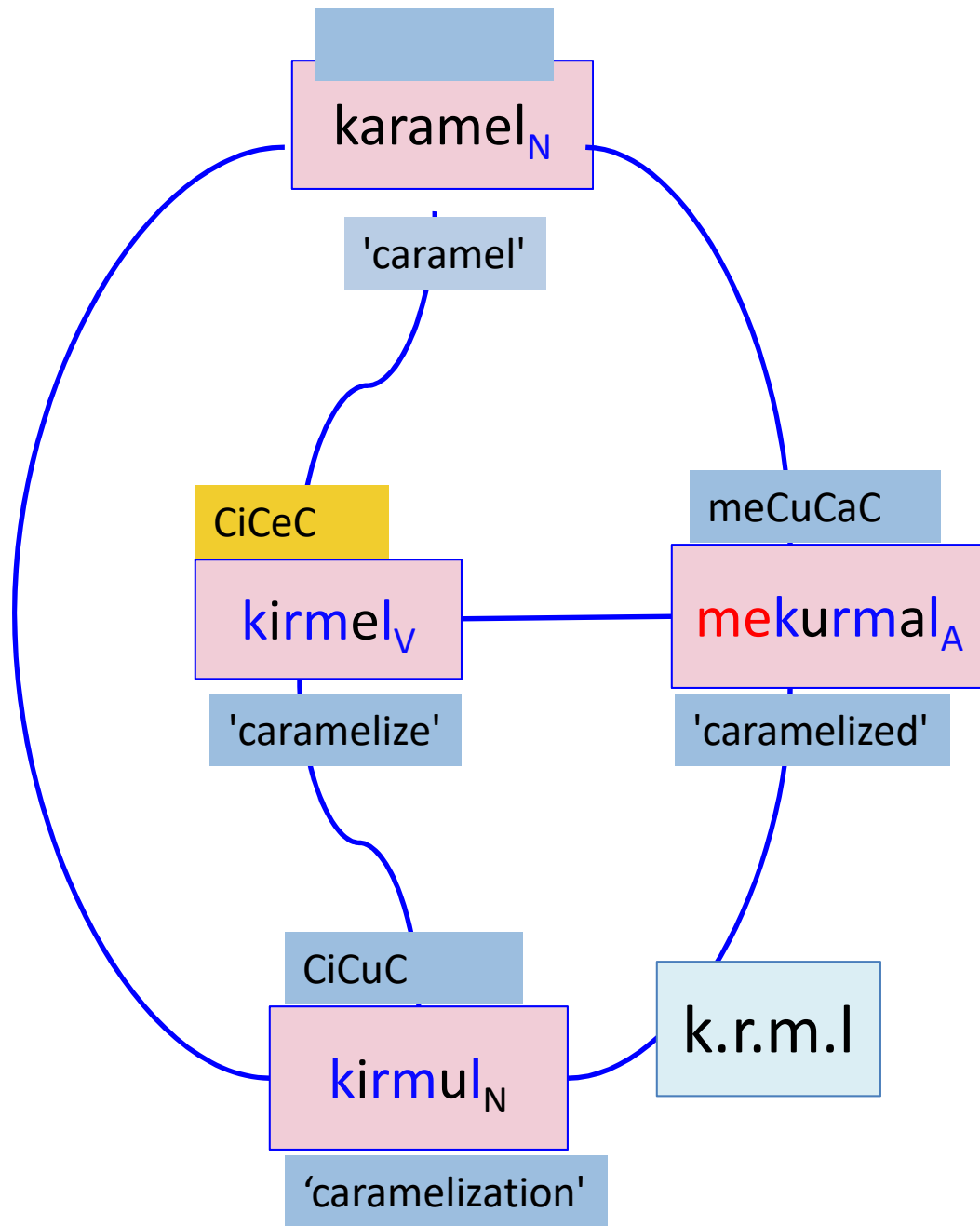
(Berman 1978, 2003, Bolozky 1978, 1986, 2003, Schwarzwald 1981, 2001, 2009, Ravid 1995, 2004, Bat El 1994, 2017, Faust 2011, Laks 2018, among others)

Hebrew CiCeC verb formation based on loanwords

Base		Potentially derived verb	
model	'model'	midel	'make a model of'
ristart	'restart'	ristert	'restart'
katalog	'catalog'	kitleg	'put in a catalog'
faks	'fax'	fikses	'send a fax'

Derivational families based on loan words

- Hebrew loanwords can be the base for the formation of derivational families.



Hebrew verbs derived from -ing ending loan nouns

- 83 words that denote actions that end with the equivalent Hebrew orthography of *-ing* were extracted from the corpus:
- *camping*
casting
- Verb **CiCeC** forms derived from these words were searched in different conjugations on Google and in the HeTenTen corpus.

Hebrew verbs derived from -ing ending loan nouns

- Only 7 (8%) of the 83 words had verbs derived from them
- All the 83 **-ing** ending loan nouns can surface in verbal periphrastic constructions.
- The loan nouns are preceded by the verb *asa* 'do'
- *asa piling* 'do peeling'
- Most words surfaced only in periphrastic verbal constructions.

Hebrew verbs derived from -ing nouns

Base		Derived verb	
kemping	'camping'	kimpeng	'camp'
piling	'peeling'	pileng	'do peeling'
snepling	'snepling'	snipleng	'do snepling'
tizing	'teasing'	tizeng	'do teasing'
šoping	'shopping'	šipeng	'do shopping'

Morphological vs. periphrastic constructions 'peeling'

- **pilang-ti** kašot gam et kaf ha-yad
'I also **did** rough **peeling** to my palm'
<https://twitter.com/notshalan2/status/1610205261037244416>
- mišehu po paam **asa piling**?
'has anybody here ever did peeling?'
<https://www.fxp.co.il/forumdisplay.php?f=294&page=1623>

Gaps in the derivation of verbs from -ing nouns

Base		Potentially derived verb	
buking	'booking'	(?) bikeng	'book'
hiling	'healing'	(?) hileng	'do healing'
gosting	'ghosting'	(?) gisteng	'do ghosting'
rafting	'rafting'	(?) rifteng	'do rafting'
bording	'boarding'	(?) birdeng	'do boarding'

- az hu **asa buking/(?) bikeng** la-malon le-šlošet ha-yamim ha-rišonim

‘so he **did booking** for the hotel for the first three days’

<https://yoram.walla.co.il/item/1840295>

- kol exad yaxol **laasot hiling / (?) le-haleng**
‘everybody can **do healing**’

<https://betterapya.wixsite.com/betterapya/healing>

Why are verbs derived from -ing ending loanwords so rare?

- **Not a semantic problem**

The existence of verbal periphrastic constructions with all -ing ending loan nouns suggest that conceptually there is no reason for these nouns not to be the base for verb formation.

Why are verbs derived from -ing ending loanwords so rare?

- **Not because these are loanwords**

There are many cases in Hebrew where verbs (as well as other lexical categories) are derived from loanwords .

(Bolozky 1978, 1999, Berman 1987, 2003, Schwarzwald 1981, 2001, Ravid 1992, Bat-El 1994, Ussishkin 2005, Laks 2018, among others)

flirt_N 'flirt' - *flirtet_V* 'flirt with'

binj_N 'binge' - *binjej_V* 'binge watch'

Why are verbs derived from -ing ending loanwords so rare?

- The scarcity of morphologically derived such verbs is only because they end with *-ing*.
- Hebrew speakers identify the *-ing* ending nouns as typical loanwords.
- They are less likely to be integrated into the morphological system.
- The morphological system is sensitive to the morphological structure of loanwords and does not treat all of them as the same.

- In case of verb formation, the *-ing* is retained as part of the derived verb
 - No backformation where the *-ing* is dropped.
- Faithfulness to the base
- *snepling* 'snapling' → *snipleng* 'do snapling'
- Preservation of consonant clusters: *sn*, *pl* and *ng*.
 - **snipel*
 - **sinpel*
 - **snipllel*
- Each of these non-existing verbs are less faithful to the base *snapling*.

- Many studies that demonstrated the importance of **faithfulness** constraints, and specifically **cluster preservation** in Hebrew verb formation.
- (see Bolozky 1978, 1999, Schwarzwald 1981, 2001, 2009, Bat-El 1994, 2003, 2017, Ussishkin 1995, 2005, among others).

Discussion

Overview

French	Hebrew
Periphrastic constructions	Periphrastic constructions
Morphological constructions	Morphological constructions
Concatenative morphology	Non-concatenative morphology
Backformation > Noun-to-verb conversion	CiCeC
Two morphological strategies	One morphological strategy only

Constraint 1

"Foreignness"

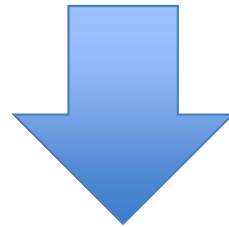
-ing: too "non-native"



Constraint 2

"Faithfulness"

Do not delete -ing



Hebrew:

- "When morphology fails, syntax prevails" (Laks, in preparation)
- Morphological formation is blocked in most cases
- Preference for periphrastic formation

Constraint 1

"Foreignness"

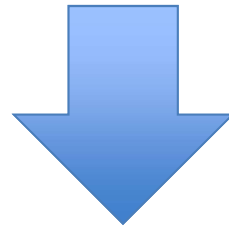
-ing: too "non-native"



Constraint 2

"Faithfulness"

Do not delete -ing



French:

- These two constraints are ranked lower
- *-ing* is regarded as a morphological marker of actions nouns, however foreign.
 - As a result *-ing* is regarded as any other marker of actions nouns (faithfulness is not an issue)

Conclusions

- We have compared two morphologically distinct languages in the way they form verbs based on the same borrowed nouns.
 - We have examined the creation of verbs and verb families in French and Hebrew.
- Both languages relate to the internal structure of the loanword differently.

Conclusions

- The study also adds new aspects to the examination of competition between morphological and periphrastic structures. (Haspelmath 2000, Kiparsky 2005, Booij 2010, Corbett 2013, Bonami 2015, Aronoff 2016, Rainer 2016, Štekauer 2016, Masini 2019, among many others)

Conclusions

- This "neologistic" character of such coinage is guaranteed by the fact that the starting point is a freshly borrowed noun entering the target lexical system.
- Looking at word formation "in vivo" is a new way to examine morphological typology.
- The importance of large scale data collection:
 - (i) Existing corpora
 - (ii) Web-searches

THANK YOU!

- Word-based approach

(Aronoff 1976, Blevins 2006)

- The central role of paradigms in derivational relations

(Bauer 1997, Pounder 2000, Beecher 2004, Booij & Lieber 2004, Štekauer 2014, Bonami & Strnadová 2019, Blevins 2016).

Which verbal constructions?

- Candidate verbs are checked online.
- Which verbal constructions are used for these candidates?
- Derivational processes relating V to N_{event/action}:
 - Xing_N/Xing_V Noun-verb conversion : *binge-washing/binge-washinguer*
- Unexpected process:
 - Xing_N/X_V backformation : *shopping/shopper*
- Are we sure that X_V is formed in French?

Xing_N is borrowed, not X_V

- Why should the borrowed action/event predicate be a noun and not a verb?
 - French has borrowed En:*brushing*_N, but why not also "(to) *brush*_V"?
 - Fr:X_V directly borrowed from En:X_V
- Look at Google Ngram Viewer.
 - *brushing*_N: in French books since 1960
 - *brusher*_V: in French books since 2010
- Our assumption : the action noun is borrowed, the verb is "rebuilt" in the target language