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J. Linguistics **54** (2018), 189–215. © Cambridge University Press 2017
doi:10.1017/S0022226717000251 First published online 25 October 2017

Idiom storage and the lexicon[1]

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(Received 18 September 2015; revised 2 May 2017)

Using a new methodology, the paper reports experimental work that sheds light on the organization of the lexicon, the storage technique of phrasal idioms, and the derivation of various diatheses. We conducted an experiment to examine the pattern of distribution of phrasal idioms across several diatheses. Native speakers of Hebrew were taught invented Hebrew idioms inspired by French idioms. The idioms were headed by predicates of three diatheses: a verbal passive, an adjectival passive, and an unaccusative verb. After learning the idioms, the participants evaluated for each idiom how likely it was that it shared its idiomatic meaning with its transitive version. The results show that the distribution of phrasal idioms depends on the diathesis of their head. Subjects perceived the likelihood of the verbal passive to share idiomatic meanings with its transitive counterpart as significantly higher than that of both the adjectival passive and the unaccusative. The findings provide support for the claim that phrasal idioms are stored in the lexicon, not in an extra-grammatical component, since their perception by speakers turned out to be dependent on a grammatical property, the diathesis. This dependency can be explained if phrasal idioms are stored as subentries of their head. The findings also reinforce the view that adjectival passives and unaccusatives are listed in the lexicon, but not verbal passives. Finally, they support the existence of an active lexicon, where thematic operations can apply.

KEYWORDS: adjectival passive, lexicon, phrasal idiom, unaccusative, verbal passive

[1] This research was supported by Grant No 2009269 from the United States–Israel Binational Science Foundation (BSF). We are grateful to Julie Fadlon for the statistical analysis. We would also like to thank Julie Fadlon, Aya Meltzer-Asscher and three anonymous *Journal of Linguistics* referees for their helpful comments.

https://doi.org/10.1017/S0022226717000251 Published online by Cambridge University Press

1. INTRODUCTION

This paper concentrates on the lexical component of the faculty of language. It deals with two major interrelated questions that have been at the heart of far-reaching controversies regarding the nature of the lexical component. First, the Word vs. Root question: What kind of entries make up the mental lexicon? Does the lexicon include words (Jackendoff 1975, Aronoff 1976, Di Sciullo & Williams 1987, among others)? Or is it a storehouse of more basic elements, such as roots, whether consonantal roots as in Semitic languages or roots in the wider sense, as argued for other languages (by e.g. Marantz 1997, Borer 2005, Pylkkänen 2008 and Ramchand 2008)? The second question concerns the workings of the lexical component. Words often seem to derive from other words or from more basic units, for example, the Hebrew verb *hudlak* 'got.lit' (verbal passive) may derive from its transitive counterpart, *hidlik* 'light' (transitive), or possibly from the consonantal root, *d.l.k.* Is the lexicon an active component that involves valence changing operations setting the diathesis (adjectival passive, unaccusative, etc.) of the predicate? Or does it comprise only lists of underived (atomic) entries, while the derivation operations all occur in the syntax? We report an experiment, whose findings, we believe, provide support that the lexicon includes words and allows derivational operations, contra syntacticocentric approaches (Marantz 1997, Harley & Noyer 1999, Borer 2005, Pylkkänen 2008, Ramchand 2008, among many others).

Bolozky (1978), Horvath (1981), Bat-El (1994), and Ussishkin (1999) have argued, on the basis of morphological evidence, that the basic unit of the lexicon is the word (and not the root). These studies show that the input to certain morphological processes is necessarily a word and not a root. Assuming that these morphological processes occur in the lexicon, they conclude that the lexical component must contain words. However, the assumption that morphological processes occur in the lexicon is no longer a consensus: Recent models assume that words are associated with their morpho-phonological 'clothing' only after the syntactic derivation (e.g. Halle & Marantz 1993). If so, then the conclusion that morphological processes can take words as their inputs does not prove that words are listed in the lexicon.

This study deals with the thematic derivation of verbs and adjectives, that is, the derivation setting their semantic and syntactic valence, their diathesis, and not their morpho-phonological derivation.[2] It reports an experiment that tests the effect various diatheses have on speakers' perception of idiom distribution. Idioms, as is well known, exhibit an intriguing duality: On the one hand, they

[2] It is orthogonal for our purposes whether morpho-phonological derivations are pre-syntactic (as traditionally assumed), take place in parallel to the lexical component as well as the syntactic component (as in Parallel Morphology, Borer 1988), or are post-syntactic (i.e. 'Late Insertion' of morpho-phonological material, as suggested by Distributed Morphology, Halle & Marantz 1993 and subsequent work).

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are complex entities whose internal makeup reflects structural properties of phrasal units; on the other hand, their meaning is conventionalized and cannot be predicted on the basis of semantic composition, and therefore, they must be stored in mental representations. Owing to their dual nature, idioms turn out to constitute a unique source of information regarding the structure of the lexicon, and its storage techniques. The present study provides experimental support for the existence of constraints diathesis imposes on idiom storage and consequently on idiom distribution, as explained directly.

The set of idioms in a language is fixed the way the set of vocabulary items is. Of course, the set can be expanded, but it is not productive in the way syntactic derivations are. Indeed, most studies of idioms rely on data concerning the idioms that actually exist in the language. A stronger kind of evidence, however, could be provided if humans can judge what would be an acceptable pattern of idiom distribution in a given language and what would not be. A major claim of our study is that the human linguistic competence predicts particular patterns of idiom distribution: Certain patterns can exist and other patterns cannot. The paper reports experimental work testing subjects' decisions with regard to the patterns of productivity of idioms. We teach adult speakers invented idioms in their native language and test them on these new idioms, aiming to shed light on their pattern of productivity. This seems to us important for assessing the properties of a finite entity like the set of idioms.

The structure of the paper is as follows: Section 2 defines the empirical array (Section 2.1), discusses the storage options for idioms (2.2), explains what the relevance is of data regarding the cross-diathesis distribution of idioms to the understanding of the structure of the lexicon (2.3), and delineates the current research question (2.4). Section 3 reports the experiment we conducted on native Hebrew speakers to test their perception of the distribution of idioms, and Section 4 discusses the findings, and evaluates various possible accounts.

2. IDIOMS: BACKGROUND

As was mentioned above, idioms exhibit an inherent duality. On the one hand, they have syntactic structure similar to phrases built by the syntactic component. On the other hand, they have conventionalized meaning that cannot be predicted by semantic composition. This means that they must be stored. Since they involve syntactic structure, the question as to how they are stored is especially intriguing. Before discussing the storage options available for idioms, we delineate our empirical domain.

2.1 *Defining the empirical array*

Along the lines suggested by Horvath & Siloni (2016), we focus on the core set of idioms defined as follows: fixed multilexemic expressions whose meaning is unpredictable and figurative. We should note here that it has often been argued that

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there is no difference between special meaning of words and special meaning of idioms (Jackendoff 1997, Marantz 1997, among others), we limit our investigation to multilexemic expressions because they involve special meanings of lexical items relative to one another. Therefore they raise questions that the storage of special meanings of single lexical items does not.[3] In our investigation, we focus on expressions with unpredictable (conventionalized) meaning. That is, the meaning of these fixed combinations of words cannot be calculated by semantic composition based on the meaning of their building blocks (see (1a–b) below). Finally, we look at expressions whose meaning is figurative, not literal (e.g. (1c–d) below). By 'figurative' we roughly mean that the (most often concrete) event or state described by the expression is representative of some other (more abstract) event or state. Thus, while (1a–b) are idioms in the above sense, as their meaning ('chat casually and without purpose' and 'get to the point', respectively) is both unpredictable and figurative, (1c–d) are fixed expressions (neither the verb nor the complement can be replaced), whose meaning is rather predictable and literal. [4]

(1) (a) shoot the breeze
(b) cut to the chase
(c) call something into question
(d) wait one's turn

Note that speakers are often unaware of the rationale behind the figuration in idioms (see (1a), for instance), but they do perceive that figuration is involved (as observed by Nunberg, Sag & Wasow 1994).

Horvath & Siloni (2016) distinguish between clausal idioms and phrasal idioms, as illustrated by (2a) vs. (2b) (and (1a–b) above) respectively, and explained directly.

(2) (a) can't see the forest for the trees
(b) spill the beans

[3] For the same reason we do not include expressions not involving at least two lexical categories. We thus set aside verb + preposition and verb + particle combinations.

[4] Additional characteristics typical of idioms have been discussed in the linguistic literature. Nunberg et al. (1994) mention the following tendencies shown by idioms: (i) INFLEXIBILITY, that is, a tendency to appear in a limited number of syntactic constructions, (ii) PROVERBIALITY: a tendency to describe situations of common social interest, (iii) AFFECT: a tendency to imply evaluation or affective stance towards what the idiom describes, and (iv) INFORMALITY: a tendency to belong to informal or colloquial registers. These are indeed often attested in idioms, but they are neither necessary nor sufficient to single out a core set. For instance, it is true that, as stated in (i), certain idioms do not allow syntactic manipulation, e.g. *kick the bucket* loses its idiomatic meaning in *the bucket was kicked*, but other idioms do allow it, e.g. *spill the beans* and *the beans were spilled*. Therefore, property (i) does not help us identify a core set of idioms. The same holds for (ii)–(iii). As far as property (iv) is concerned, we believe idioms do appear in literary and formal registers and are not typical of colloquial language only. Arguably, though, the process of their formation takes place mostly in informal and colloquial registers, but synchronically, they are part of higher registers as well.

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Clausal idioms include sentential functional structure as part of their fixed material (e.g. fixed tense, modals, negation, or complementizers), for instance, *can't* in (2a). In phrasal idioms, in contrast, the fixed combination of words, e.g. *spill the beans* in (2b), does not involve sentential functional material. Horvath & Siloni show that clausal idioms differ substantially from phrasal idioms. In this study we concentrate on phrasal idioms to ensure a coherent empirical array. Henceforth, when we use the term 'idiom' (with no further specification), it is a shorthand for phrasal idiom.

A basic question about idiom storage is whether they are stored as part of our linguistic knowledge or as part of our general, non-linguistic information, like historical or geographical facts. The choice between these two basic approaches seems to us quite uncontroversial. Knowledge of idioms involves form–meaning associations, which is linguistic in nature, and distinct from knowledge of facts of history and other language-independent knowledge. As such, it should a priori be stored with linguistic knowledge (see also Jackendoff 1997). Section 2.3 and the findings of the present research provide further support for the claim that idioms are stored with linguistic knowledge. The next question is how they are stored.

2.2 *Storage*

There are various options as to how idioms are stored. It has often been suggested that idioms are stored as independent entries, 'big units' of their own (e.g. the psycholinguistic studies by Bobrow & Bell 1973, Swinney & Cutler 1979, Gibbs 1980).[5] The idea that idioms are stored as subentries of other existing entries has also been entertained. Specifically, it has been suggested that they are stored by multiple storage, that is, as subentries of the lexical entries of their constituents, namely, the head and its dependents (Everaert 2010), or as subentries of the Encyclopedic entries of their constituents (Harley & Noyer 1999). Alternatively, it has been proposed that they are stored under the lexical entry of the head of the idiom (Baltin 1989, Horvath & Siloni 2009).[6] These storage hypotheses are summarized in (3).

[5] Psycholinguistic models mainly deal with the processing of idioms. Hybrid models are common, suggesting that the lexical entries composing the idioms are also involved in their processing, in addition to the processing of the idiomatic unit (the 'configuration' in Cacciari & Tabossi's (1988) terms or the 'superlemma' in Sprenger, Levelt & Kempen's (2006), for instance).

[6] Analyses of idioms claiming that the head of the idiom selects the other subparts of the idiom via a dependency between heads are common in earlier literature, and include a variety of otherwise different approaches, such as Bresnan 1982, Koopman & Sportiche 1991, Erbach 1992, and O'Grady 1998. These studies do not address the manner of storage, and are thus not explicit as to whether they propose that idioms are listed exclusively as subentries of the entry of their head. Yet, with regard to their emphasis on head-on-head dependency and the parallels between their accounts of idioms and other instances of 'selection'/'subcategorization' (in the terminology of Chomsky's (1965) *Aspects* model), it is reasonable to assume that these proposals implicitly adopt a head-based storage for idioms as well.

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(3) (a) *Independent storage*
Phrasal idioms are stored as independent entries, as 'big units'.

(b) *Subentry storage*
Phrasal idioms are stored as subentries of other independently listed entries:

(i) *Multiple storage*
Phrasal idioms are stored as subentries of the entries of their constituents.

(ii) *Head-based storage*
Phrasal idioms are stored as subentries of the entry of their head.

Options (3bi) and (3bii) above share the claim that idioms are stored under the entry of their head. They differ as to whether idioms are stored in addition under the entries of their other constituents. We put the latter question aside here, and investigate the hypothesis of storage under the head – a claim shared by (3bi) and (3bii).[7]

A priori, two options come to mind as to how idioms are listed (stored) under their head: Either they are stored under the root of the head or they are stored under the actual predicate heading the idiom. Which of these options is available depends on the nature of listed entries. For concreteness consider the Hebrew idiom in (4), which appears in both the transitive (4a) and the unaccusative diathesis (4b).[8,9]

(4) (a) hoci et X me-ha-kelim
took/got.out.TRANS OM X from-the-tools/equipment
'make someone lose his temper'

(b) yaca me-ha-kelim
went/got.out.UNACC from-the-tools/equipment
'lose his temper'

[7] On the head-based storage hypothesis (3bii), the question would be how the lexicon stores idioms with no recognizable internal structure (e.g. *trip the light fantastic*) as well as idioms (arguably) headed by a functional element (a light verb, a functional preposition, or a conjunction, as in *take a stab at*, *in a rut*, and *cut and dried*, respectively). These intriguing questions are beyond the scope of our paper and are not directly relevant for its purposes since the paper does not take a stand as to whether the head-based storage hypothesis or the multiple storage hypothesis is to be preferred.

[8] The citation form in Hebrew is third person singular past; glosses match this, but translations are not in the past to prevent misunderstandings. X stands for lexically non-fixed constituents. The abbreviations used in the paper are: ADJPASS = adjectival passive, INDEF.ART = indefinite article, NEG = negation, OM = object marker, TRANS = transitive, UNACC = unaccusative, VPASS = verbal passive.

[9] As mentioned in Section 2.1 above, the rationale behind the figuration in idioms is not always clear. A commentary regarding the idiom in (4) suggests that the idiom (borrowed from Yiddish) compares one losing his/her temper to a horse getting released from its harness (its equipment).

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If the lexical entry is an abstract verbal representation, unspecified for diathesis, such as the consonantal root y.c.a., then the idiom is stored under that root, and can therefore be realized in both diatheses. If both diatheses (i.e. both the transitive and the unaccusative verb) are entries in the lexicon, then the idiom can be stored under its corresponding verbal diathesis. The same holds for the transitive (5a) and adjectival passive (5b) pair:

(5) (a) gila et lib-o
revealed/exposed.TRANS OM heart-his
'tell his thoughts/share his feelings'

(b) gluy lev
exposed.ADJPASS heart
'honest, openhearted'

Regarding the sharing of idiomatic meaning (which is illustrated in (4) and (5)), it has sporadically been observed in the literature that the verbal (eventive) passive always shares its idioms with its active alternant, while the adjectival passive can give rise to idioms that are not available to the corresponding active (see Ruwet 1991, Dubinsky & Ron Simango 1996, and Marantz 1997). A first quantitative examination of these observations is reported in Horvath & Siloni (2009), who also discuss their relevance for idiom storage. This is briefly summarized in the next section.

2.3 *Horvath & Siloni (2009): Distribution across diatheses and storage*

Horvath & Siloni (2009) present a survey of Hebrew idioms designed to examine their distribution across diatheses in order to shed light on their storage and the nature of listed entries. For the purposes of the study, the notion 'unique idiom' was defined. An idiom is unique to a given diathesis α, if α does not share the idiom with its (existing) root-counterpart β, which α would most directly be related to by derivation. The formulations in (6) give the explicit definition of uniqueness for the various diatheses examined in the study: the verbal passive, the unaccusative, the adjectival passive, and the transitive.[10]

(6) *Idiom uniqueness*

(a) An idiom in the verbal passive/adjectival passive/unaccusative is unique if the corresponding (existing) transitive does not share the idiom.

(b) An idiom in the transitive is unique if the corresponding (existing) unaccusative does not share the idiom.

[10] Unaccusatives were diagnosed by tests detecting underlying objects in Hebrew, and the categorial status of the passive forms was determined by tests detecting adjectives in Hebrew (see Horvath & Siloni (2009), and footnote 13 below for details).

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The study examined whether phrasal idioms show cross-diathesis distribution or can give rise to unique idioms for the above-mentioned diatheses.

Horvath & Siloni argue that the distribution of unique idioms across diatheses is revealing with regard to idiom storage: If the idiom is stored as a subentry of the bare root, a priori, idiom sharing across diatheses is expected, that is, idiomatic meanings should be shared by the different diatheses associated with their root, except for gaps due to independent reasons. Robust, systematic occurrence of unique idioms is not expected. If, in contrast, the entry under which the idiom is stored is the actual predicate (diathesis) heading it, idiom sharing is not dictated. Rather, unique idioms should be possible, as long as their head itself is an entry, under which the idiom can be stored. That is, the occurrence of unique idioms is expected. Finally, if idioms are stored as independent entries (not as subentries), their storage is not dependent on the existence of any other entry. Consequently, idiom distribution (occurrence) should in this case be indifferent to the diathesis of the head: Unique idioms should be able to be headed by any diathesis (predicate) independently of whether or not the particular diathesis itself constitutes an entry. This is summarized below.

(7) (a) *Storage by root*
Phrasal idioms are stored as subentries of the root that represents their head in the lexicon.

Prediction
Idiom sharing across diatheses is expected; unique idioms are not expected, except sporadic cases due to independent reasons.

(b) *Storage by word*
Phrasal idioms are stored as subentries of the predicate (the particular diathesis) that heads them.

Prediction
Unique idioms are expected to occur (if their head is listed).

(c) *Independent storage*
Idioms are stored as independent (phrasal) entries.

Prediction
Idiom distribution (occurrence) should be indifferent to the diathesis of the head.

Horvath & Siloni (2009) sampled 60 predicates of each of the four diatheses from a verb dictionary, and checked whether or not they appear in unique idioms.[11] For each diathesis type, the number of predicates heading one or more unique idioms was counted. The results are presented in Table 1.

[11] This was done by searches of seven idiom dictionaries, followed by Google searches to check occurrences of relevant root-mate idioms, and consultation of eight native speakers of Hebrew regarding the results.

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Verbal passives	Unaccusatives	Transitives	Adjectival passives
0/60	21/60	23/60	13/60

Table 1
The distribution of unique phrasal idioms across diatheses.

Out of the 60 verbal passive predicates, none appeared in unique idioms. The difference between this result and the number of predicates participating in unique idioms in each of the other diatheses (unaccusatives, transitives, adjectival passives) was statistically significant. The difference between the number of unaccusatives, transitives, and adjectival passives that participated in unique idioms was insignificant.

The findings show that idioms are sensitive to the diathesis of their head. This sensitivity reinforces the claim that idioms are stored as linguistic knowledge, since otherwise there is no reason for them to be affected by a grammatical factor such as the diathesis of their head. Likewise, they show that phrasal idioms are not stored as independent entries of their own; if they were, any diathesis would be able to appear in unique idioms independently of whether or not it is listed. Moreover, the pervasive occurrence of unique idioms attests against storage by the root (7a), which erroneously predicts sharing of idioms across diatheses. The findings favor storage under the word, i.e. the diathesis heading the idiom (7b), which predicts considerable occurrence of unique idioms.

Let us now see how the specific pattern of idiom distribution across diatheses was accounted for by Horvath & Siloni (2009). First, it is suggested that transitive verbs, unaccusative verbs, and adjectival passives are entries listed in the lexicon. It then follows that an idiom may be uniquely listed under each of them, resulting in a unique idiom. The verbal passive, in contrast, is assumed not to be formed and listed in the lexicon. Hence, it cannot head unique idioms at all, because there is no lexical entry whose subentry the idiom could be. Indeed, in the linguistic literature it is a widely held view that the verbal passive is not formed in the lexical component but constitutes a post-lexical output (Baker, Johnson & Roberts 1989, Collins 2005, Horvath & Siloni 2008, Meltzer-Asscher 2012, among others).

As for the other diatheses, it is debated where they are formed, but there are studies that argue that transitives are lexical entries, which can serve as input for diathesis derivation (Reinhart 2002, Horvath & Siloni 2011, Siloni 2012), and that unaccusatives and adjectival passives are derived by a lexical operation (see Levin & Rappaport-Hovav 1995, Reinhart 2002, Chierchia 2004, Koontz-Garboden 2009, Horvath & Siloni 2011 for unaccusatives; and Levin & Rappaport-Hovav 1986, Horvath & Siloni 2008, Meltzer-Asscher 2011 for adjectival passives). Further discussion of this approach and of alternative accounts is provided in Section 4 below.

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Before turning to the present experiment, we reiterate that the existence of unique idioms for the transitive, unaccusative, and adjectival passive does not mean, of course, that all the phrasal idioms they head are unique; phrasal idioms can appear in two (or more) diatheses, as illustrated in (4)–(5) above.[12]

2.4 *Goal and research questions*

In light of the above results, we set out to reexamine the distribution (uniqueness vs. sharing) of idioms across diatheses – using a different technique – and reevaluate its theoretical consequences. The empirical question we addressed was whether the diathesis heading the idiom affects speakers' evaluation as to whether the corresponding transitive version of this idiom (i.e. the corresponding idiom headed by the transitive alternant) exists. We therefore limited ourselves to the following three nontransitive diatheses: verbal passives, adjectival passives and unaccusatives.

To check that, we designed an idiom-teaching experiment overriding the fact that idioms constitute a closed set per language by using invented idioms. Given that mastering new idioms means storing them the way other idioms are stored, the experiment opened a window on speakers' linguistic competence in the domain of idioms and their storage. Native speakers of Hebrew were taught invented Hebrew phrasal idioms, which were inspired by existing idioms in French. The idioms were headed by an unaccusative, a verbal passive, or an adjectival passive. After learning and assimilating the new idioms, the participants were presented with each idiom again and were asked to estimate how likely it seemed to them that the corresponding transitive version of the idiom would exist. In this way, we examined for each idiom to what extent it was perceived to be able to be unique because if an idiom is highly likely to have a transitive counterpart, then it is highly likely not to be unique.

Our assumption was that if there indeed is a systematic pattern of idiom distribution across diatheses, then it would manifest itself in speakers' evaluations of nonextant (i.e. invented) idioms as well. Our prediction was as follows: If Horvath & Siloni's (2009) findings indeed represent a linguistic pattern, then the results should show a significant difference between the verbal passive and the other diatheses with regard to their likelihood to head unique idioms, as reflected in speakers' evaluations.

[12] Also note that the fact that every verbal passive idiom has a transitive counterpart does not mean that every transitive idiom must have a verbal passive counterpart. It is in fact well-known that not every idiom in the transitive has a verbal passive counterpart; see Nunberg et al. (1994), Punske & Stone (2014) for discussion as to what plays a role in whether or not a verbal passive version can be derived.

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3. The experiment

3.1 *Method*

3.1.1 *Participants*

Participants were thirty-five native speakers of Hebrew, undergraduate students at Tel Aviv University and at the Tel Aviv-Yafo Academic College, with no knowledge of French. Their age ranged from twenty to thirty-five years (mean age 27.5 years).

3.1.2 *Materials and design*

The stimuli consisted of twelve phrasal idioms in Hebrew especially composed for the purpose of the experiment, inspired by existing idioms in French. Out of the twelve idioms, four were headed by a verbal passive, four – by an unaccusative, and the remaining four – by an adjectival passive.[13] All the predicates have a morphologically distinct transitive alternant, and all the idioms rely on a verbal/adjectival meaning that the corresponding transitive alternant shares. Six speakers concurred that all idioms had unpredictable meaning and involved figuration (see Section 2.1 above). The transitive versions of the idioms – presented independently of their alternants – were judged by six (other) speakers as possible idioms. Each idiom was read in various tenses, together with a concise explanation of its meaning, and a matching example of usage in context. Table 2 includes examples for each idiom type, with a translation of its meaning and an example of usage. For the full list including the transitive versions and the inspiring French idioms, see appendix.

Four forms were composed. Form I contained the list of idioms in pseudo-random order. Form II had the list of idioms (in the same pseudo-random order), each accompanied by its meaning and an example of usage. Form III included two tasks: (i) a completion task – idiom completion based on the beginning of the idiom – and (ii) a multi-choice comprehension question for each idiom in context, as illustrated in (9) and (10), respectively, for the idiom in (8). Subjects were asked to fill in this form for purposes of practice and to ensure the idioms were incorporated in their lexicon.

[13] Intransitives were classified as unaccusatives on the basis of the standard diagnostics for Hebrew: (i) licensing of strict verb–subject order (Shlonsky 1997, Meltzer-Asscher & Siloni 2013), (ii) licensing of possessive datives (Borer & Grodzinsky 1986, Meltzer-Asscher & Siloni 2013), and (iii) existence of a transitive alternant whose external role is a Cause role (indifferent with regard to the mental state of the argument) (Reinhart 2002). To ensure correct identification of the adjectival passive (versus the verbal passive), we used only adjectival passives of the CaCuC template, which is reserved exclusively for adjectival passives. Verbal passives were presented in the past (on a par with other diatheses, as this is the Hebrew citation form), and read out also in the future; both of these forms exclude an adjectival passive interpretation in Hebrew.

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Diathesis	Invented idiom	Meaning	Usage example
Unaccusative	*yaca* *im* went/got.out.UNACC with *snapir* *be-yad-o* fin in-hand-his	'end up with nothing'	The political candidate invested in a large, grandiose campaign, but eventually, because of sloppy administration, he **came out with a fin in his hand** - not even passing the threshold.
Verbal passive	*hunax* *al* *ha-gril* put.VPASS on the-grill	'be subjected to inconvenience/ annoyance'	When he called to ask what the medical committee has decided on his matter, he was told that the meeting was postponed for technical reasons, and thus he **was put on the grill** for another two months.
Adjectival passive	*matu'ax* *be-arba* stretched.ADJPASS with-four *sikot* pins	'elegantly/ meticulously dressed'	Usually his appearance was frumpy and disheveled. However, when he went to the job interview yesterday, he was all **stretched with four pins**.

[a]The unaccusatve *yaca* 'went/got.out' has a transitive alternant, *hoci* 'took/got.out'.

Table 2
Examples of stimuli for each condition.

(8) matu'ax be-arba sikot
stretched.ADJPASS with-four pins
'elegantly, meticulously dressed'

(9) matu'ax be-arba_____
stretched.ADJPASS with-four

(10) A: What should I wear for the date?
B: Wear something nice, which looks good on you, but on the other hand, don't come all **stretched with four pins**.
In the dialogue above, when B says 'stretched with four pins', she means by it that:
1. A should not come with her hair tied up with four pins.
2. A should not come too elegantly dressed.
3. A should not come stressed out.

Form IV was the target questionnaire: For each of the twelve idioms, subjects had to rank the extent to which they perceived the idiom as likely to exist in its transitive version, on an ordinal scale from 1 (least likely) to 5 (most likely). A translation of the target question corresponding to the idiom in (8) is given in (11). The transitive form was presented in the impersonal, third person plural (past, which is the citation form).

(11) You have learned the idiom 'stretched with four pins'. How likely, from 1 (least likely) to 5 (most likely), does it seem to you that the following idiom exists as well?
matxu oto be-arba sikot
stretched.PAST3PL him with-four pins
'dress him elegantly, meticulously'

3.1.3 *Procedure*

The experiment proceeded in two steps. In the first session, the experimenter handed out Form I (bare idiom list) to the participants. Next, she explained the idioms based on Form II, by reading each idiom aloud in various tenses, along with its meaning and an example of usage. Participants had only Form I in order to direct their attention to the experimenter's explanation. At the end of the session, the experimenter handed out Form II to the participants, who were asked to study the idioms again at their leisure before the second session. The second session took place three days later.

The experimenter reviewed the idioms, by reading them aloud again one-by-one alongside their meanings. Next, Form III (the testing form), which checked idiom assimilation, was handed out and participants were asked to fill in the completion tasks and answer the multi-choice questions. Immediately afterwards, participants received the target questionnaire (Form IV) and were asked to rate the likelihood that the transitive version of the idiom existed.

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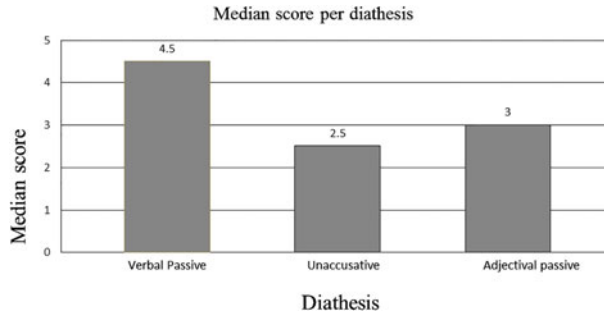


Figure 1
Median score for each diathesis.

3.2 *Results*

The statistical analyses were performed on the thirty-five subjects (no participant was excluded as they all filled in Form III correctly). A Wilcoxon signed-rank[14] test comparing participants' median ratings per diathesis (see the chart in Figure 1) revealed the following pattern. Subjects ranked idioms headed by the verbal passive (median = 4.5, interquartile range = 0.75, standard deviation = 0.9) as significantly more likely to share idiomatic meanings with their transitive counterparts than they ranked idioms headed by the unaccusative (median = 2.5, interquartile range = 1.12, standard deviation = 0.8; two-tailed: $W(26) = 324$, $p < 0.0001$) and the adjectival passive (median = 3, interquartile range = 0.75, standard deviation = 0.7; two-tailed: $W(25) = 296$, $p = 0.0001$). The likelihood of the unaccusative and the adjectival passive to share their idiomatic meanings with their transitive alternant was not significantly different (two-tailed: $W(26) = 142$, $p = 0.072$).

The median score of each idiom in the three conditions (diatheses) is shown in Figure 2. Idioms are referred to by their head and according to the order in which they appear in the appendix.

The patterns of median scores per participant observed for the verbal passive were compared to 5, the highest possible score. A Wilcoxon signed-rank test shows that the verbal passive median scores (4.5) were significantly lower than 5 (two-tailed $W(17) = 153$, $p = 0.0003$).

[14] Since ordinal scales may be incompatible with the basic assumptions required for the *t*-test, we performed the Wilcoxon signed-rank test.

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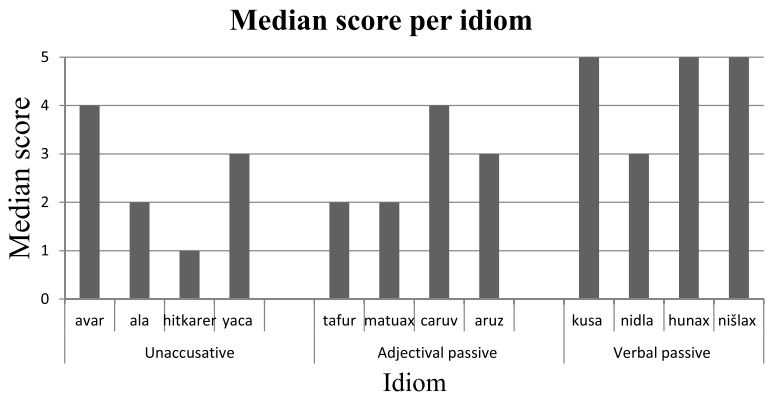


Figure 2
Median score for each idiom.

4. Discussion

4.1 *No unique verbal passive idioms*

The experiment reveals that there is a significant difference between speakers' perception of idioms headed by a verbal passive versus their perception of idioms headed by either an unaccusative or an adjectival passive. Speakers perceive idioms headed by the verbal passive as significantly more likely to share idiomatic meanings with their transitive alternants compared to idioms headed by either the unaccusative or the adjectival passive. No significant difference was found between idioms headed by the unaccusative versus those headed by the adjectival passive. Both scored at the mid-range of the scale.

For these diatheses, there does not seem to be any criterion SYSTEMATICALLY determining when an idiomatic meaning (potentially plausible also for the transitive) is unique to the diathesis and when it is available in the transitive, too. For example, there is no obvious reason why (12a) is a unique idiom in Hebrew while (4b) above, repeated as (12b), exists also in the transitive diathesis (see (4a)). (Of course, there may be idiosyncratic factors excluding a potential alternant in certain cases.)[15]

[15] An anonymous *JL* referee raises the possibility that the meaning of the unaccusative *yaca* (literally: 'went/got out') in (12a) is based on its meaning 'turned out to be', and not on its meaning 'went/got out' (which may explain why it has no transitive alternant, as there exists no transitive alternant with that meaning). We think that (12a) is based on the meaning 'went/got out (of a situation/event)' of *yaca*. More generally, there are many other instances where there is no obvious reason why a certain idiom, but not another, has an alternant: (14b) in Section 4.2 is another unique idiom with the unaccusative *yaca*, which is clearly based on the meaning 'went/got out' of *yaca*.

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(12) (a) yaca be-šen va-ayin
went/got.out.UNACC with-tooth and-eye'
'come out of a situation or event seriously harmed'

(b) yaca me-ha-kelim
went/got.out.UNACC from-the-tools/equipment
'lose his temper'

If so, then the participants had no guiding criterion to decide whether or not the unaccusative and adjectival passive idioms share their idiomatic meaning with the corresponding transitive. This individual uncertainty as to whether or not the transitive idiom is possible translated into scores at the mid-range of the scale (3 for the adjectival passive and 2.5 for the unaccusative); no large individual variance is observed, as shown by the interquartile ranges, and standard deviation values.

As mentioned, speakers perceive idioms headed by the verbal passive as significantly more likely to share idiomatic meanings with their transitive alternants compared to idioms headed by the unaccusative or the adjectival passive. There must be a factor that has driven responses in the case of the verbal passive in this direction (as will be discussed in Section 4.2). However, the median scores per participant observed for the verbal passive (4.5) were found to be significantly lower than the highest possible score (5). A second glance at the chart in Figure 2 reveals that the median score of three of the idioms in the verbal passive condition was 5. The median score 4.5 was driven by the median score of one single idiom, the one in (13) (no such distribution is observed for the other conditions).

(13) nidla mi-mayim axurim
extracted/lifted.VPASS from-water turbid
'be obtained as profit from a problematic situation'

Examining this invented idiom again, we realized that the verb heading it was clearly much less frequent than the verbs heading the other idioms, and more importantly, that certain speakers may not even be acquainted with the verb. This was verified on the basis of Frost & Plaut's (2005) word-frequency database for printed Hebrew. The fact that the verb is rare and the form may not be known to speakers may have affected their evaluations. If the idiom is excluded, the median score of the verbal passive condition is 5. That is, subjects ranked idioms headed by the verbal passive as necessarily having a transitive alternant.

4.2 *Support for Horvath & Siloni's (2009) approach*

The results of the experiment thus reproduce the pattern of distribution of phrasal idioms reported in Horvath & Siloni's (2009) idiom survey. More specifically, subjects' evaluations exhibited a significant difference between the verbal passive and the other diatheses with regard to their likelihood to head unique idioms.

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The findings provide support for the claim that idioms are stored in the lexicon, where linguistic knowledge is stored.[16] If idioms were stored as part of general knowledge with other memorized data, speakers' perception of their distribution should not be sensitive to a grammatical feature such as the diathesis of the predicate. Since speakers do show such sensitivity, it reinforces the claim that idioms are stored in the lexicon together with other form–meaning associations.

The results also reinforce the claim that phrasal idioms are stored as subentries of their lexical head, and not as independent entries of their own. If phrasal idioms were not stored as subentries but as independent units, there would be no reason for speakers to treat them differently depending on the diathesis of their head. Further, the root-storage option turns out to be implausible, because if phrasal idioms were stored under the root of their head, all other things being equal, we would expect the three diatheses to be perceived by speakers as equally likely to share idiomatic meanings with their transitive alternants; recall that the transitive alternants of the experimental items had been judged as possible idioms. Rather, the results support the claim that idioms must be stored as subentries of the predicate (actual diathesis) heading them – a word, not a root.[17] In the rest of this section, we first analyze the results under Horvath & Siloni's (2009) approach, and then discuss alternative analyses.

On Horvath & Siloni's approach, the results would be accounted for as follows. The speakers perceived idioms headed by the verbal passive as having a transitive alternant because verbal passives, being formed post-lexically (as has been claimed by Baker et al. 1989, Collins 2005, Horvath & Siloni 2008, Meltzer-Asscher 2012 on independent grounds), are not entries in the lexicon.[18]

[16] One may nonetheless suggest that the learned idioms were not stored in the participants' lexicon, as would be assumed under circumstances of natural learning, but rather are placed in some short-term storage, given that the exposure and learning take place in an experimental setting. A priori, this could be a possible alternative hypothesis. Observe, though, that this short-term storage would by assumption be outside the Grammar's storage component. Thus adopting this hypothesis would leave us with the question of why the results of the experiment turn out to pattern the way they do and specifically why they manifest sensitivity to diathesis. The short-term storage hypothesis in itself does not offer any account of the pattern of behavior revealed in the experiment. Moreover, the fact that the findings reproduced the pattern revealed by Horvath & Siloni's (2009) survey of (existing) idioms would then be a coincidence.

[17] This conclusion is compatible with proposals of head-based storage as well as multiple storage. Further, it is also compatible with assuming that also roots have some presence in the lexicon; so our storage proposal does not conflict with claims that roots are recoverable and play a role in certain linguistic tasks.

[18] It should be noted here that Hebrew verbal passives tend to have a relatively formal status and their use is less frequent in colloquial varieties (Berman 2008). Likewise, passive forms vary in their degree of acceptability. An anonymous *JL* referee wonders whether the particular stylistic status and variable frequency of use associated with verbal passives in Hebrew is consistent with their being derived post-lexically. We think there is no inconsistency involved here. The stylistic value is not a lexical matter; it is often associated with whole syntactic constructions – such as for instance the output of certain inversion operations in English – rather than with particular lexical items. Thus, this property of the usage of verbal passives in Hebrew is compatible with the passivization operation applying post-lexically (see also Everaert's (2010) claim that frequency and register are post-syntactic rather than lexical matters).

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The unaccusative and the adjectival passive were perceived as significantly more likely than the verbal passive to head unique idioms. This is accounted for by the claim that the former diatheses are listed in the lexicon, and thus can have idioms as their subentries. No significant difference was found between speakers' perception of unaccusative and adjectival passive idioms regarding uniqueness. If both diatheses are lexical entries, a priori there should not be a difference between them regarding the tendency to occur in unique idioms.

It has been independently suggested that unaccusatives as well as adjectival passives are derived in the lexicon (Levin & Rappaport-Hovav 1995, Reinhart 2002, Chierchia 2004, Koontz-Garboden 2009, Horvath & Siloni 2011 for unaccusatives; and Wasow 1977, Levin & Rappaport-Hovav 1986, Horvath & Siloni 2008, Meltzer-Asscher 2011 for adjectival passives). Our findings that unaccusatives and adjectival passives are lexical entries provide support for these studies. If a particular derived diathesis is shown to be listed in the lexicon, its derivation must be lexical, assuming that the lexicon is the component systematically providing input for the syntax, but not vice versa, that is, assuming that productive syntactic derivations do not regularly feed the lexical component.[19] If these diatheses are indeed derived by lexical operations, it means that the lexicon must be an active component of Grammar (as argued by Reinhart 2002, Siloni 2002, among others), and not a mere storehouse of atomic items, in contrast with the view of syntacticocentric approaches (Marantz 1997, Harley & Noyer 1999, Borer 2005, Pylkkänen 2008, Ramchand 2008, among many others).

Note that it also follows that unaccusatives and adjectival passives are not lexically derived anew upon each retrieval (use); they must be listed as lexical entries or else they could not have their own subentries. That is, the organization of the lexical component should, of course, capture the relation between derived diatheses and their input, but the derivation itself does not apply with each use of the diathesis by the speaker, as the diathesis (the derived item) itself is listed.[20,21]

Horvath & Siloni's (2009) approach indeed accounts for the findings. But other approaches seem a priori plausible too. We examine them directly.

[19] For discussion of our findings under a Distributed Morphology-type model, where syntactic derivations systematically feed certain lexical lists, see Section 4.3 below.

[20] The operations responsible for lexical derivations are undoubtedly available (despite the fact that they are not activated for each use) not only at the acquisition stage for formation of new lexical items, but also beyond this stage, as attested by the fact that they can apply to neologisms, loanwords and invented items.

[21] Although there are links between lexical entries established by lexical derivational operations, this does not mean that linked entries should automatically share their idioms. The operations establish links between derived predicates (diatheses) and their input; they do not operate on idioms and cannot derive idiom alternants. Being stored as a subentry of a listed predicate, a given idiom can appear listed under more than one diathesis of a set of linked ones, but need not do so.

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4.3 *Alternative approaches*

A potential alternative explanation could be that the results are reflections of the productivity found at the diathesis level, that is, that they reflect inheritance from the verb level to the idiom level. Specifically, since there are no verbal passives that lack a corresponding transitive alternant, there are also no verbal passive idioms that lack a transitive counterpart. And the same way that there are sporadic gaps in the transitive–unaccusative alternation (certain unaccusatives idiosyncratically lack a transitive alternant in a given language, and vice versa), unaccusative and transitive idioms can similarly lack a corresponding transitive/unaccusative counterpart. Indeed, in the case of the verbal passive, an inheritance approach from the verb to the idiom level can be envisioned. However, as far as the transitive–unaccusative alternation is concerned, this approach is implausible. While uniqueness of unaccusative and transitive idioms is a pervasive phenomenon, as shown in Table 1 (and exemplified in (12a) above and (14) below), unaccusative verbs systematically have a transitive alternant (with a Cause external role) and vice versa, except isolated sporadic gaps (Haspelmath 1993, Reinhart 2002). Therefore, idiom uniqueness regarding unaccusatives and transitives does not reflect a parallel phenomenon at the verb level.

(14) (a) he'evir et X al da'at-o
passed.TRANS OM X on opinion-his
'drive X mad'

(no parallel idiom with the unaccusative *avar*)

(b) yaca lo mi-kol-ha-xorim
went/got.out.UNACC to.him from-all-the-holes
'is fed up with'

(no parallel idiom in the transitive *hoci*)

Thus, the 'inheritance' approach cannot account for the entire set of findings (for more evidence against this approach, see Horvath & Siloni 2017). An anonymous *JL* referee proposes another possible approach, one that relies on a difference in valence between verbal passives, which have two arguments available (including the implicit external argument), versus unaccusatives and adjectival passives, which are one-place predicates. The contrasting findings of the experiment may then follow, so the argument goes, from the fact that when speakers are asked to estimate the likelihood of the active transitive version based on a verbal passive idiom, they are dealing with predicates of the same valence (both two-place), but when they have to relate an unaccusative or an adjectival passive idiom to a potential transitive version, speakers need to convert a one-place predicate into a two-place, transitive version of the same idiom. The addition of an argument necessary in the unaccusative and adjectival passive cases but not in the verbal passive may add some extra difficulty to the task, and thus it might be claimed to be the source of the difference in the results found between these diatheses.

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However, such an approach does not seem to explain the total lack of verbal passive idioms reported by Horvath & Siloni's (2009) survey of existing idioms. Suppose it is easier to 'transitivize' a verbal passive idiom – this still would not explain why the latter always has a transitive alternant.

Marantz (1997), advancing the Distributed Morphology framework, which has a single structure-building engine, the syntax, suggests that the syntactic head introducing the external argument (Agent) is the boundary delimiting the domain of special (idiomatic) meanings. He thus argues that the fact that the verbal passive involves an external argument (explicit or implicit) is the reason why it cannot be associated with special meanings (that is, cannot head unique idioms). The unaccusative, in contrast, lacks an external argument and can head unique idioms. It is, however, not obvious how this line of reasoning can account for the fact that transitive verbs can head unique idioms, although they involve an external argument. Further, it has been shown in recent literature that a subset of the set of adjectival passives does involve an external argument (Anagnostopoulou 2003, Meltzer-Asscher 2011, McIntyre 2013, Gehrke & Marco 2014). Among the adjectival passives used in the present study, one finds adjectival passives involving an Agent (*aruz* 'packed' and *tafur* 'sewed'), contra the predictions made by an account along these lines. Adjectival passives involving an Agent are also found in Horvath & Siloni's (2009) survey of unique idioms discussed in Section 2.3 above.

The syntactic boundary delimiting the domain for idiosyncratic meanings could then be argued to be higher than the head responsible for the Agent, say, the head responsible for the formation of verbal passives. The verbal passive would not give rise to unique idioms because it would be beyond the syntactic domain of special meanings. Such a proposal would be at odds with Arad's (2005) arguments that the domain of idiosyncrasy is the local domain of the root, the domain delimited by the first category-assigning head above the root; the domain of any higher head is argued by Arad to have no access to meanings associated with the root. If so, then a syntactic account extending the locality domain of the root to cover the split behavior of idioms (in the verbal passive versus the other diatheses) seems unfeasible.[22]

As is clear from the above discussion, we believe that the above alternative proposals are less adequate than the one proposed by Horvath & Siloni (2009) to account for our findings.

[22] Under some recent approaches dissociating Voice from *v* (e.g. Harley 2013), the passive Voice head merely captures the non-canonical realization of the external argument and is argued not to involve any of the particular semantics of the various 'flavors' of *v* (assumed by syntacticocentric approaches). Given such a proposal, one might perhaps think of attributing the absence of unique verbal passive idioms to the Voice head's lack of semantic substance. But the postulation of such a Voice head is not worked out in sufficient detail to permit evaluation of its merits, and its potential ability to account for the idiom data.

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5. Conclusion

The paper reports an experimental study allowing a glimpse into speakers' linguistic competence in the domain of idioms and their storage. It provides experimental support for the pattern of cross-diathesis distribution of phrasal idioms reported in previous literature (in particular, Horvath & Siloni 2009). Speakers evaluated the likelihood of the verbal passive to share idiomatic meanings with its transitive counterpart as significantly higher than that of both the adjectival passive and the unaccusative. The results contribute to our understanding of the nature of the lexicon, the derivations of several diatheses, and the storage of phrasal idioms. First, they suggest that the lexicon includes words and is an active component of Grammar, where valence-changing operations can apply. Specifically, they suggest that adjectival passives and unaccusatives are listed in the lexicon, and are derived by lexical operations, contra syntacticocentric approaches. The verbal passive is distinct: The findings reinforce the view that it is a post-lexical output, not listed in the lexical component, in concert with common approaches. As for the storage of phrasal idioms, given that their distribution has turned out to be sensitive to a grammatical property, i.e. the diathesis of their head, they cannot be stored in an extra-grammatical component, where such grammatical features are irrelevant for storage of information. The fact that the diathesis of the head crucially affects speakers' perception of the distribution of phrasal idioms suggests that phrasal idioms are stored as subentries of their actual head.

APPENDIX

The list of invented idioms

The full list of invented idioms in Hebrew is given below in three tables according to the diathesis of the verb heading the idiom. The tables include the English translations of the usage examples and the French idioms that inspired the Hebrew ones.[23,24]

[23] As noted in footnote 8 above, the citation form in Hebrew is third person singular past; the gloss matches this, but translations are not in the past (to prevent misunderstandings). X stands for lexically non-fixed constituents. French verbal idioms are in the infinitive citation form.

[24] The predicates involved in the experiment are frequent (except *nidla*, which is discussed in Section 4.1), and therefore tend to have more than one meaning. We do not think this may have affected the results because, as discussed in Section 3.1.2, all the idioms used in the study rely on a verbal/adjectival meaning that the corresponding transitive alternant shares, and the transitive versions of the idioms were judged as possible idioms.

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Inspiring French idiom	Invented idiom & transitive alternant	Usage example
passer sous les fourches caudines pass under the Caudine Forks 'go through hard and humiliating conditions' (*Fourches caudines* is a name of a mountain pass in southern Italy.)	*avar taxat kilšonot xadim* passed.UNACC under hayforks sharp 'go through hard and humiliating conditions' *he'evir X taxat kilšonot xadim* passed.TRANS X under hayforks sharp 'impose hard and humiliating conditions on X'	Finally, not only the prosecutor won, the court also decided that the defendant must apologize publicly and compensate the claimant by mint of money. In short, the defendant **passed under sharp hayforks**.
monter sur ses grands chevaux mount on his big horses 'set for a (more) serious confrontation'	*ala al sus-av ha-gdolim* mounted.UNACC on horses-his the-big 'set for a (more) serious confrontation' *he'ela X al sus-av ha-gdolim* mounted.TRANS X on horses-his the-big 'involve X in a (more) serious confrontation'	Up to now, I treated you gently, but if the phenomenon repeats itself again, **I mount on my big horses**.
Ne pas avoir froid aux yeux NEG NEG have cold in.the eyes 'get courageous, not frightened'	*hitkarer ba-eynaim* got.cold.UNACC in.the-eyes 'get frightened' *kerer X ba-eynaim* made.cold.TRANS X in.the-eye 'frighten X'	He arrived at the house of his youth love, but at the last moment **got cold in the eyes** and turned back.
finir en queue de poisson end.up in tail of fish 'end up with nothing'	*yaca im snapir be-yad-o* went/got.out.UNACC with fin in-hand-his 'end up with nothing' *hoci X im snapir be-yad-o* took/got.out.TRANS X with fin in-hand-his 'make X end up with nothing'	The candidate invested in a large, grandiose campaign, but eventually, due to sloppy administration, he **got out with a fin in his hand -** not even passing the threshold.

Table A1
Unaccusatives.

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Inspiring French idiom	Invented idiom & transitive alternant	Usage example
cousu de fil blanc sewed by thread white 'very clear, visible'	*tafur be-xut* sewed.ADJPASS with-thread *lavan* white 'very clear, visible' *tafar X* sewed.TRANS X *be-xut lavan* with-thread white 'clarify X very well'	From his speech everybody has understood who he was going to support. It was **sewed with white thread**.
tiré à quatre épingles stretched by four pins 'elegantly/meticulously dressed'	*matu'ax be-arba* stretched.ADJPASS with-four *sikot* pins 'elegantly/meticulously dressed' *matax X be-arba* stretched.TRANS X with-four *sikot* pins 'dress X elegantly/meticulously'	Usually his appearance was frumpy and disheveled. However, when he went to the job interview yesterday, he was all **stretched with four pins**.
marqué au fer rouge marked by.the iron red 'marked as problematic, blemished'	*caruv be-barzel* scorched.ADJPASS with-iron *adom* red 'marked as problematic, blemished' *carav X be-barzel* scorched.TRANS X with-iron *adom* red 'mark X as problematic, blemished'	Since that affair, he is **scorched with red iron**, and the chance of finding him a match is tiny.
être dans de beaux draps be in INDEF.ART nice sheets 'be in a complicated situation'	*aruz be-maca'im* packed.ADJPASS in-bedding *na'im* nice 'be in a complicated situation' *araz X be-maca'im* packed.TRANS X in-bedding *na'im* nice 'entangle X in a complicated situation'	When a leader is having an extramarital affair, he should know he may find himself **packed with nice bedding** after a while.

Table A2
Adjectival passives.

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Inspiring French idiom	Invented idiom & transitive alternant	Usage example
rouler dans la farine roll in the flour 'deceive'	*kusa be-kemax* covered.VPASS with-flour 'be deceived' *kisa X be-kemax* covered.TRANS X with-flour 'deceive X'	When the Agent offered this deal, Danny did not suspect anything. Only when he saw the debits in his credit card, he realized he had been **covered with flour**'
pêcher en eau trouble fish in water turbid 'profit from a problematic situation'	*nidla* extracted/lifted.VPASS *mi-mayim axurim* from-water turbid 'be obtained as profit from a problematic situation' *dala X* extracted/lifted.TRANS X *mi-mayim axurim* from-water turbid 'obtain X as profit from a problematic situation'	All his political success **was extracted from turbid water**, starting with his appointment to minister, exploiting the state of war**.**
mettre sur le gril put on the grill 'put in an inconvenient, annoying situation'	*hunax al ha-gril* put.VPASS on the-grill 'be subjected to inconvenience/annoyance' *heni'ax X al ha-gril* put.TRANS X on the-grill 'subject X to inconvenience/annoyance'	When he called to ask what the medical committee has decided on his matter, he was told the meeting was postponed for technical reasons, and thus he **was put on the grill** for another two months.
enyoyer promener send to.take.a.walk 'send away/refuse rudely'	*nišlax le-tiyul* sent.VPASS to-trip 'rejected/refused rudely' *šalax X le-tiyul* sent.TRANS X to-trip 'be rejected/refused rudely'	He asked the health ministry to add positions a few times, but over and over again he **was sent on a trip**

Table A3
Verbal passives.

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https://doi.org/10.1017/S0022226717000251 Published online by Cambridge University Press