## Tel Aviv University The Lester & Sally Entin Faculty of Humanities Department of Linguistics

# ON THE FORMATION OF IDIOMS: THE CASE OF GOAL DITRANSITIVES

Thesis submitted in partial fulfillment of the requirements for the M.A. degree in Linguistics

by

Yael Mishani

Prepared under the guidance of

Prof. Tal Siloni

## In Memory of Batya and Ezri Uval

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#### Abstract

The current research focuses on Hebrew Verb Phrase idioms headed by ditransitive verbs, taking Theme and Goal as their internal arguments. It aims at shedding light on the structure of ditransitive idioms, the constraints on their formation and the properties they share with their literal (non-idiomatic) counterparts.

Undertaking a first systematic and comprehensive corpus-study of ditransitive idioms, by scanning four idiom dictionaries in Hebrew, I compiled a total of 55 ditransitive idioms, and examined each one of them in light of the following aspects: (i) the word order in which the idiom can or cannot appear; (ii) the distribution of different ditransitive verbs among the distinct types of idioms; (iii) the distribution of "open" slots (that are lexically filled by non-idiomatic material) in such idioms.

The results of this research lead to the following conclusions: (i) the formation and structure of ditransitive idioms are governed by the semantics of their verbal head and the thematic content of its complements (in particular, the Goal argument); (ii) ditransitive idioms show restrictions regarding the word order in which they appear and the type of verb heading them; (iii) Nunberg, Sag and Wasow's (1994) principles, according to which an idiom's fixed part tends **not** to include animate arguments, receive support in the current research; (iv) a tendency of the "open" slots to refer to humans (Tal Siloni, p.c.) turns out to be at work as well in constraining the structure of idioms. The observations in (iii) and (iv) allow explaining the asymmetries attested in ditransitive idioms in both Hebrew and English.

The analysis suggested in this thesis provides a simple account of the behavior of ditransitive idioms, relying on representations and mechanisms commonly assumed by the linguistic theory. Furthermore, it uncovers and reinforces generalizations regarding the fixed and "open" material in idioms. Finally, the thesis offers strong support to the assumption that Hebrew has a genuine dative alternation, parallel to the uncontroversial one in English.

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#### 1. Introduction

The behavior of idioms, especially in English, has been the focus of much linguistic research in the past few decades. In the generative linguistic literature many studies have utilized idiom data to support various syntactic analyses, such as transformational operations in different constructions, thematic hierarchy, compositional asymmetry between subjects and objects, and more (see e.g. Chomsky 1980, Marantz 1984, Larson 1988, Kiparsky 1987). Much less linguistic research, however, has focused purely on the structure of idioms (but see e.g. O'Grady 1998, Bruening 2010). The current research aims at shedding light on this still quite unexplored area of natural language, through an examination of a subset of Verb Phrase idioms in Hebrew.

In general, idioms are defined as fixed expressions that have figurative meanings that cannot (to different degrees) be predicted from the meanings of their parts. This immediately raises the following question with regard to their structure: must idioms form constituents, i.e. structural and semantic units? Previous studies that have utilized idiom data to support different syntactic analyses, presumed that in order to receive idiomatic interpretation, an idiom's fixed part must form a constituent (Chomsky 1980, Larson 1988, Harley 2002, among others). However, this assumption has faced fundamental problems due to the existence of (i) idioms which can be "interrupted", e.g. by manipulation of word order (Nunberg, Sag & Wasow 1994), such as idioms appearing in passive constructions that are derived by syntactic movement of the subject, as in (1b), and (ii) non-constituents idioms containing an "open" slot (marked henceforth by *x*), which is obligatory but is lexically filled by non-idiomatic material (Bresnan 1982, Napoli 1992), as in (2a-b).

- (1) a. The police kept tabs on the main suspect. ('observed carefully')
  - b. **Tabs** should be **kept on** main suspects.
- (2) a. pull x's leg ('tease x, play a joke on x')
  - b. fill x's shoes ('assume x's position or duties')

<sup>&</sup>lt;sup>1</sup> As observed by Nunberg, Sag & Wasow (1994), idioms can also contain internal modifiers, as in (i). I won't discuss internal modification of idioms in this work.

<sup>(</sup>i) pull yet more strings ('use contacts to help you get what you want')

The existence of idioms in passive constructions immediately dismisses the idea that idioms must form constituents at Surface Structure. Nonetheless, the assumption that idioms must form constituents at some underlying level of representation (Deep Structure or Logical Form) may still be correct, assuming that subjects of passive constructions (*tabs* in (1b)) are underlying objects. However, the existence of non-constituents idioms, such as those in (2a-b), poses a real problem, since there is no reason to assume that their fixed parts form constituents at any level of representation.

Given that idioms allow word order manipulations (as in (1b)) and do not always form constituents but rather allow free ("open") slots (2a-b), the following questions regarding their formation and structure emerge:

- (i) Is the distribution of the fixed versus free ("open") slots in idioms random, and if not, what governs it? Do some syntactic positions in idioms tend to be left "open" more than others?
- (ii) Can any kind of non-idiomatic material occupy the "open" slots in idioms, and if not, what constraints it?
- (iii) How free are word order manipulations in idioms?

To face these challenges I have chosen to focus on the behavior of Verb Phrase idioms in Hebrew headed by **Goal ditransitives**, i.e. verbs taking three arguments: a subject (an external argument) and two complements (internal arguments) – Theme and Goal (e.g. *natan* 'gave', *daxak* 'pushed', *šalax* 'sent'). Since Goal ditransitives take two internal arguments, idioms headed by them provide fertile ground for examining the following questions:

- (i) Are there any constraints on the distribution of "open" versus fixed slots in ditransitive idioms? Are they equal regarding Theme and Goal positions?
- (ii) Are there any constraints on the non-idiomatic material that can occupy the "open" slots in ditransitive idioms? Are they equal regarding Theme and Goal positions?

<sup>&</sup>lt;sup>2</sup> I use the term *Goal* for Goal arguments of ditransitive verbs, including Goal-Recipients and Goal-Locations. The distinction between these two will become relevant in due course.

In addition, since across languages Goal ditransitives typically allow two different argument realization schemes, in one the Goal precedes the Theme and in the other it follows the Theme, a third question arises:

(iii) Do ditransitive idioms manifest both Theme-Goal and Goal-Theme order (compared to the order in which they appear in non-idiomatic phrases)? If not, what can be the constraint(s) governing it?

As is well known, many English Goal ditransitives (e.g. *give*, *throw*, *send*) show the dative alternation: the Goal argument (*Mary* in (3a-b)) can be realized either as the first object (Noun Phrase) in the Double Object construction (3a) or as the second object (Prepositional Phrase) in the Prepositional Dative construction (3b).

(3) a. *Dan gave Mary a book.* (Double Object construction)b. *Dan gave a book to Mary.* (Prepositional Dative construction)

The question, therefore, is whether ditransitive idioms exhibit the dative alternation the same way their literal counterparts do. Although there is no extensive research on ditransitive idioms, it has been observed for English, that there seems to be an asymmetry between Double Object idioms and Prepositional Dative ones. As noted by Hudson (1992), there are two types of ditransitive idioms in the Prepositional Dative construction: one consists of the verb and the Theme, leaving the Goal "open" (4a) and the other consists of the verb and the Goal, leaving the Theme "open" (4b). In the Double Object construction, on the other hand, only the first pattern exists ((5a) versus (5b)).

- (4) a. read the riot act to x ('give x a severe scolding')b. throw x to the wolves ('sacrifice x to save the rest')
- (5) a. give x the creeps ('give x a feeling of uneasiness or mild fright') b \*throw the wolves x

In addition, while most idioms with an "open" Goal position (such as the one in (4a)) can alternate into the Double Object variant (*read x the riot act*), idioms of type (4b), in which the Goal is fixed (and the Theme is "open") obviously cannot (5b) (Green

1974, Machonis 1985, Nunberg, Sag & Wasow 1994, O'Grady 1998, Harley 2002, Rappaport-Hovav & Levin 2008, Bruening 2010, among others).

Undertaking a first systematic and comprehensive corpus-study of Hebrew ditransitive idioms, I compiled a corpus of 55 idioms. The examination of these idioms uncovers that similar patterns are attested in Hebrew. This strongly suggests that the behavior of ditransitive idioms is not random, but rather follows from general constraints on the formation of idioms.

Following Landau (1994), I maintain that Hebrew exhibits the dative alternation and has parallel constructions to the Double Object construction (Goal-Theme order) and the Prepositional Dative one (Theme-Goal order) in English (independent motivation for this is presented in subsection 5.1). The findings of the corpus-research I conducted in Hebrew reveal that when the Goal argument is part of the idiom (i.e. fixed), it must follow the Theme, and therefore, the idiom must appear in one fixed word order (Theme-Goal). On the other hand, an idiom with an "open" Goal position seems to be indifferent to its complement word order, since it can be found in both Goal-Theme and Theme-Goal orders, while retaining its idiomatic interpretation.

Moreover, the results reveal a particular pattern of distribution of Goal ditransitives across Verb Phrase idioms in Hebrew. Certain Goal ditransitives appear only in idioms with fixed Goals, others appear in idioms with "open" Goals and a third group of Goal ditransitives is found in all types of idioms. A similar state of affaires is reported by Rappaport-Hovav & Levin (2008) (henceforth, RH&L 2008) with regard to English ditransitive idioms.

I will show that these findings straightforwardly follow from two generalizations (to be discussed in the course of the work). On the one hand, as Nunberg, Sag & Wasow (1994) observe, an idiom's fixed part tends **not** to include animate arguments. This observation receives strong support in the present work. On the other hand, as noticed by Tal Siloni (p.c.), the free ("open") slots in idioms tend to refer to humans. I will account for these distributional facts, relying on the "Verb-Sensitive" approach to Goal ditransitives, advanced by RH&L (2008). Their approach, thus, also receives support by the Hebrew data.

In addition, the overwhelming fact that ditransitive idioms in Hebrew show the same asymmetry attested in English, with respect to the complement order in which they appear, provides robust support to Landau's (1994) view that Hebrew has a genuine dative alternation and exhibits parallel constructions to the Double Object construction and the Prepositional Dative one in English.

The thesis is structured as follows. Section 2 introduces the definition of the notion *idiom*. Section 3 clarifies the research method I used to collect the idioms constituting my empirical array and test their behavior. Section 4 presents the results of the corpus searches I conducted. In section 5 I provide the account for the word order findings, and in section 6 – the account for the distribution of Goal ditransitives among different types of idioms. Section 7 introduces some apparent counter-examples to the present account and discusses them. Finally, section 8 examines alternative accounts to the puzzles raised in this research and shows that all are (to different extents) inadequate.

#### 2. Defining an Idiom

Before addressing any questions regarding the theory of idioms, and in particular, those mentioned in the introduction, we must first define what the notion *idiom* exactly means. In general, the term *idiom* refers to a linguistic expression, which contains more than one word and whose overall meaning is not the sum of the meanings of its parts. For example, the meaning of the idiom *kick the bucket* ('die') has nothing (or at most, very little) to do with either *buckets* or with the action of *kicking*. In this sense, as Jackendoff (1997) pointes out, there is no sharp distinction between the special meanings of words and the special meanings of idiomatic phrases. Idioms, just like words, are

<sup>&</sup>lt;sup>3</sup> When exploring the etymology of idioms, one can find explanations for the relation between the meanings of the words forming a specific idiom and its overall meaning. The *dictionary of idioms and their origins* (Flavell 2006), for example, suggests that the idiom *kick the bucket* was coined at the time when pigs were slaughtered by suspending their back legs from a beam (known as a *bucket*), and kicking against it. So it is reasonable to assume that diachronically, idioms, or at least some of them, had compositional meanings. However, it is also clear that along the years, idioms acquire special metaphoric meanings and lose their compositional meanings. Therefore, native speakers usually cannot reach the meanings of idioms simply by knowing the meanings of their parts.

conventionalized expressions, which carry meanings that cannot be computed compositionally, but rather have to be learnt and memorized by native speakers.<sup>4</sup>

But while all idioms have meanings that are somewhat unpredictable, they still differ from each other greatly in both their syntactic and semantic properties. Moreover, the fact that idioms are conventionalized expressions does not distinguish them from other conventionalized expressions, such as proverbs and clichés. Hence, when exploring the nature of idioms, first one has to define the criterion/criteria, according to which one can determine whether or not a specific expression is to be considered an idiom.

Nunberg, Sag & Wasow (1994) propose a set of characteristic properties commonly attested in idioms. Among them are *conventionality* (unpredictable meaning), *inflexibility* (showing limitations of syntactic manipulations), *figuration* (metaphoric meaning), *proverbiality* (describing situations of common social interests), *informality* (associated with informal or colloquial registers) and *affect* (imply a certain evaluation or affective stance toward the situations described).

Following Horvath & Siloni (2009b), I take *conventionality* and *figuration* to be the **defining** properties of idioms, which distinguish them from other conventionalized expressions. When an expression is both *conventionalized* and *figurative*, it forms an idiom. So while (6a) is an idiom, as it exhibits both *conventionality* and *figuration*, (6b) is a proverb since it exhibits only *conventionality* but not *figuration*.

- (6) a. *me-rov ecim lo ro'im et ha- ya'ar*. from+much trees not seeing ACC the forest 'Not see the forest for the trees'.
  - b. al ta'am ve- re'ax ein le-hitvake'ax. on taste and smell no to+argue 'There is no accounting for taste'.

*Inflexibility* is clearly not a defining property of idioms. As we have seen in the introduction, some idioms "tolerate" syntactic manipulations, and appear, for example, in

<sup>&</sup>lt;sup>4</sup> Indeed, some researchers have recently argued that there is no distinction between special meanings of words (e.g., the meaning 'broadcast' for *transmission*) and special meanings of multiple expressions (Jackendoff 1997, Marantz 1997, among others). However, for the questions studied here, special meanings of words are irrelevant, since this study focuses only on the constraints imposed on Verb Phrase idioms headed by Goal ditransitives.

passive constructions that are derived by syntactic movement. *Proverbiality*, *informality* and *affect* cannot also be regarded as defining properties of idioms, since they are not found in all idioms. The idiom in (7), for example, is of high register in Hebrew (the word zro'a 'arm' is not used in informal registers) and it is at least unclear whether it includes some sort of *affect* and *proverbiality*. So *inflexibility*, *proverbiality*, *informality* and *affect* are neither necessary nor sufficient to define idioms, and may best be regarded as tendencies of idioms.

(7) hera le-x et naxat zro'o showed to x ACC satisfaction arm+his 'beat x harshly'

Among the class of uncontroversial idioms the literature distinguishes between *clausal* and *phrasal* idioms (Marantz 1984, Nunberg, Sag & Wasow 1994, Horvath & Siloni 2009b). *Clausal* idioms contain clausal structure higher than VP, such as a fixed tense, a modal, negation, CP-material etc. *Phrasal* idioms, on the other hand, are headed by a lexical category and do not contain clausal structure. This distinction seems to be essential to the research of idioms, as both types of idioms manifest distinct properties, which suggests that they deserve a different account. For example, *clausal* idioms do not readily permit internal modification (8a) or syntactic operations, such as passivization (8b), as opposed to *phrasal* idioms ((9b)-(10b) respectively) (Horvath & Siloni 2009b), that allow such modifications

- ya'ar. (8) a. \*me-rov ecim gvohim loro'im et hafrom+much trees tall seeing ACC the forest not
  - b. \*me-rov ecim ha- ya'ar lo nire. from+much trees the forest not is+seen
- (9) a. hixnis oto la-tmuna let+in him to+the picture 'brought him into the matter'
  - b. *hixnis oto la- tmuna ha- gdola* let+in him to+the picture the big

- (10) a. hexzir et ha- šed la- bakbuk returned ACC the demon to+the bottle 'managed to gain control on a social phenomenon that erupted again'
  - b. *ha- šed huxzar la- bakbuk* the demon was+returned to+the bottle

Moreover, among the class of *phrasal* idioms, there are idioms forming a full constituent in which, all arguments are fixed and interpreted idiomatically (11a) and idioms including an "open" slot, which is filled by a non-idiomatic nominal argument (11b-c). Following Horvath & Siloni (2008), I refer to the first by the descriptive term *full* idioms, as they do not contain any lexically free ("open") position, and to the latter – *partial* idioms. Among *partial* ditransitive idioms, I distinguish between *Fixed-Goal* (*Open-Theme*) idioms (11b) and *Fixed-Theme* (*Open-Goal*) idioms (11c), referring to which syntactic position is part of the fixed portion of the idiom and which is "open".

- (11) a. hosif šemen la- medura added oil to+the fire 'added fuel to the fire, aggravated a situation'
  - b. daxak et x la- pina pushed ACC x to+the corner 'pushed x into a corner, not to let x any liberty of reaction'
  - c. *hera le-x et ha- delet* showed to x ACC the door 'showed x the door, asked x to leave, fired x'

The current research focuses on *phrasal* idioms, mainly in Hebrew, and in particular, Verb Phrase idioms headed by Goal ditransitive verbs, i.e. verbs taking three arguments: a subject, a direct object – the Theme argument marked by the accusative case marker *et* (when the Noun Phrase is definite) – and an indirect object – the Goal argument marked by the proclitic *le*- ('to'). As mentioned, the study concentrates on the way word order alternations allowed by Goal ditransitive verbs in non-idiomatic contexts are reflected in Verb Phrase idioms. Since word order alternations attested by three-place verbs taking different arguments (such as Source and others) that are not realized by *le*-,

do not show the same properties (Landau 1994, Botwinik-Rotem 2004), they are not included in this study.

The next section introduces the method I used to collect the idioms constituting the corpus of my research. It clarifies how idioms were collected, by which criterion they were divided into groups and what kind of test they underwent.

#### 3. Research Method

For the purpose of exploring the nature of Hebrew ditransitive idioms, four idiom dictionaries in Hebrew were scanned.<sup>5</sup> The search has come up with the total of 55 ditransitive idioms: 16 are Fixed-Goal (Open-Theme) idioms; 23 are Fixed-Theme (Open-*Goal*) idioms; and the rest (16) are *full* idioms.<sup>6</sup>

After compiling the idiom corpus, the availability of two complement orders (Theme-Goal versus Goal-Theme) was checked for each idiom by Google searches and native speakers' judgments. The purpose of this test was to examine if a specific idiom must appear in one fixed complement order or shows flexibility with respect to the order of its complements, without resulting in the loss of idiomatic interpretation. As Hebrew allows a relatively free complement word order of Goal ditransitives in literal contexts, as can be seen in (12a-b) and (13a-b) below, it is interesting to examine if this relatively free word order is preserved in idiomatic phrases as well.

- (12) a. dani natan perax le- rina. flower to Dani gave 'Dani gave a flower to Rina'
  - natan le- rina perax. b. dani Dani gave to Rina flower 'Dani gave Rina a flower'

<sup>5</sup> The Hebrew dictionaries I used are listed in the references section under the title *sources*.

<sup>&</sup>lt;sup>6</sup> All idioms collected for this research are listed in the appendix. The idioms are listed in the word order in which they appear in dictionaries.

<sup>&</sup>lt;sup>7</sup> I deliberately refer to the word order alternation in terms of theta roles, and not syntactic categories (NP-PP order versus PP-NP order) because, as will be discussed in subsection 5.1, when Hebrew le- introduces a dative argument, it does not project a PP. In addition, the data in Hebrew is compared to the data in English, where the Goal argument is realized as a Noun Phrase in the Double Object construction (Dan gave Mary a book), and as a Prepositional Phrase in the Prepositional Dative construction (Dan gave a book to Mary). For that reason, it is more convenient to use the terms *Theme* and *Goal*.

- (13) a. dani hera et ha- xeder le- rina.

  Dani showed ACC the room to Rina

  'Dani showed the room to Rina'
  - b. dani hera le- rina et ha- xeder.

    Dani showed to Rina ACC the room

    'Dani showed Rina the room'

One could postulate that since we are dealing with quite fixed expressions that usually appear in a limited number of syntactic constructions, we would not expect idioms to allow word order alternations at all. However, it has been observed in the literature that there are idioms, which allow syntactic variations, and in particular, word order alternations. As already mentioned in the introduction, some idioms, for example, can appear in passive constructions, which are derived by syntactic movement of the subject, as can be seen in Hebrew (14b).

- (14) a. netanyahu he'evir le- livni et ha- lapid. Netanyahu passed to Livni ACC the torch 'Netanyahu passed the torch to Livni'
  - b. *ha- lapid hu'avar le- livni*. the torch was+passed to Livni

In addition, a large class of ditransitive idioms in English show the dative alternation, e.g. they are found in both the Double Object construction and the Prepositional Dative one (RH&L 2008, Bruening 2010, among others), as illustrated below.

- (15) throw x a bone  $\sim$  throw a bone to x ('give x a reward or a compliment')
- (16)  $lend x a hand \sim lend a hand to x ('help x')$

(Bruening 2010: p.541, (47a-c))

Word order alternations are even attested outside the ditransitive domain. There are idioms in Hebrew, for example, which are headed by unaccusative verbs and exhibit both  $V_{erb}$ - $S_{ubject}$  order and  $S_{ubject}$ - $V_{erb}$  order, as can be seen by the following examples.

- (17) a. *oro* panav lit+up (Biblical) face+his 'showed happiness'
  - b. panav oro face+his lit+up (Biblical)
- (18) a. *nistam* ha- golel al x was+blocked the burial stone (Talmud) on x 'brought x to an end'
  - b. *ha- golel nistam al x* the burial stone (Talmud) was+blocked on x

The subject of unaccusative verbs is an internal argument (an underlying object), which, as noted by Shlonsky (1987), can stay in-situ resulting in  $V_{erb}$ - $S_{ubject}$  order (the so-called simple inversion), just like the subjects of passive verbs can. In idiomatic contexts unaccusatives often show both word orders. In light of that, the question arises whether Goal ditransitives that usually allow reordering of their complements in literal contexts, as we have seen in (12)-(13) above, allow such reordering in phrasal idioms as well.

One more important observation that needs to be taken into account when examining syntactic variations (such as word order alternations) in Verb Phrase idioms is the level of idioms' *decomposability*. In their study of English idioms, Nunberg, Sag & Wasow (1994) argue that idioms differ from one and other with respect to their level of *decomposability*, that is "the degree to which the phrasal meaning, once known, can be analyzed in terms of the idiom parts" (Nunberg, Sag & Wasow 1994: p. 498).

They argue against the assumption that has been central in the generative literature, according to which all idioms are entirely *non-compositional*, i.e. there is no relation between the meanings of the parts forming the idiom and the meaning of the whole phrase (Katz & Postal 1963, Kiparsky 1976, Chomsky 1980, Machonis 1985, among others). Instead, Nunberg, Sag & Wasow (1994) distinguish between: (a) *idiomatically combining expression* (also referred to in the literature as *decomposable* idioms), which have meanings that can be assigned to the idiom's subparts, and (b) *idiomatic phrases* (also referred to in the literature as *non-decomposable* idioms), which have meanings that cannot be distributed among their subparts. A typical *decomposable* 

idiom in English is *spill the beans*. *Spill* can correspond to the verb 'reveal' and *beans* to the Noun Phrase 'secrets'. On the other hand, an idiom, such as *kick the bucket*, is *non-decomposable* since there is no way to analyze its meaning ('die') in a way that can correspond to the different subparts forming the idiom. 'Die' is a one-place predicate and there seems to be no way in which *bucket* can be assigned part of this meaning.

Nunberg, Sag & Wasow (1994) argue that this distinction is relevant to predicting what kind of idioms can be separated syntactically, while retaining their idiomatic interpretations. According to them, *decomposable* idioms can, for example, appear in passive, raising and elliptical constructions, which involve syntactic movements. *Non-decomposable* idioms, on the other hand, are less likely to manifest such syntactic variations (as illustrated in due course). Therefore, my corpus of Hebrew ditransitive idioms includes both *non-decomposable* idioms (for instance, (19a-b)) and *decomposable* idioms (20a-b), and the examination of word order variations will take this observation as well into account.<sup>8</sup>

- (19) a. hevi le-x et ha- se'if' brought to x ACC the paragraph 'annoyed x very much'
  - b. *hixnis et x la- roš* put+into ACC x to+the head 'understood x'
- (20) a. hera le-x et ha-derex showed to x ACC the way 'showed x the way, gave x a spiritual guidance'

<sup>&</sup>lt;sup>8</sup> All idioms listed in the appendix are also divided into decomposable and non-decomposable idioms

 $<sup>^9</sup>$  It should be noted that the verb heading this idiom – hevi ('brought') – is a light verb and does not clearly carry a metaphoric meaning. There are other examples in my corpus-study of idioms headed by verbs, which are not interpreted idiomatically such as those in (i)-(ii) below. Nonetheless, I chose to include such idioms in my corpus-study, because although the verb does not carry a metaphoric meaning, the idiom as a whole does, and its complement(s) do not appear metaphorically outside the idiom.

<sup>(</sup>i) hivti'ax le-x harim ve-gva'ot promised to x mountains and hills 'promised x the moon, made extravagant promises to x'

<sup>(</sup>ii) he'evir le-x et ha- lapid passed to x ACC the torch 'passed the torch to x, gave one's responsibility to x'

b. hixnis et x la- tmuna let+in ACC x to+the picture 'brought x into the matter'

See, for example, the following observations with regard to English and Hebrew Verb Phrase idioms, which illustrate syntactic flexibility in *decomposable* idioms. Some of the examples were already presented in section 2 to illustrate the different properties between *phrasal* and *clausal* idioms, but are repeated here for convenience.

#### (i) Modification

Parts of idioms can be modified, for example, by adjectives. This entails that parts of idioms can be assigned interpretations contributing to the interpretations of the whole phrases, as illustrated in English (21a-b) and Hebrew (22a-b).

- (21) a. *leave no legal stone unturned*. ('do everything legal in order to achieve something or search for something')
  - b. kick the filthy habit. ('stop a bad habit')

(Nunberg, Sag & Wasow (1994): p. 500, (2a,c))

- (22) a. lakax et ha- inyanim ha- xašuvim la- yadayim took ACC the matters the important to+the hands 'took the important matters into one's own hands'
  - b. hixnis et x la- tmuna ha- gdola let+in ACC x to+the picture the big 'brought x into the whole matter'

#### (ii) Passivization

Some idioms can appear in both active and passive structures, as can be seen by the following examples in English (23) and Hebrew (24).

- (23) a. The police *kept tabs* on the main suspect. ('observed carefully')
  - b. *Tabs* should *be kept on* main suspects.
- (24) a. **hexzir** atara le- yošna returned crown to oldness 'restored something to its previous good quality or condition'

b. *huxzera* atara le- yošna. was+returned crown to oldness

These facts too follow from the distinction between *decomposable* and *non-decomposable* idioms. If parts of idioms can be assigned idiomatic interpretations, then it is not surprising that they can also be separated by syntactic movements, such as the one involved in passive constructions.

Non-decomposable idioms, on the other hand, are predicted by Nunberg, Sag & Wasow (1994) to allow much less syntactic variations. And indeed, non-decomposable idioms such as kick the bucket in English and hevi le-x et ha-se'if ('annoyed x very much') in Hebrew, allow neither modification (25a, 26a) nor passivization (25b, 26b).

- (25) a. #John kicked the **big** bucket. 10 b. #The bucket **was kicked** by John.
- (26) a. \*hevi le-x et ha- se'if ha- gadol brought to x ACC the paragraph the big
  - b. \*huva le-x ha- se'if. was+brought to x the paragraph

The current study further examines Nunberg, Sag & Wasow's (1994) observation in the present corpus of data. If word order alternations in Hebrew turn out to be permissible only with *decomposable* idioms and not with *non-decomposable* idioms, it reinforces their observation and suggests that there is no need for an additional explanation to word order variations in ditransitive idioms. On the other hand, if word order alternations are attested in *decomposable* idioms, as well as *non-decomposable* ones, it entails that *decomposability* is not enough for predicting if a certain idiom can or cannot exhibit word order alternations.

The issue of *decomposability* is also addressed in the following section, which presents the results of the corpus-research I conducted.

<sup>&</sup>lt;sup>10</sup> When the idiom looses its idiomatic interpretation but the phrase is interpreted literally, I mark it by #. When it looses its idiomatic interpretation and is ungrammatical/ anomalous I mark it by \*.

#### 4. Results

The results of the corpus-research I conducted in Hebrew, regarding word order alternations, are presented below with respect to three different subtypes of ditransitive idioms: (a) Fixed-Goal (Open-Theme) partial ditransitive idioms; (b) Fixed-Theme (Open-Goal) partial ditransitive idioms and (c) full ditransitive idioms. I begin the discussion with the ordering of partial ditransitive idioms. In section 4.2 I present additional results revealing another intriguing puzzle, regarding the distribution of Goal ditransitives among the three different subtypes of idioms.

#### **4.1 Possible Word Orders**

#### 4.1.1 Fixed-Goal (Open-Theme) Partial Ditransitive Idioms

*Fixed-Goal (Open-Theme)* ditransitive idioms appear in idiom dictionaries only in one word order, in which the Theme precedes the Goal. Moreover, Google searches and native speakers' judgments show that reordering the internal arguments into Goal-Theme order is either ungrammatical (or at least, infelicitous) or gives rise to a literal interpretation rather than an idiomatic one.<sup>11</sup>

In order to facilitate judgments, idioms were inserted into sentences, and this is also the format in which they are given in this section. As illustrated below, Theme-Goal order ((27a)-(28a)-(29a)) is possible whereas Goal-Theme order ((27b)-(28b)-(29b)) is not. 12

<sup>&</sup>lt;sup>11</sup> Only when the sentence is prosodically manipulated by a heavy Noun Phrase (occupying the Theme position), reordering the internal arguments is possible, as can be seen by examples (i)-(ii) below. However, it is known that heavy NP shift is an independent factor that releases very strict word orders. Therefore, these findings are irrelevant to the present research.

<sup>(</sup>i) mezeg ha-avir horid le-timyon et ha-parnasa šel me'ot ve-af alfey xakla'im... the+weather lowered to-treasure ACC the livelihood GEN hundreds and+even thousands farmers 'The weather threw down the drain the livelihood of hundreds and even thousands of farmers'.

(http://www.onweeds.us/viewtopic.php?p=153659)

<sup>(</sup>ii) musar ha- avoda ha- xadaš hipil la- krašim et masoret ha- aruxa ha- ninoxa... moral the-work the-new brought+down to+the-board ACC tradition the-meal the-calm 'The new work moral knocked down the traditional calm meal'.

<sup>(</sup>http://www.foodforliving.co.il/?p=661)

<sup>&</sup>lt;sup>12</sup> What I am interested in is the different level of grammaticality in the alternating word order in *Fixed-Goal (Open-Theme)* idioms versus *Fixed-Theme (Open-Goal)* idioms. While the alternating complement order in *Fixed-Goal (Open-Theme)* is completely out, this is not the case for *Fixed-Theme (Open-Goal)* idioms, in which the alternating order sounds good, as I will show in the next subsection.

- (27) a. netanyahu daxak et ha- rofim la- pina.

  Netanyahu pushed ACC the doctors to+the corner 'Netanyahu pushed the doctors into a corner.'
  - b. ??netanyahu daxak la- pina et ha- rofim. 13 Netanyahu pushed to+the corner ACC the doctors
- (28) a. *netanyahu hixnis šney sarim la-tmuna*. Netanyahu let+in two ministers to+the picture 'Netanyahu brought two ministers into the matter.'
  - b. #netanyahu hixnis la- tmuna šney sarim. 14
    Netanyahu let+in to+the picture two ministers
- (29) a. *netanyahu horid et ha- ma'amacim le- timyon*. Netanyahu lowered ACC the efforts to treasure 'Netanyahu threw the efforts down the drain.'
  - b. ??netanyahu horid le- timyon et ha- ma'amacim.

    Netanyahu lowered to treasure ACC the efforts

Among 16 *Fixed-Goal (Open-Theme)* ditransitive idioms collected for this research, 5 are *decomposable* idioms and 11 are *non-decomposable*. However, even *decomposable* idioms, which as discussed in the previous section, are more likely to "tolerate" syntactic manipulations, do not allow Goal-Theme word order. This can be seen, for example, in (28) above that includes a *decomposable* idiom, but still imposes a Theme-Goal order.

#### 4.1.2 Fixed-Theme (Open-Goal) Partial Ditransitive Idioms

Fixed-Theme (Open-Goal) ditransitive idioms usually appear in dictionaries in Goal-Theme order. The question is whether the way they are listed in dictionaries implies that this type of idioms is also limited to one word order, i.e., Goal-Theme order (as opposed to Fixed-Goal (Open-Theme) idioms which, as we have seen in the previous subsection, **must** appear in Theme-Goal order)? Google searches and native speakers'

Some speakers reported this sentence, where the Goal precedes the Theme, to have a literal interpretation, as if Netanyahu made a photograph and asked two ministers to join the picture.

<sup>&</sup>lt;sup>13</sup> I mark sentences (27b) and (29b) in which *Fixed-Goal (Open-Theme)* idioms appear in Goal-Theme order by ?? and not \*, because in most cases (native) speakers understand the idiomatic meaning even in this word order, but report that they wouldn't have used it in this specific word order. In addition, in most cases, I could not find examples of these idioms in Goal-Theme order in Google searches.

judgments show that a Theme-Goal order (in most cases) is also allowed. As illustrated below, both Goal-Theme ((30a)-(31a)-(32a)) and Theme-Goal ((30b)-(31b), (32b)) orders are possible.

- (30) a. netanyahu he'evir le- livni et ha- lapid. Netanyahu passed to Livni ACC the torch 'Netanyahu passed Livni the torch'
  - b. *netanyahu he'evir et ha- lapid le- livni*. Netanyahu passed ACC the torch to Livni
- (31) a. *netanyahu natan la- moxim perurim.* <sup>15</sup> Netanyahu gave to+the protesters crumbs 'Netanyahu deprived the protesters'
  - b. *netanyahu natan perurim la- moxim*. Netanyahu gave crumbs to+the protesters
- (32) a. *netanyahu hifna la- rofim et ha- gav.*Netanyahu turned to+the doctors ACC the back 'Netanyahu turned his back on the doctors'
  - b. *netanyahu hifna et ha- gav la- rofim*. Netanyahu turned ACC the back to+the doctors

The question then is why *Fixed-Theme (Open-Goal)* idioms appear in dictionaries only in Goal-Theme order, while they allow the alternating word order, as is clear from spontaneous corpora and native speakers' judgments. The reason for that lies in the form dictionaries use to represent the "open" Goal slot. The dictionaries I scanned mark this slot by a pronominal dative (third person masculine) *lo* ('to him'). This form is a weak pronoun that must be adjacent to the verb. Therefore, the adjacency requirement forces these idioms to appear in dictionaries in Goal-Theme order (Goal adjacent to the verb). However, when the Noun Phrase occupying the "open" Goal position is not pronominal but rather a full Noun Phrase, reordering the internal arguments into Theme-Goal order is accepted and does not result in the loss of idiomatic interpretation or in some level of ungrammaticality.

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<sup>&</sup>lt;sup>15</sup> This idiom can also be headed by the ditransitive verb *zarak* 'threw'.

<sup>&</sup>lt;sup>16</sup> Thanks to Tal Siloni (p.c.) for pointing that out to me.

Among 23 *Fixed-Theme (Open-Goal)* ditransitive idioms collected for this research 8 are *decomposable* idioms and 15 are *non-decomposable* idioms. Interestingly, there are 3 *Fixed-Theme (Open-Goal)* idioms, which are less compatible with the Theme-Goal order and they all are *non-decomposable* idioms. These idioms are listed bellow.

- (33) a. dan hevi le- yossi et ha- se'if.

  Dan brought to Yossi ACC the paragraph
  'Dan annoyed Yossi very much'
  - b. ??dan hevi et ha- se'if le- yossi.

    Dan brought ACC the paragraph to Yossi
- (34) a. dan hevi le- yossi acabim.

  Dan brought to Yossi nerves
  'Dan annoyed Yossi very much'
  - b. ??dan hevi acabim le- yossi.

    Dan brought nerves to Yossi
- (35) a. dan hevi le- yossi makot.

  Dan brought to Yossi bumps
  'Dan beat Yossi'
  - b. ??dan hevi makot le- yossi.

    Dan brought bumps to Yossi

At the same time, although the majority of this type of idioms are *non-decomposable*, most of them do show two complement orders.

These results, together with the previous ones regarding *Fixed-Goal (Open-Theme)* idioms, suggest that something else plays a role in (dis)allowing a specific idiom to appear in either Theme-Goal order or Goal-Theme one. The level of idiom's *decomposability* may have its own effect, but obviously cannot be the only factor determining if a specific idiom can or cannot appear in both complement orders.

#### 4.1.3 Full Ditransitive Idioms

In their comparative study of the order of verbal complements in Hebrew and Italian, Belletti and Shlonsky (1995) observe that *full* ditransitive idioms, in which both the Theme and the Goal contribute to the idiomatic reading (i.e. fixed), impose Theme-

Goal order.<sup>17</sup> Reordering the complements into the alternating order is either ungrammatical or gives rise to a compositional, non-idiomatic, reading. Their observation is confirmed by my corpus search, as illustrated below.

- (36) a. hosif šemen la- medura added oil to+the fire 'added fuel to the fire, aggravated a situation'
  - b. #hosif la- medura šemen added to+the fire oil
- (37) a. hexzir atara le-yošna returned crown to oldness 'restored something to its previous good quality or condition'
  - b. \*hexzir le- yošna atara returned to oldness crown
- (38) a. hikdim trufa la- maka preceded medicine to+the injury 'took preventive steps against expected trouble'
  - b. \*hikdim la- maka trufa preceded to+the injury medicine

Among 16 *full* ditransitive idioms, 8 are *decomposable* idioms and 8 are *non-decomposable* idioms. However, once again, the findings reveal that the large majority of *full* idioms do not allow word order alternations, regardless of their level of *decomposability*. So the behavior of *full* idioms also suggests that there are limitations on word order variations that are beyond *decomposability*. <sup>18</sup>

#### 4.2 Verb Distribution

Sorting out the idioms according to their verbal head reveals another intriguing fact. Some Goal ditransitive verbs appear in *Fixed-Goal* idioms (*partial* or *full*), while

<sup>18</sup> There are 3 *full non-decomposable* idioms, which can be found in Google searches in Goal-Theme order. I will discuss these examples in section 7.

<sup>&</sup>lt;sup>17</sup> Belletti and Shlonsky (1995) refer to these idioms as double complements idioms, which include a Noun Phrase, followed by a Prepositional Phrase.

others appear in *Fixed-Theme (Open-Goal)* idioms. A third group of Goal ditransitives appears in both *Fixed-Theme (partial* or *full)* and *Fixed-Goal* idioms.

Following Francez (2006) and RH&L (2008), we can divide Hebrew Goal ditransitive verbs into the following groups:<sup>19</sup>

- (i) Verbs denoting a Change of Location event (also labeled as Caused Motion verbs), whose Goal denotes a Location.
- (ii) Verbs denoting a transfer of Possession event (also labeled as Caused Possession verbs), whose Goal denotes a Recipient (typically an animate, mostly human argument).
- (iii) Verbs that can either denote a Caused Motion meaning or a Caused Possession one, and therefore their Goal argument can either be a Recipient or a Location.

The results of my corpus-study reveal that the first type of Goal ditransitives (e.g. daxak 'pushed', hixnis 'put into/let in') head Fixed-Goal idioms (partial or full), while the second group (e.g. natan 'gave', hivti'ax 'promised') head Fixed-Theme idioms. The third group of Goal ditransitives (e.g. šalax 'sent', hexzir 'returned') can head both kinds of idioms.

As mentioned in the introduction, the same picture is reported with respect to English in RH&L (2008). Goal ditransitives that can be associated with a Caused Motion meaning (e.g. *send*) can head idioms with Fixed Goals, whereas Goal ditransitives associated only with a Caused Possession meaning (e.g. *give*), can only head *Fixed-Theme (Open-Goal)* idioms. This strongly suggests that there is something systematic also in the distribution of Goal ditransitives among the different types of idioms.

#### 4.3 Summary

With regard to complement order of ditransitive idioms in Hebrew, the results above show that only when the Goal is fixed, whether in *partial* or *full* idioms, the internal arguments must appear in one fixed word order in which the Theme precedes the

<sup>&</sup>lt;sup>19</sup> The classification of Goal ditransitives in Hebrew into three different groups is elaborated in subsection 6.2 and summarized in table 3.

Goal. On the other hand, when the Goal is "open", i.e., in *Fixed-Theme* idioms, the complement order can alternate between Theme-Goal and Goal-Theme orders, without resulting in the loss of idiomatic interpretation.

The results also show that word order alternations are attested in both decomposable and non-decomposable idioms. So clearly, the level of idioms' decomposability is irrelevant for determining when word order alternations in ditransitive idioms are possible. This, thus, calls for another account that can explain these results, which are summarized in the following table.

Table 1: Summary of Possible and Impossible Patterns of Ditransitive Idioms in Hebrew

	Theme-Goal order	Goal-Theme order
Fixed-Goal (Open-Theme)	V	*/??
Fixed-Theme (Open-Goal)	V	V
Full	√	*/??

As mentioned in the introduction, English shows the same patterns. Although no systematic idiom dictionary search in English was reported with regard to ditransitive idioms, the generalizations in the literature (Hudson 1992, Harley 2002, RH&L 2008, among others) for *Fixed-Theme (Open-Goal)* and *Fixed-Goal (Open-Theme)* idioms are the same as summarized in table 1 above. There is, however, no information, as far as I know, regarding *full* ditransitive idioms.<sup>20</sup>

The second puzzle that needs to be accounted for is the distribution of Goal ditransitive verbs among different subtypes of idioms that seems to be systematic as well. Section 6 resumes discussion of the classification of the verbs heading different types of

<sup>&</sup>lt;sup>20</sup> Bruening (2010) mentions (in footnote 14, p.536) that he found only two examples of *full* ditransitive idioms in English: *give the devil his due* ('acknowledge the positive qualities of a person who is unpleasant') and *send/carry coals to Newcastle* ('do something redundant'). He remarks that ditransitive idioms with both internal arguments being idiomatic are rare, because there are far more idioms consisting of a ditransitive verb and one fixed argument. In Hebrew, however, as we have seen, *full* ditransitive idioms are not rare, and therefore need to be accounted for.

ditransitive idioms. The next section focuses on the results summarized in table 1, with regard to the complement order of ditransitive idioms.

### 5. Accounting for the Word Order Results

The first puzzle raised by the results of the corpus research I conducted in Hebrew is the impossibility to reorder the complements of *Fixed-Goal* idioms (*partial* or *full*) into Goal-Theme order, as opposed to *Fixed-Theme* (*Open-Goal*) idioms, which can appear in both Goal-Theme and Theme-Goal orders. I will show that this asymmetry stems from the different interpretation the Goal argument has in *Fixed-Goal* idioms (*partial* or *full*) versus *Fixed-Theme* (*Open-Goal*) ones.

In order to account for this asymmetry, I first summarize evidence that the word order alternation attested in Hebrew ditransitive idioms is an instantiation of the dative alternation parallel to the one in English (subsection 5.1). I then show that just like in English, the Goal argument in the Hebrew Double Object construction (Goal-Theme order) is limited to Recipients (subsection 5.2). The fact that *Fixed-Goal* idioms (*partial* or *full*) impose one complement order, in which the Theme precedes the Goal, will then follow from two independently motivated cognitive principles that constrain idiom formation, as suggested by Nunberg, Sag & Wasow (1994).

#### **5.1 The Dative Alternation in Hebrew**

The first step toward accounting for the word order asymmetry in ditransitive idioms is to establish, on independent grounds, that Hebrew has a genuine dative alternation, and that just like English, it manifests two distinct syntactic structures: one parallel to the Double Object construction (Goal-Theme order) and the other parallel to the Prepositional Dative one (Theme-Goal order).

On the surface, there is allegedly no reason to assume that Hebrew has a dative alternation. Unlike in English, the alternating complement order in Hebrew, in which the Goal precedes the Theme (39b), does not involve the deletion of *le*-. In both complement orders *le*- is present, while in the Double Object Construction in English, *to* is absent. Landau (1994), however, brings extensive evidence to support the claim that there is a

fundamental difference in Hebrew between the alternation in (39) which, as he shows, is a case of the dative alternation versus the alternation in (40), which is a case of PP-shift.

- (39) a. dan natan sefer le- dina.

  Dan gave book to Dina.'
  - b. dan natan le- dina sefer.

    Dan gave to Dina book
    'Dan gave Dina a book.'
- (40) a. dan halax im dina le- seret.

  Dan went with Dina to movie 'Dan went with Dina to a movie.'
  - b. dan halax le- seret im dina.

    Dan went to movie with Dina.

    'Dan went to a movie with Dina.'

A central assumption underlying his account is that Hebrew *le*- has two distinct functions: (a) a dative case marker, and (b) an independent preposition. While the second *le*- is both a preposition and an independent case assigner, the first is only a case marker. To prove that *le*- has two different functions, Landau (1994) (see also Botwinik-Rotem 2004) gives tests to show that verbs, such as *natan* ('gave'), *hera* ('showed'), *šalax* ('sent'), which freely allow both complement order, differ syntactically from other three-place verbs, and that only in dative constructions *le*-objects pattern with Noun Phrases and should be syntactically analyzed as in (41a) rather than (41b).<sup>21</sup>

(41) a. NP[le-Dina]
b. PP[le-NP[Dina]
Two of these tests are given below:<sup>22</sup>

#### (i) Modified Conjunction

As noted in Landau (1994), it is possible to modify conjoined Noun Phrases with either one adjective for both conjuncts, or two adjectives, one for each conjunct

<sup>&</sup>lt;sup>21</sup> As will become clear in subsection 6.2, this behavior is limited to verbs taking a Goal-Recipient.

<sup>&</sup>lt;sup>22</sup> See Landau (1994) and Botwinik-Rotem (2004) for further evidence.

separately. Conjoined PPs, on the other hand, do not allow one adjective for both conjuncts.

- (42) a. dan axal et ha- uga ve- (et) ha-ugiyot ha- te'imot.

  Dan ate ACC the cake and ACC the cookies the tasty(pl.)
  - b. dan axal et ha- uga ha- te'ima ve- (et) ha-ugiyot ha-te'imot.

    Dan ate ACC the cake the tasty and ACC the cookies the tasty
- (43) a. \*dan diber al ha-yeled ve- al ha-yalda ha-macxikim.

  Dan talked on the boy and on the girl the funny(pl.)
  - b. dan diber al ha-yeled ha-macxik ve- al ha-yalda ha-macxika.

    Dan talked on the boy the funny and on the girl the funny

Modification of conjoined Goal *le*-arguments (44) patterns with that of conjoined Noun Phrases (42).

- (44) a. dan natan matana la-yeled ve-la-yalda ha-ktanim.

  Dan gave present to+the boy and to+the girl the small(pl.)
  - b. dan natan matana la- yeled ha-katan ve la- yalda ha- ktana.

    Dan gave present to+the boy the small and to+the girl the small

The verb in (44) allows "collective" modification of both objects, which are headed by *le*-. This leads to the conclusion that these objects are true Noun Phrases rather than PPs.

#### (ii) Binding

As noted in Borer and Grodzinsky (1986), anaphors in Hebrew can only be bound by bare Noun Phrases but not by PPs. The examples below show that the Goal *le*-argument can bind the Theme anaphor (if it precedes it) (45). The same does not hold for other, non-dative constructions (46).

- (45) a. dan her'a la- tinoket et acma (ba- mara).

  Dan showed to+the baby ACC herself in+the mirror
  - b. dan her'a et ha-tinoket le-acma.

    Dan showed ACC the baby to herself

- (46) a. \*dan siper al ha-yalda le-acma.

  Dan told on the girl to herself
  - b. dan siper la- yalda al acma.

    Dan told to+the girl on herself

The fact that (45a) is grammatical leads to the same conclusion: *le*-objects are dative Noun Phrases (as they show properties of Noun Phrases rather than PPs).

Additionally, as Larson (1990) pointes out, Goal ditransitive verbs differ from verbs taking two PP complements with respect to certain asymmetries observed in Barss and Lasnik (1986). The first complement in the Double Object construction or the Prepositional Dative construction is always "higher" than the second one (47). In V-PP-PP constructions, on the other hand, PP<sub>1</sub> is higher than PP<sub>2</sub> in V-PP<sub>1</sub>-PP<sub>2</sub> construction (48a,c), but PP<sub>2</sub> is not higher than PP<sub>1</sub> in V-PP<sub>2</sub>-PP<sub>1</sub> construction (48b,d). This is shown by constructions involving a pronoun bound by quantified Noun Phrase (47a-b, 48a) or a wh-phrase (47c-d, 48c), which gives rise to a weak crossover effect, if the pronoun is not c-commanded by the quantified Noun Phrases (48b) or the wh-phrase (48d).

- (47) a. John sent [every boy]<sub>k</sub> to his<sub>k</sub> mother.
  - b. John sent [every mother]<sub>k</sub> her<sub>k</sub> son.
  - c. Who<sub>k</sub> did you send his<sub>k</sub> mother?
  - d. Who<sub>k</sub> did you send her<sub>k</sub> son?

(Landau 1994: p. 21, (25))

- (48) a. John talked to [every mother]<sub>k</sub> about her<sub>k</sub> boy.
  - b. \*John talked about her<sub>k</sub> boy to [every mother]<sub>k</sub>.
  - c. Which mother<sub>k</sub> did you talk to about her<sub>k</sub> boy?
  - d. \*About which mother<sub>k</sub> did you talk to her<sub>k</sub> boy?

The same holds for Hebrew, as can be seen by the following contrast between dative constructions (49) and V-PP-PP constructions (50).

(49) a. John šalax [kol ben]<sub>k</sub> le-ima šelo<sub>k</sub>.

John sent every boy to mother his

'John sent [every boy]<sub>k</sub> to his<sub>k</sub> mother.'

- b. John šalax [le-kol ima]<sub>k</sub> et ha- ben šela<sub>k</sub>. John sent to every mother ACC. the son her 'John sent [every mother]<sub>k</sub> her<sub>k</sub> son.'
- c. [et mi]<sub>k</sub> šalaxta le-ima šelo<sub>k</sub>? ACC who sent.2.m.sg to mother his 'Who<sub>k</sub> did you send to his<sub>k</sub> mother?'
- d. [le-mi]<sub>k</sub> šalaxta et ha- ben šela<sub>k</sub>? to whom sent.2.m.sg ACC the son her 'Who<sub>k</sub> did you send her<sub>k</sub> son?'

(Landau 1994: p. 22, (28))

- (50) a. *dibatri im* [*kol gever*]<sub>k</sub> *al ha-ben šelo*<sub>k</sub>. talked+1sg. with every man about the son his 'I talked to [every man]<sub>k</sub> about his<sub>k</sub> son.'
  - b. \*dibarti al kol ben<sub>k</sub> im aba šelo<sub>k</sub>. talked+1sg. about every boy with father his 'I talked about [every boy]<sub>k</sub> to his<sub>k</sub> father.'
  - c. im eize gever<sub>k</sub> dibarta al ha- ben šelo<sub>k</sub>? with which man talked+2m.sg. about the son his 'To [which man]<sub>k</sub> did you talk to about his<sub>k</sub> son?'
  - d. \*al eize gever<sub>k</sub> dibarta im ha-ben šelo<sub>k</sub>?
    about which man talk+2<sup>nd</sup>sg. with the son his
    'About [which man]<sub>k</sub> did you talk to his<sub>k</sub> son?'
    (Landau 1994: pp. 21-22, (25)-(26),(28))

The unavailability of the bound variable reading in (50b,d) shows that this is a true V-PP-PP construction. On the other hand, the availability of the bound reading in (49b,d) is parallel to that of (47b,d). These facts lead to the conclusion that just like in English Goal ditransitive verbs in Hebrew exhibit the dative alternation. The first object is structurally higher in both variants and is realized as a Noun Phrase rather than a PP, since it can bind the Theme anaphor.

Additional empirical evidence suggesting that Hebrew exhibits the dative alternation, just like English, comes from nominalization asymmetry. Kayne (1984) observes that nominalization of Prepositional Dative constructions is possible, while nominalization of Double Object constructions is not.

- (51) a. Sue's gift of a book to Mary.
  - b. \*Sue's gift of Mary (of) a book.
- (52) a. John's assignment of a hard sonata to Mary.
  - b. \*John's assignment of Mary (of) a hard sonata.

(Pesetsky 1995: p.127, (354a,b)-(355a,b))

Landau (1994) shows that the same asymmetry is attested in Hebrew.

- (53) a. ha- ha'anaka šel ha- pras le- ronit the award GEN the prize to Ronit
  - b. \*ha- ha'anaka le- ronit šel ha- pras the award to Ronit GEN the prize
- (54) a. *ha- ceruf šel moti la- va'ada* the joining GEN Moti to+the committee
  - b. \*ha- ceruf la- va'ada šel moti the joining to+the committee GEN Moti

(Landau 1994: p. 53, (65))

This provides additional support to the claim that Hebrew has constructions parallel to the Double Object and Prepositional Dative constructions, since nominalization is only possible when the Theme precedes the Goal.<sup>23</sup>

To conclude this subsection, the tests above provide strong evidence to support the assumption that Hebrew, just like English, has a genuine dative alternation and exhibits two different constructions: one parallel to the Double Object construction and the other parallel to the Prepositional Dative construction in English.<sup>24</sup> The only difference is that in both constructions in Hebrew, the Goal is realized as a dative (*le-*) Noun Phrase.

The next section shows a semantic restriction on the Double Object construction. It will provide evidence that when the Goal precedes the Theme (in English and Hebrew) it must be interpreted as a Goal-Recipient argument and not a Goal-Location one.

<sup>24</sup> There are some differences between the Hebrew and English dative alternation, which are irrelevant for the purposes of this study. See Landau (1994) and Botwinik-Rotem (2004) on this issue.

<sup>&</sup>lt;sup>23</sup> The reason for the impossibility of nominalization of Double Object constructions is irrelevant for the current research (for more on this issue see Landau 1994, Pesetsky 1995).
<sup>24</sup> There are some differences between the Hebrew and English dative alternation, which are irrelevant for

#### **5.2 Possession**

It has long been observed that the Double Object construction in English shows semantic restrictions on the Goal argument (realized as the first object) that the Prepositional Dative construction does not (Green 1974, Oehrle 1976, Pinker 1989, among others). While the complement of *to* in the Prepositional Dative construction can host either a Goal-Location argument (animate or inanimate) or a Goal-Recipient one, the first object of the Double Object construction is reserved for Recipients.

This observation explains why (55b) is ungrammatical. Since the argument *London* cannot be interpreted as a Possessor (Recipient), it can only occur as a complement of *to* in the Prepositional Dative construction, and not as the first object of the Double Object construction.

- (55) a. John sent the letter to London.
  - b. \*John sent London the letter.<sup>25</sup>

The same holds for Hebrew. When the Goal precedes the Theme in dative constructions it has to be interpreted as a Recipient (Botwinik-Rotem 2004), as can be seen by the following examples.

- (56) a. ron šalax et ha- mixtav le- rina. Ron sent ACC the letter to Rina
  - b. ron šalax le- rina et ha- mixtav. Ron sent to Rina ACC the letter
- (57) a. ron šalax et rina le- london. Ron sent ACC Rina to London
  - b. \*/??ron šalax le- london et rina Ron sent to London ACC Rina

While the alternation is perfectly fine in (56a-b), in which the Goal-Recipient (*rina*) can be interpreted as a Possessor of the Theme argument (*mixtav*) the shift in (57b)

<sup>&</sup>lt;sup>25</sup> Sentence (55b) is grammatical only if the Goal-Location argument (*London*) is interpreted metonymically as an institution such as *the London office*.

is infelicitous. Notice that in (57b) the Goal argument is an inanimate Location and clearly cannot be interpreted as a Possessor of the Theme argument, which is human (*rina*).<sup>26</sup>

The notion of Possession also characterizes verbs like *show*, *read* and *tell*, which do not express a change of Possession in the literal sense, but indicate that the Recipient becomes a "Possessor" of some information (Krifka 2004). This is shown by (58) and (59) for English and Hebrew, respectively.

- (58) a. John showed the picture to Beth.b. John showed Beth the picture.
- (59) a. ron hera et ha-tmuna le-rina. Ron showed ACC the picture to Rina
  - b. ron hera le- rina et ha- tmuna. Ron sent to Rina ACC the picture

This observation has led many researchers to argue that the Double Object construction encodes a Caused Possession meaning, while the Prepositional Dative construction encodes a Caused Motion meaning. Krifka (2004), for example, suggests the following event semantics account of a ditransitive verb with the arguments *Ann*, *Beth* and *the car*.

(60) a. *Double Object Construction*: Ann VERBed Beth the car

∃e∃s [AGENT(e, Ann) Λ CAUSE(e, s) Λ s: HAVE(Beth, the\_car)]

b. Prepositional Dative Construction: Ann VERBed the car to Beth  $\exists e \exists e' [AGENT(e,Ann) \land CAUSE(e,e') \land MOVE(e') \land$ 

THEME(e', the car)  $\Lambda$  GOAL(e', Beth)]

(Krifka 2004: pp. 7-8, (45))

<sup>&</sup>lt;sup>26</sup> The shift is possible only when the Theme argument is heavy (i) or with a specific intonation: with focus on the Theme argument rather than the Goal one, which is given in context (ii). These possibilities clearly do not fall within the dative alternation.

<sup>(</sup>i) ron šalax le-london et ha- xavila še hu kibel me- ima šel rina. Ron sent to London ACC the package that he received from mother GEN Rina 'Ron sent London the package that he received from Rina's mother'.

<sup>(</sup>ii) ron šalax le-london et rina ve- lo et dani. Ron sent to London ACC Rina and not ACC Dani 'Ron sent London Rina and not Dani'.

The next section provides the solution to the word order puzzle: why do *Fixed-Goal* ditransitive idioms, *partial* or *full*, must appear in Theme-Goal order to retain their idiomatic meaning, while *Fixed-Theme (Open-Goal)* ditransitive idioms do not?

#### 5.3 Idioms and Possession

In the previous subsections we have established that Hebrew has constructions parallel to the Double Object and the Prepositional Dative constructions in English, and that only in the Double Object construction the first object (the Goal) has to be interpreted as a Recipient. The question that needs to be accounted for is why only idioms with fixed Goals impose a Theme-Goal word order, while idioms with "open" Goals may appear in either Theme-Goal or Goal-Theme word orders without resulting in the loss of the idiomatic interpretation.

RH&L (2008) note (based on O'Grady 1998) that *Fixed-Goal* idioms in English do not involve a relation of Possession between the Theme and the Goal, even when the Goal is animate. For example, if you *throw someone to the wolves, the wolves* do not possess this person, not even metaphorically (RH&L 2008: p.154). Therefore, *Fixed-Goal* idioms carry meanings that involve an abstract form of Caused Motion and as such, are incompatible with the Double Object construction (which encodes a Caused Possession meaning only).

RH&L (2008) do not provide any explanation as to why *Fixed-Goal* idioms cannot encode a Caused Possession meaning. However, along lines entertained by O'Grady (1998), Levin (2010) suggests that this follows directly from Nunberg, Sag & Wasow's (1994) observation that animate arguments are not good inputs for metaphors. Let us see why. Nunberg, Sag & Wasow (1994) propose that the principles below govern the formation of idioms (and metaphors in general):

- (61) a. Idioms describe abstract situations in terms of concrete ones and **not** vice versa.
  - b. Animate Noun Phrases tend to preserve their animacy in metaphoric and idiomatic meanings.

These principles are meant to account for the rarity of external arguments and Goals in the fixed part of idioms (Marantz 1984, Kiparsky 1987). Since external arguments (Agents, Experiencers) and Goals (Recipients) are predominantly animate – most often human – they tend to preserve their animacy in idiomatic contexts. Given that animates denote concrete entities, it follows that they can hardly be used to describe abstract situations. Therefore, it is not surprising that external arguments and Goals are rare in idioms. Nunberg, Sag & Wasow (1994) further suggest that this observation can account for the lack of idioms such as \*give the judge x. "Since the first of two objects in English is almost always a Goal or Beneficiary, such objects almost always denote animates" (Nunberg, Sag & Wasow (1994): p. 527).

Note, however, that Goal-Locations are not rare in idioms, at least not in Hebrew. This is not surprising as they tend to be inanimate and therefore, can appear in idioms, unlike Recipients. This can explain the observation pointed out in O'Grady (1998) and RH&L (2008), that *Fixed-Goal* idioms encode only a Caused Motion meaning and not a Caused Possession one. Given the principles above, if a Goal argument is part of the idiom it will most likely function as a Goal-Location argument and not a Goal-Recipient one. As the latter is typically a human argument that tends to preserve its animacy, it is not a good candidate to describe an abstract situation.

Therefore, since *Fixed-Goal* idioms (*partial* or *full*) tend not to include Goal-Recipients, they can only encode a Caused Motion meaning and not a Caused Possession one. As a result, they cannot appear in the Double Object construction, because Goal-Location arguments (which cannot be interpreted as Possessors) cannot occupy the first complement position, but rather have to follow the Theme argument. This is why even idioms with fixed animate Goals, such as *throw x to the wolves*, cannot alternate into the Double Object variant (\**throw the wolves x*).

This solves the ordering puzzle I started with. In addition, this account is also supported by the distribution of Goal ditransitive verbs among the three different subtypes of idioms in Hebrew. This will be the topic of the following section.

### 6. The Distribution of Goal Ditransitives in Hebrew Idioms

The second interesting observation emerging from the results of the corpus-study, which was already mentioned in section 4, is the distribution of different Goal ditransitive verbs among the three types of idioms discussed in this research. These results raise the following question: is there anything systematic about the distribution of Goal ditransitives among different types of idioms? Why are some verbs more likely to appear in *Fixed-Theme* idioms and others in *Fixed-Goal* ones?

Subsection 6.1 introduces the "Verb-Sensitive" approach to the dative alternation proposed by RH&L (2008), which underlies the account for the verb distribution puzzle. Subsection 6.2 presents the distinction between three different groups of Goal ditransitive verbs in Hebrew and subsection 6.3 presents the account.

### 6.1 The "Verb-Sensitive" Approach

While it is widely assumed that the Goal position of the Double Object construction in English typically requires an argument that is capable of Possession (i.e. a Recipient), as opposed to *to*-objects, which do not (as discussed in subsection 5.2), the source of this difference is controversial. Three major approaches are found in the literature. The *Monosemy* approach holds that both constructions are associated with the same meaning, each allowing a different argument realization patterns (Emonds 1972, Larson 1988, among others).<sup>27</sup> The *Polysemy* approach, in contrast, (which is a more dominant view) assumes that the two constructions are associated with different meanings, each giving rise to a different argument realization pattern (Green 1974, Oehrle 1976, Pinker 1989, Harley 2002, among others). On the latter analysis, **all** dative verbs have two meanings: a Caused Possession meaning, giving rise to the Double Object construction, and a Caused Motion meaning, giving rise to the Prepositional Dative construction.

A somewhat hybrid view – the "Verb-Sensitive" approach – is found in RH&L (2008). They argue against the *polysemy* approach, which takes all dative verbs to have two meanings. Instead, they show that some English alternating verbs are *polysemous*,

<sup>&</sup>lt;sup>27</sup> Some researchers assume that the constructions are derivationally related (Emonds 1972, Larson 1988, among others).

while others are *monosemous*. In particular, they show that while verbs such as *give* semantically encode **only** a Caused Possession meaning (in both constructions), verbs such as *send*, encode both a Caused Possession meaning (in the Double Object construction) and a Caused Motion one (in the Prepositional Dative construction).

On their analysis, the dative alternation in English involves an alternate realization of the Recipient, which can be expressed in English either as the first object in the Double Object construction, or as the object of *to* in the Prepositional Dative construction.<sup>28</sup> In other words, the Caused Possession meaning is not exclusive to the Double Object construction, but can also be realized by the Prepositional Dative construction. The Caused Motion meaning, on the other hand, is only associated with the Prepositional Dative construction.

The motivation for their classification of ditransitive verbs comes from syntactic and semantic differences between the *to*-phrase with *give*- versus *send*- type verbs. These differences are explained by the claim that *give*-type verbs only take Goal-Recipients, whereas *send*-type verbs can take Goal-Locations as well. Two of these motivations are given below.<sup>29</sup>

#### (i) Wh-Questions

The *to*-phrase with *give*-type verbs cannot be questioned by the locative *wh*-word *where* (Levinson 2005), as can be seen in (62a), but the *to*-phrase with *send*- type may be (62b).

#### (62) a. \*Where did you give the ball?

b. Where did you send the bicycle? To Rome.

(RH&L 2008: p.137, (14))

This entails that *give*-type verbs take only Recipients as their Goal arguments, while *send*-type verbs may also take Locations as their Goals.

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<sup>&</sup>lt;sup>28</sup> RH&L (2008) claim that the dative alternation in Caused Possession verbs (i.e. the choice of the Double Object construction or the Prepositional Dative one) is governed by information structure and heaviness considerations. Since the source of the dative alternation is not central to this paper, I will not discuss the information structure view. For more on this issue see RH&L (2008).

<sup>&</sup>lt;sup>29</sup> For more evidence see RH&L (2008).

### (ii) Animate Complements

Give-type verbs can only take animate complements as their Goals (in either the Double Object or the Prepositional Dative constructions), as can be seen in (63a). Verbs like *send*, on the other hand, can take both animate and inanimate complements, which denote Locations, as their Goals (63b).

(63) a. I gave the package to Maria / \*London

b. I sent the package to Maria / London

(RH&L 2008: p.138, (15))

These facts lead to the same conclusion: *give*-type verbs take animate Goal arguments, as these are typically able of being interpreted as Recipients.

The next section shows that Goal ditransitives in Hebrew can be divided into three different groups, each one carrying a slightly different meaning.

#### **6.2 Goal Ditransitives in Hebrew**

We have already seen that Goal ditransitives in Hebrew realize their non-Theme argument with the proclitic *le*-, which marks different semantic roles. Luckily, Hebrew provides a way to distinguish between the different roles of *le*-, and in particular the Goal-Recipient and the Goal-Location roles. As opposed to *le*-, *el* is a preposition, which marks only Spatial Goals (Locations) and cannot mark Recipients.<sup>30</sup>

While all Goal ditransitives in Hebrew can realize their non-Theme argument with *le*-, some can also realize it with *el* (Berman 1982, Landau 1994, Botwinik-Rotem 2004, Francez 2006). In addition, as pointed out in Francez (2006), while *le*- can always mark the non-Theme argument of a Goal ditransitive verb and thus, replace the preposition *el*, pronominal *le*- (the inflected form of *le*-) is exclusively a marker of Goal-Recipients, and pronominal *el* is a marker of Goal-Locations.

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<sup>&</sup>lt;sup>30</sup> As both *le*- and *el* are roughly equivalent to English *to*, they are both glossed as *to*.

Table 2: The Distinction between Hebrew *le-* and *el* (Francez 2006)

le-	Location or Recipient	
el	Location	
Pronominal le-	Recipient	
Pronominal el	Location	

Given RH&L (2008) typology, Francez (2006) shows that the distribution of *le*-and *el* is determined by the type of verb selecting it. Accordingly, he distinguishes three different types of Goal ditransitives in Hebrew:

- a) Verbs that encode a Caused Possession meaning, such as *natan* ('gave'), and therefore, disallow *el* (64-65).
- b) Verbs that encode a Caused Motion meaning, such as *daxak* ('pushed'), and therefore, disallow the pronominal *le* (66-67).<sup>31</sup>
- c) Verbs that are compatible with both meanings, such as *šalax* ('sent'), and therefore, can occur with either pronominal *le* or *el* (68-69).

#### (i) Caused Possession verbs

(64) a. ron natan tapu'ax le-/ \*el rina.

Ron gave apple to to Rina

'Ron gave an apple to Rina.'

b. ha- tapu'ax še- ron natan la \*eleha...<sup>32</sup> the apple that Ron gave to+her to+her 'The apple that Ron gave her...'

<sup>31</sup> Francez (2006) refers to verbs that encode a Caused Motion meaning as verbs that encode a Caused Change of Location meaning. As mentioned in subsection 4.2, both terns are found in the literature.

<sup>&</sup>lt;sup>32</sup> For the sake of examining if a certain verb licenses pronominal *le* or *el*, I use the context of relative clauses (as Francez 2006 does), which call for the use of resumptive pronouns. The reason for preferring relative clauses to main ones is that in the latter pronominal *le*- or *el* are interpreted as referring to a person and not a Location. Referring to a Location in main clauses is usually done by a locative pronoun *šam* ('there').

- (65) a. ron hivti'ax matana le-/ \*el ruti.

  Ron promised present to to Ruti
  'Ron promised a present to Ruti.'
  - b. *ha- matana še- ron hivti'ax la \*eleha...* the present that Ron promised to+her to+her 'The present that Ron promised her...'

#### (ii) Caused Motion verbs

- (66) a. ron daxak et ha- yeled la-/ el ha- kita.

  Ron pushed ACC the boy to+the to the classroom 'Ron pushed the child into the classroom.'
  - b. ha- kita še- ron daxak \*la/ eleha et ha- yeled... the classroom that Ron pushed to+her to+her ACC the boy... 'The classroom that Ron pushed the child into...'
- (67) a. ron hixnis et ha- yalda la-/ el ha- kita.

  Ron let+in ACC the girl to+the to the classroom 'Ron let the girl into the classroom.'
  - b. ha- kita še- ron hixnis \*la/ eleha et ha- yalda... the classroom that Ron let+in to+her to+her ACC the girl... 'The classroom that Ron let the girl into...'

### (iii) Ambiguous Verbs

- (68) a. ron **šalax** sefer le-/ el rina. Ron sent book to to Rina 'Ron sent a book to Rina.'
  - b. ha- yalda še- ron šalax la eleha sefer... the girl that Ron sent to+her to+her book 'The girl Ron sent a book to...'
- (69) a. ron hevi praxim le-/ el rina. Ron brought flowers to to Rina 'Ron brought flowers to Dina.'
  - b. *ha- praxim še- ron hevi la eleha...* the flowers that Ron brought to+her to+her 'The flowers that Ron brought her...'

In light of that, we can now distinguish the set of all Goal ditransitive verbs heading the idioms collected for the current research, by checking if they permit their non-Theme argument to appear with pronominal *el* or pronominal *le*-. After applying the test to each verb, we reach the following division:

Table 3: The Classification of Goal Ditransitives in Hebrew

<b>Caused Possession</b>	<b>Caused Motion Meaning</b>	<b>Both Meanings</b>
Meaning		
hivti'ax ('promised')	gilgel ('rolled')	hevi ('brought')
hera ('showed')	hosif ('added')	hošit ('streached out')
maxar ('sold')	hixnis ('let in/put into')	hexzir ('returned')
natan ('gave')	hikdim ('preceded')	he'evir ('passed to')
	lakax ('took	hifna ('turned to')
	someone/something	
	somewhere')	
	daxak ('pushed')	hešiv ('returned')
	hidbik ('glued')	zarak ('threw')
	horid ('lowered')	<i>šalax</i> ('sent')
	hipil ('brought down')	

Additional evidence to the split between Caused-Possession and Caused Motion Goal ditransitive verbs in Hebrew comes from the different syntactic realization of *le*-phrases in each construction, as argued by Botwinik-Rotem (2004). As illustrated in subsection 5.1, only conjoined Noun Phrases allow either one adjectival modifier or two (Landau 1994). Conjoined Prepositional Phrases, on the other hand, allow only the second option, i.e. two adjectival modifiers — one for each Prepositional Phrase. Now consider the following contrast between *le*-phrases in the Caused Motion construction (70)-(71) and *le*-phrases in the Caused Possession construction (72) (the latter example was mentioned in subsection 5.1, but is repeated here for convenience).

- (70) a. \*rina hixnisa oti la- ta'aruxa ve- la- mofa ha- xadašim.

  Rina let+in me to+the exhibition and to+the show the-new(pl.)
  - b. *rina hixnisa oti la-* ta'aruxa ha- xadaša ve- la- mofa Rina let+in me to+the exhibition the new and to+the show ha- xadaš. the new

- (71) a. \*rina lakxa oti la- misada ve- la- glideria ha- xadašot.

  Rina took me to+the restaurant and to+the ice cream parlor the new(pl.)
  - b. *rina lakxa oti la- misada ha- xadaša ve- la- glideria*Rina took me to+the restaurant the new and to+the ice cream parlor *ha- xadaša*.

    the new
- (72) a. *dani* **natan** matana la-yeled ve-la-yalda ha-ktanim.

  Dani gave present to+the boy and to+the girl the small(pl.)
  - b. dani natan matana la- yeled ha- katan ve la- yalda ha-ktana.

    Dani gave present to+the boy the small and to+the girl the small

The ungrammaticality of (70a)-(71a), as opposed to the grammaticality of (72a), implies that *le*-phrases in Caused Motion constructions are Prepositional Phrases, whereas *le*-phrases in the Caused Possession constructions are Noun Phrases. This split is not surprising under the assumption, mentioned in subsection 5.1, that Hebrew *le*- has two distinct functions: a dative case marker and an independent preposition. As argued in Botwinik-Rotem (2004), it seems that only in the dative construction the Goal argument is realized as a Noun Phrase rather than a Prepositional Phrase, appearing with the case marker *le*-, and is invariably interpreted as a Recipient. In Caused Motion constructions, on the other hand, *le*-phrases denote Goal-Locations and are realized as Prepositional Phrases, which are headed by prepositional *le*-. <sup>33</sup>

<sup>&</sup>lt;sup>33</sup> If Caused Motion verbs realize their Goal-Location arguments as PPs, we might wonder why *Fixed-Goal* idioms (*partial* or *full*) headed by such verbs, do not allow PP-shift, resulting in Goal-Theme order. Firstly,

as noted by Belleti & Shlonsky (1995), Hebrew idioms headed by other ditransitive verbs realizing their non-Theme argument with prepositions such as *be* ('in') or *al* ('on'), also cannot appear in PP-NP order, as illustrated in (i)-(ii) below. Secondly, notice that even in non-idiomatic contexts PP-NP order in Hebrew sounds at least infelicitous, when it is not accompanied by special intonation, as can be seen in (iii)-(iv). So even if *Fixed-Goal* idioms headed by Caused Motion verbs do take a PP Goal argument, it is still predicted that they will not allow a Goal-Theme order.

<sup>(</sup>i) a. sam et nafšo be-xapo put ACC soul+his in palm+his 'risked his life'

b. \*sam be-xapo et nafšo put in palm+his ACC soul+his

<sup>(</sup>ii) a. hini'ax ma'otav al keren ha- cvi put money+his on horn the gazelle 'abandoned his money'

b. \*hini'ax al keren ha- cvi ma'otav put on horn the gazelle money+his

Even with ambiguous verbs *le*-phrases pattern with PPs when they appear in Caused Motion constructions (73a) and with NPs when they appear in Caused Possession constructions (74a).

- (73) a. \*rina šalaxa et ran la- makolet ve- la- kiosk ha-rexokim.

  Rina sent ACC Ran to+the grocery and to+the kiosk the far(pl.)
  - b. *rina šalaxa et* ran la-makolet ha-rexoka ve-la-kiosk ha-raxok.

    Rina sent ACC Ran to+the grocery the far and to+the kiosk the far
- (74) a. rina šalaxa mixtavim la-mora ve-la-menahel ha-adivim.

  Rina sent letters to+the teacher and to+the principal the kind(pl.)
  - b. *rina šalaxa mixtavim la- mora ha- adiva ve- la- menahel ha- adiv.* Rina sent letters to+the teacher the kind and to+the principal the kind

In (73) there is obviously no Caused Possession meaning but only a Caused Motion one (the *grocery* cannot be interpreted as a Possessor of *Ran*). Therefore, the fact that the behavior of the *le*-phrase in this case patterns with a PP and not a NP is not surprising. On the other hand, in (74), where a Caused Possession meaning is possible, the *le*-phrase behaves as a NP and not a PP.

Interestingly, we find the following generalizations with respect to the distribution of Goal ditransitive verbs among the three different subtypes of idioms:

- a) Caused Possession verbs head *Fixed-Theme (Open-Goal)* idioms (75a-b).
- (75) a. hera le-x panim showed to x face 'treated x warmly, kindly'
  - b. maxar le-x lokšim
    sold to x noodles (Yiddish)
    'deceived x, told x lies'

Dan put cup on the table

<sup>(</sup>iii) a. dan sam et ha-xulca ba- aron.

Dan put ACC the shirt in+the closet

b. ??dan sam ba- aron et ha-xulca .

Dan put in+the closet ACC the shirt

<sup>(</sup>iv) a. dan hini'ax sefel al ha- šulxan.

b. ??dan hini'ax al ha- šulxan sefel.

Dan put on the table cup

- b) Caused Motion verbs head *Fixed-Goal* idioms, whether *partial* (76a-b) or *full* (77a-b).
- (76) a. daxak et x la-pina pushed ACC x to+the corner 'pushed x into a corner, not to let x any liberty of reaction'
  - b. *horid et x le- timyon* lowered ACC x to treasure 'threw X down the drain, lost x'
- (77) a. gilgel et ha- kadur la- migraš šel  $x^{34}$  rolled ACC the ball to+the court GEN x 'passed the responsibility to x'
  - b. hosif šemen la- medura added oil to+the fire 'added fuel to the fire, aggravated a situation'
    - c) Verbs, which are compatible with both meanings, head *Fixed-Goal* idioms, *partial* (78a) or *full* (78b), as well as *Fixed-Theme* (*Open-Goal*) idioms (79a-b).
- (78) a. *šalax et x le-kol ha-ruxot* sent ACC x to all the spirits 'expelled x in a humiliating way'
  - b. hexzir et ha- šed la- bakbuk returned ACC the demon to+the bottle 'managed to gain control on a social phenomenon that erupted again'
- (79) a. šalax le-x yadayim sent to x hands 'groped x'
  - b. hevi le-x acabim brought to x nerves 'annoyed x very much'

<sup>&</sup>lt;sup>34</sup> This idiom contains an open genitive slot, but as the direct object and indirect object are present, meaning, fixed, I included this idiom within the subtype of *full* ditransitive idioms.

### **6.3** Accounting for the Distribution of Verbs

Summarizing the results of the distribution of verbs among ditransitive idioms in Hebrew leads to the following generalizations:

- (80) a. If a verb encodes a Caused Possession meaning only, it heads *Fixed-Theme (Open-Goal)* idioms.
  - b. If a verb encodes a Caused Motion meaning, it heads *Fixed-Goal* idioms, whether *partial* or *full*.

Given (80a-b), it follows that:

- (81) a. If an idiom has a Fixed Theme and an "Open" Goal, the verb heading it has a Caused Possession meaning.b. If an idiom (partial or full) has a Fixed-Goal, the verb heading it has a Caused Motion reading.
- (82) A verb compatible with both meanings (Caused Possession and Caused Motion) can head *Fixed-Goal* or *Fixed-Theme* idioms.

Generalizations (80a) and (81b) follow on the same grounds. Let us start with (80a). If a verb encodes a Caused Possession meaning (e.g. *natan* 'give'), its Goal argument is interpreted as a Recipient and hence, it is animate (mostly, human). As stated in Nunberg, Sag & Wasow's principles (61) (subsection 5.3), arguments tend to preserve their animacy in idioms, and animates fail to describe abstract situations. Since idioms describe abstract situations in terms of concrete ones, animate arguments tend **not** to appear in the fixed part of idioms. Since Recipients are typically humans they tend not to appear in the fixed part of idioms. It follows that idioms headed by verbs encoding a Caused Possession meaning must have their Goal "open" since it is interpreted as a Recipient.

Generalization (81b) is the mirror image of generalization (80a), as explained directly. If an idiom (partial or full) has a fixed Goal, its Goal (by and large) cannot be animate, as animates tend not to appear in the fixed part of idioms, due to principles (61). If the Goal cannot be animate, it cannot be a Recipient, as the latter is most typically human. If the Goal cannot be animate, the relevant verb cannot encode a Caused

Possession meaning, but must, instead, encode a Caused Motion meaning (e.g. daxak 'pushed').

The next question is what underlies generalizations (80b) and (81a)? An additional principle constraining the formation of idioms seems to be at work here. As observed by Tal Siloni (p.c.), the free slot in *partial* Verb Phrase idioms usually refers to a human argument. Indeed, an examination of all the *partial* idioms constituting the present corpus reveals that the empty slot – whether in the Goal position or the Theme one – usually refers to humans. The constraint that the empty slot tends to be subject to is stated below.

# (83) The free slot in *partial* Verb Phrase idioms refers to [+human].<sup>35</sup>

I will not discuss here the question of what underlies the generalization in (83). Importantly, the generalization is largely confirmed by my corpus with regard to *Open-Goal* idioms.<sup>36</sup> Let us then see how (83) helps us understand (80b) and (81a), starting with the latter. If an idiom has an "open" Goal, the latter is [+human]. The solution then is straightforward: a [+human] Goal is interpreted as a Recipient and not a Location. Hence, idioms with an "open" Goal must be headed by a verb encoding a Caused Possession meaning. However, human arguments can denote Locations and hence, can be selected by verbs encoding Caused Motion verbs, as can be seen in (84a-b).

(84) a. dina lakxa et yossi el ha-rofe
Dina took ACC Yossi to the doctor

'Dina took Yossi to the doctor'

<sup>35</sup> By [+human] arguments we also mean collective nouns referring to a group of people, such as *kita* ('class'), *kahal* ('audience'), *medina* ('country') etc.

These facts might suggest that (83) is a cognitive tendency (not an absolute constraint), just like the cognitive principle in (61). In my corpus the tendency is rather pervasive, but we leave this issue open for further research.

<sup>(&#</sup>x27;class'), kahal ('audience'), medina ('country') etc.

There is only one Fixed-Theme (Open-Goal) in my corpus, which realizes the Goal as an inanimate argument: natan le-x yad ('agreed to participate in x, let x happen'). With respect to Open-Theme idioms there are a few examples (6 out of 16 Fixed-Goal (Open-Theme) idioms in my corpus) in which the Open-Theme can refer to a [-human] argument. For example, idioms such as horid et x la-timyon, can take a [-human] argument, as the following example illustrate.

<sup>(</sup>i) hu horid et kol ha- ma'amacim le- timyon. he lowered ACC all the affords to treasure 'He threw the affords down the drain'

b. dina gilgela et ha- kadur el- yossi
Dina rolled ACC the ball to Yossi
'Dina rolled the ball to Yossi'

Nonetheless, human Goal-Locations are rather rare. Firstly, only 4 out of 9 Caused Motion verbs heading idioms constituting my corpus, allow animate Goal-Locations in non-idiomatic contexts (*gilgel* 'rolled', *daxak* 'pushed', *hixnis* 'let in', *lakax* 'took someone/something somewhere'). The rest do not take human Goal-Locations (*hidbik* 'glued', *hosif* 'added', *horid* 'lowered', *hikdim* 'perceded', *hipil* 'brought down'). Secondly, Google searches reveal that even the 4 verbs that can select human Goal-Locations usually appear with inanimate Goal-Locations. Therefore, given the scarcity of human Goal-Locations, we expect a strong tendency of "open" Goals in idioms to be interpreted as Recipients.

Now let us return to (80b). If a verb encodes a Caused Motion meaning, then its Goal must express a Location. Since free Goals cannot denote Locations by generalization (83), it follows that these Goals must be fixed, as stated in (80b). Thus, in fact, it is the thematic content of the Goal that shapes the form of the idiom, and the content of the Goal argument is determined by the type of verb selecting it. The effect the thematic content of the Goal has on the type of idiom, Goal ditransitives can form is summarized in (85).

#### (85) a. An idiom has a free Goal iff the Goal is a Recipient.

## b. An idiom has a fixed Goal iff the Goal describes a Location.<sup>37</sup>

Finally, Consider (82). If the verb heading the idiom can have either Caused Possession or Caused Motion meanings (e.g., *šalax* 'send'), its Goal can either be a Recipient and consequently be free ("open"), or a Location and consequently be fixed. Hence, verbs compatible with both meanings are not selective with regard to which argument will be free/fixed in the idioms they head.<sup>38</sup> The Theme argument is not

<sup>38</sup> Note that if an idiom has an "open" Goal, the verb heading it can either be a Caused Possession verb or an ambiguous verb, but crucially must describe a Caused Possession meaning in the idiom. Indeed, the

<sup>&</sup>lt;sup>37</sup> It is important to note that sometimes the fixed Goal argument is not a typical Locative argument. Nevertheless, the meanings of *Fixed-Goal* idioms always involve an abstract form of moving the Theme argument to the Goal one, and not a Caused Possession meaning.

expected to have a parallel effect on the form of the idiom, as it is indifferent with regard to animacy.

# 7. Apparent Counter-examples

It is important to note that the account above does not posit absolute restrictions on the formation of idioms, but rather suggests **strong** tendencies. This is so because the "animacy" generalization (61) by Nunberg, Sag & Wasow (1994) is not intended to provide an absolute restriction, but to offer a strong generalization, capturing a typical behavior of idioms. Therefore, it is not surprising to find some counter-examples to these proposals, as illustrated below.

Among 17 *full* idioms collected for this research, we find one Caused Possession verb in 2 idioms, contrary to generalizations (80a)-(81b). They are presented below.

- (86) a. **maxar** et nišmato la-satan sold ACC his+soul to+the devil 'to be persuaded to do something because of the reward you receive for doing it'
  - b. maxar kerax la- eskimosim sold ice to+the Eskimos 'carry coals to Newcastle, do something that is redundant'

According to (80a), if a verb encodes a Caused Possession meaning only, it heads *Open-Goal* idioms. According to (81b), if an idiom has a fixed Goal, the verb heading it has a Caused Motion reading. The idioms in (86a-b), however, are *full* idioms, meaning their Goal is fixed, but they are headed by a verb encoding a Caused Possession meaning only. Notice, however, that both idioms in (86) have a fixed **animate** Goal (assuming that *satan* 'devil' is interpreted as having animate characteristics). As these verbs take only Goal-Recipients, this fact is expected. So although there is a tendency for Goal-Recipients not to appear in the fixed part of idioms (85), the generalizations in (61) do not totally forbid it.

formulation of (78a) does not require that it be a Caused Possession verb but only that it has a Caused Possession reading in the specific idiom. Likewise, if an idiom has a fixed Goal, the verb heading it can either be a Caused Motion verb or an ambiguous one, but crucially it must describe a Caused Motion meaning in the idiom. The formulation of (78b) captures exactly that.

Interestingly, these two idioms, which are *non-decomposable*, can be found in Google searches in the alternating word order, where the Goal precedes the Theme (87a-b), unlike any other *full* idiom, which imposes the Theme-Goal order.<sup>39</sup> This is also expected under the assumption advocated here, that the alternating word order in dative constructions, in which the Goal precedes the Theme, is possible only when the Goal denotes a Recipient.

- (87) a. *maxar la-satan et nišmato* sold to+the-devil ACC his+soul
  - b. maxar la-eskimosim kerax sold to+the-Eskimos ice

Moreover, while the idiom in (86a) usually appears with the *satan* ('devil') as its Goal argument, it can also be found with other Goal arguments, as can be seen by the following examples:

(88) a. *šaron maxar et nišmato la- smol šaron* sold ACC his+soul to+the left wing '(Ariel) Sharon sold his soul to the left wing'

(http://www.ynet.co.il/articles/0,7340,L-2843883,00.html)

b. noam šalit maxar et nišmato le- noni mozes Noam šalit sold ACC his+soul to Noni Mozes 'Noan Shalit sold his soul to Noni Mozes'

(http://rotter.net/forum/politics/23686.shtml)

These facts strongly suggest that that this idiom is not a "true" *full* idiom, but rather constitutes an "open" Goal slot. Therefore, it doesn't really pose a problem to generalization (80a), which predicts that Caused Possession verbs head "Open" Goal idioms.

Turning to the idiom in (86b), it is worth noting that it can also be headed by the verb *hevi* ('brought'), which unlike *maxar* ('sold') is an ambiguous verbs denoting either

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<sup>&</sup>lt;sup>39</sup> In addition to another *full* idiom, headed by an ambiguous verb, which can also appear in Goal-Theme order, but crucially also have an animate Goal argument: *hešiv et nišmato la-bore* ('returned his soul to his maker, died') ~ *hešiv la-bore et nišmato*.

a Caused Possession meaning or a Caused Motion one.<sup>40</sup> This suggests that the verb *maxar* here does not really encode a Caused Possession meaning, but rather a Caused Motion one, as expected by generalization (81b).

There is only one counter-example to (80b) and (81a). The idiom in (89) is headed by a Caused Motion verb, which is expected to appear only with *Fixed-Goal* idioms, but here it heads a *Fixed-Theme (Open-Goal)* idiom.

(89) hixnis le-x makot put into to-x bumps 'beated x'

However, the verb *hixnis* ('put into') in this specific idiom does not seem to encode a Caused Motion meaning but rather a Caused Possession one. A support for this assumption comes from the fact that *hixnis* can be replaced in this idiom by the Caused Possession verb *natan* ('gave') or by the ambiguous verb *hevi* ('brought'). In light of these facts, we can conclude that the verb *hixnis* in this specific idiom has undergone metaphoric transfer that reclassifies it as a Caused Possession verb, and therefore, it can head an "Open" Goal idiom.

#### 8. Previous Accounts

The behavior of ditransitive idioms and the patterns in which they can or cannot appear have received a lot of attention in the past few decades. In addition, previous syntactic studies have utilized ditransitive idioms to justify different analyses of the Double Object and Prepositional Dative constructions. The current section critically summarizes the major syntactic approaches to the dative alternation in English and to the questions addressed throughout this research, regarding the formation of idioms.

# 8.1 The "VP-shell" Analysis (Larson 1988, 1990)

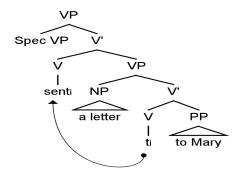
To capture the well-known asymmetries of the dative alternation, presented in subsection 5.1 (examples (47)-(48)), Larson (1988, 1990) proposes a hierarchical structure for the VP, which involves two VP shells. On his analysis, the Prepositional

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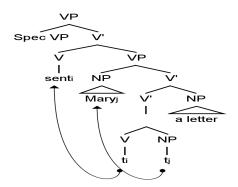
<sup>&</sup>lt;sup>40</sup> Thanks to Irena Botwinik (p.c.) for pointing that out to me.

Dative and the Double Object constructions are derivationally related. The first is the base form, and the second is derived by syntactic movement. In the Prepositional Dative construction the verb and its indirect object (the Goal argument) form a constituent (the Goal is the complement of the verb) that excludes the direct object (the Theme argument), which is generated as a Specifier of the lower VP shell (90). The Double Object construction, on the other hand, is derived by a passive-like operation, moving the Goal to the Specifier position of the lower VP shell and generating the Theme in an adjunct position (91).

### (90) Prepositional Dative construction: John sent a letter to Mary



### (91) Double Object construction: John sent Mary a letter



The structures in (90)-(91) capture the observation, first noted by Barss and Lasnik (1986), that in the Prepositional Dative construction the Theme asymmetrically c-commands the Goal, whereas in the Double Object construction it is the Goal that asymmetrically c-commands the Theme (as demonstrated in subsection 5.1).

One of the arguments Larson (1988) brings to support his analysis is the existence of *Fixed-Goal (Open-Theme)* English ditransitive idioms in the Prepositional Dative construction (appearing in "discontinuous" forms, in his terms), as can be seen in (92)-(93) below (these facts were first noted by Emonds 1972).

- (92) *throw x to the wolves* ('sacrifice someone to save the rest')
- (93) throw x to the dogs ('abandon x to enemies or evil')

Assuming that fixed parts of idioms must form syntactic and semantic constituents at some underlying level of representation, the existence of "discontinues" idioms, such as those in (92)-(93) is expected. Since before movement the verb forms a constituent with its indirect object (the outer complement), to the exclusion of the direct object, the two can form a thematic complex, which can carry an idiosyncratic meaning.

However, as already mentioned in the introduction, the assumption that idioms must form constituents at some underlying level of representation, faces problems with the existence of non-constituent idioms, such as those in (94)-(95), in which x can be filled by any nominal argument which is not interpreted idiomatically (Nunberg, Sag & Wasow 1994, O'Grady 1998, among others).

- (94) get x's goat ('make x annoyed or angry')
- (95) fill x's shoes ('assume x's position or duties')

Moreover, under this analysis the existence of idioms in the Prepositional Dative construction that include a verb and a fixed Theme, excluding the Goal, such as the idioms in (96)-(97), is unexpected.

- (96) give the creeps to x ('give x a feeling of uneasiness or mild fright')
- (97) give the boot to x ('stop employing x, end a relationship with x')

If the verb and the Theme argument do not form a thematic complex, we would not expect these idioms to appear. Larson (1988) acknowledges these facts, but argues that they are not true counter-examples to his analysis, since the idiomaticity of these idioms lies in the object alone and not in the verb+object. He claims that since the

standard entailment x-give-y-to-z  $\longrightarrow$  z-get-y is preserved in these idioms, as can be seen in (98)-(99) below, it suggests that the verb in these examples is not part of the idiom.

- (98) Geez, you get the creeps just looking at him.
- (99) Peter got the boot.

(Larson 1988: p. 341, (12c-d))

However, there are idioms consisting of a verb and its Theme argument (excluding the Goal) that do not have a *get* counterpart (100-101).

- (100) give rise to x ('cause x')
- (101) give birth to x ('deliver x, bring forth a new idea, an innovation')

Moreover, as argued in Richards (2001), if Larson is correct and the idiomaticity of idioms, such as those in (96)-(97), lies in the objects alone (excluding the verbal heads), then we would expect these objects (NPs) to appear freely (outside the Verb Phrase idiom) and still be able to carry idiomatic interpretations. This, however, is not the case. As Harley (2002) shows, a sentence like *the boot upset Peter* (Harley 2002: p. 45) cannot be interpreted idiomatically. The same is true for Hebrew. None of the NPs occurring in *Fixed-Theme (Open-Goal)* idioms can be interpreted idiomatically by themselves. For example, the NP *xevel* ('rope'), which appears as complement of the verb *natan* ('gave') in the idiom *natan le-x xevel* ('helped x'), cannot be interpreted idiomatically outside of the Verb Phrase idiom (102).

Furthermore, as pointed out in Harley (2002), Larson's analysis according to which the Double Object construction is derived by a passive-like operation, also predicts that at least some *Fixed-Goal* idioms in the Prepositional Dative construction will be able to freely shift to the Double Object construction. However, this is clearly not the case. As

we have already seen, there are no examples of "discontinuous" idioms, such as those in (92)-(93), which can appear in the Double Object construction (103-104).

- (103) \*throw the wolves x
- (104) \*throw the dogs x

The same is true for Hebrew. As we have seen, idioms in which the Goal is fixed must appear in Theme-Goal order and cannot alternate into Goal-Theme order.

## 8.2 "The Continuity Constraint" (O'Grady 1998)

Aware that idioms need not form constituents, O'Grady (1998) argues that they can still be characterized in syntactic terms. To do that, he proposes two independent principles that govern the formation of idioms: (a) "the Continuity Constraint" and (b) "the Hierarchy Constraint". "The Continuity Constraint" defines the general architecture of idioms in terms of a continuous chain of head-to-head relations. According to this constraint, idiom's component parts must form a chain of heads, in which a lexical head licenses its dependents such as arguments, modifiers and specifiers, via their heads. To account for the argument structure of idioms, he uses "the Hierarchy Constraint", which was first introduced by Kiparsky (1987). According to this constraint, arguments, which are part of the fixed portion of an idiom, must be lower on the thematic hierarchy (Agent > Theme > Goal/Location) than arguments, which are not part of the idiom.

Idioms in the Double Object construction, thus, pose an empirical problem to "the Hierarchy Constraint", which predicts that a ditransitive verb with the argument structure <Agent, Theme, Goal>, will be able to form idioms that include just the verb and its Goal, but not the verb and its Theme. As we have seen, though, the opposite is true: there are no Double Object idioms, which consist of the verb and its Goal, leaving the Theme "open", while there are Double Object idioms consisting of verb and Theme, where the Goal constitutes the "open" slot.

O'Grady (1998) is aware of these facts and remarks that while "the Continuity Constraint" is an absolute restriction on the formation of idioms, "the Hierarchy Constraint" only reflects a strong tendency. He briefly points out two possible explanations for this asymmetry. The first, suggested by Kiparsy (1987), is that Double

Object verbs have the argument structure <Agent, Recipient, Theme>, compared to <Agent, Theme, Goal> for Prepositional Datives. Therefore, Double Object idioms can have their Theme argument fixed, but not the Goal-Recipient one (as it is higher on the thematic hierarchy). However, this solution cannot account for the fact that Prepositional Dative idioms can either have their Theme or their Goal fixed. In fact, it predicts that there will be no *Fixed-Theme (Open-Goal)* idioms in the Prepositional Dative construction, contrary to the facts.

The second explanation, which I have discussed in subsection 5.3, posits that since the first argument in the Double Object construction is always a Recipient, which tends to denote animates, idioms in this construction do not appear with a *Fixed-Goal*, as Nunberg, Sag & Wasow's (1994) cognitive principles (61) ban it. This solution, as I have shown throughout the current research, seems to be the most accurate explanation. O'Grady, however, takes no stand on the matter and leaves it open for further research.<sup>41</sup>

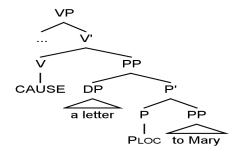
#### 8.3 The Symmetric Theory of Ditransitives (Harley 2002)

Harley (2002) assumes (as opposed to RH&L 2008) that all ditransitive verbs exhibiting the dative alternation have two meanings: a Caused Possession meaning and a Caused Motion one. On her analysis, each of these meanings is realized by a different syntactic construction – a Caused Possession by the Double Object construction and a Caused Motion by the Prepositional Dative one. The syntactic structures of these two constructions are essentially identical, except that the two internal arguments are reversed, depending on an abstract preposition of the verb that encodes either Location (P<sub>LOC</sub> in Prepositional Dative construction (105)) or Possession (P<sub>HAVE</sub> in Double Object construction (106)).

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<sup>&</sup>lt;sup>41</sup> An additional problem raised by "the Continuity Constraint" is that it is not restrictive enough, since it does not pose any limitations on the length of idioms. A solution to this problem is given in Horvath and Siloni (2008). They suggest that the form of Verb Phrase idioms is determined specifically by the verbal head, and that fixed parts of idioms must be licensed by it, i.e. arguments of the verb (including optional ones), secondary predicates (and their modifiers) etc. If fixed parts of idioms can only be a licensee of the verbal head, this clearly entails that there is a limit to the length of Verb Phrase idioms. Such an account is desirable, given that idioms have to be stored in the mental lexicon (an assumption that is highly accepted in the literature) and thus, are not likely to be unlimited.

### (105) Prepositional Dative Construction: John sent a letter to Mary



## (106) Double Object Construction: John sent Mary a letter

Assuming that all fixed parts of an idiom must form an underlying semantic and syntactic constituent (again, a highly problematic assumption), Harley (2002) claims that ditransitive idioms are restricted to either the Double Object construction or to the Prepositional Dative one. If an idiom has one fixed Noun Phrase constituent, this Noun Phrase must be the sister of the abstract P head. Thus, an idiom with a fixed Goal should not be found in the Double Object variant, since P<sub>HAVE</sub> and the fixed Goal do not form a constituent. On the other hand, idioms with a fixed Theme and an "open" Goal should never appear in the Prepositional Dative construction, since P<sub>LOC</sub> and the fixed Theme do not form a constituent. Clearly, as also noted in RH&L 2008, this account cannot explain all the data with regard to ditransitive idioms. As we have seen, idioms with fixed Themes are not necessarily restricted to the Double Object construction, but can also occur in the Prepositional Dative one.<sup>42</sup>

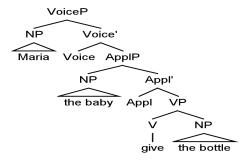
 $^{42}$  Harley (2002) is aware of such idioms but argues that they result from "heavy NP shift". However, this is not always the case. There are a lot of examples of *Fixed-Theme (open-Goal)* idioms in English that appear

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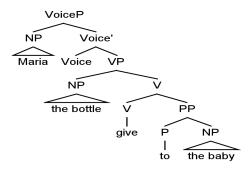
## 8.4 The Asymmetric Theory of Ditransitives (Bruening 2010)

As opposed to Harley (2002), Bruening (2010) (based on Marantz 1993 and Kratzer 1996) proposes an asymmetric theory of ditransitives. On his analysis, in the Double Object construction, the Theme is an argument of the verb, while the Goal is introduced by an Appl(icative) head that is projected between the verb and Voice (107). The Prepositional Dative construction, in contrast, lacks Appl head, thus, having both the Theme and the Goal as arguments of the verb (108).

(107) Double Object Construction: Maria gave the baby the bottle<sup>43</sup>



(108) Prepositional Dative Construction: Maria gave the bottle to the baby



in either the Double Object or the Prepositional Dative constructions, regardless of the heaviness of the Goal argument, occupying the "open" slot, such as (i) below.

(RH&L 2008: p.153, (57b))

<sup>(</sup>i) Police lend an ear to the victims.

<sup>&</sup>lt;sup>43</sup> Bruening (2010) rejects the DP hypothesis and therefore, the Noun Phrases in his constructions appear as NPs. This, however, is irrelevant to the current research and therefore, I do not discuss it.

With regard to idiomatic interpretation, Bruening (2010) argues (expending "the Continuity Constraint" by O'Grady 1998) that it is governed by lexical selection: two components can be interpreted idiomatically only if one selects the other. In addition, he posits a constraint on idiomatic interpretation according to which, when the selected element is a lexical category (N, V, A or Adv) and only then, all of its selected arguments must also be interpreted idiomatically.

Assuming that the first (Goal) and second (Theme) objects of the Double Object construction are arguments of different heads, and that only the second is an argument of the verbal head, allows him to explain the lack of idioms of the type \*throw the wolves x. Under his analysis, this class of nonexistent idioms would have the Goal, Appl and V interpreted idiomatically, excluding the Theme. Appl selects the Goal and V, and so these three could be interpreted idiomatically. But since V is a lexical category, and it is part of the idiom with the head that selects it, all of its selected arguments have to be part of the idiom too. In contrast, idioms of the type  $throw\ x\ to\ the\ wolves$  exist, because in the Prepositional Dative construction, the Goal is an argument of the verb. Therefore, in such idioms V selects the head of its Goal argument  $-P\ (to)$  – but since nothing higher than V is part of the idiom (V is not selected), not all the selected arguments of V need to be part of the idiom, meaning the Theme can be left "open".

On the other hand, idioms such as *give* x a *wide* berth ('keep distance from x') or its alternating pattern – give a *wide* berth to x – exist because they consist of just the verb and the Theme (which is an argument of the verbal head in both the Double Object and the Prepositional Dative constructions). Since nothing higher than the verb is part of the idiom in neither the Double Object idioms nor the Prepositional Dative ones, then according to Bruening's constraints on idiomatic interpretation, not all the selected arguments of V need to be part of the idiom. And since these idioms contain only the verb and the Theme, they can appear in either the Double Object construction or the Prepositional Dative one.

The structures Bruening (2010) posits to the Prepositional Dative and Double Object constructions and his theory of idiom formation seem to be most accurate with respect to the word order alternations attested in *Fixed-Theme (Open-Goal)* idioms versus *Fixed-Goal (Open-Theme)* idioms in both English and Hebrew.

However, Bruening's (2010) proposal cannot account for the fact that *full* ditransitive idioms in Hebrew, such as those in (36)-(38) (subsection 4.1.3), cannot appear in the Double Object construction (Goal-Theme order). If Appl is part of the idiom since it selects V and the Goal argument, then according to Bruening's (2010) constraints on the formation of idioms, the Theme argument needs to be part of the idiom as well. Meaning, there is no reason for *full* idioms not to appear in the Double Object construction (Goal-Theme order). This, however, is clearly not the case. As we have seen in subsection 4.1.3, *full* ditransitive idioms in Hebrew, just like *Fixed-Goal (Open-Theme)* idioms, can appear only in Theme-Goal order, i.e. in the Prepositional Dative construction. Consequently, it seems that the "animacy" constraints, on both the fixed and "open" material in idioms, are essential in order to account for both the word order alternations attested in the different types of ditransitive idioms, and for the fact that "open" Goal slots refer to Recipients.

In addition, Bruening's (2010) analysis fails to account for other idiom facts attested in Hebrew, outside the ditransitive domain. As noted in Almog (2012), there are lots of idioms in Hebrew, headed by transitive or intransitive verbs, in which inalienable Possessive Datives constitute the "open" slot, as can be seen in (109)-(110) below (the Possessive Dative constituent is marked in bold).

- (109) bilbel le-x et ha-mo'ax confused to-x ACC the-brain 'bothered x with useless chatter'
- (110) macac le-x et ha-dam sucked to-x ACC the-blood 'abused, took advantage of x'

There are good reasons to believe that the inalienable Possessive Dative is an argument of the possesse. The following examples from Siloni (2002) demonstrate that inalienable nouns require their possessor to be present in the sentence.

(111) ??ha- roš nifga. the- head was+hurt

(112) *nifga* **lo** *ha- roš*. was+hurt to+him the-head

(Siloni 2002: p. 168, (16a)-(16c))

As Siloni (2002) shows, sentence (111) is odd since it does not contain a possessor, and therefore, the noun *ha-roš* ('the-head') cannot be understood inalienably. Sentence (112), on the other hand, is fine because it contains a Possessive Dative element (marked in bold), which can constitute the possessor of the inalienable noun. These facts strongly suggest that inalienable Possessive Datives are arguments of the noun of which they are part and not of the verb. Under Bruening's (2010) theory, however, it would be unexpected for them to constitute the "open" slot, since they are arguments of the selected possessed element, a lexical category N, and therefore, have to be part of the fixed material.

To conclude this section, it seems that none of the accounts above provides a full (and accurate) explanation to the puzzles raised by ditransitive idioms in English and Hebrew, and discussed in the current research. Some of these accounts seem to be too restrictive, as they do not allow all ditransitive idioms and all alternating patterns. Others seem to be too "weak" as they predict the occurrence of non-existing idioms as well as alternation of ditransitive idioms, which in fact appear only in one word order.

#### 9. Conclusion

Although idiomatic phrases seem, at least on the surface, quite distinct from "standard" literal phrases, there is no doubt that they play a central role in language and thus, can hardly be considered as marginal or abnormal phenomena. One of the major observations this research leads to is that there is an overwhelming similarity between the structure and behavior of Verb Phrase idioms and their literal counterparts. While it is true that the correlation between idioms' fixed parts and their overall meanings is by and large arbitrary (similarly to language's arbitrary relation between the phonetic form of a linguistic sign and its meaning), the structure of idioms seems to be far from random.

By examining all existing and non-existing patterns of Goal ditransitive idioms in Hebrew and their properties, I have shown that the formation of Verb Phrase idioms is governed by (i) the semantic and lexical properties of the their head (the verb) and (ii) certain general cognitive principles. More specifically, word order and the status – free or fixed – of one of the complement, is determined by the type of Goal ditransitive verb heading the idiom: a Caused Motion or a Caused Possession verb modulo certain cognitive principles.

The study shows that the "animacy" constraint on the fixed part of idioms, as suggested by Nunberg, Sag & Wasow (1994), can account for the puzzling results of my corpus-research, as well as the English data, according to which *Fixed-Goal* idioms (*partial* or *full*) cannot appear in the Double Object construction (Goal-Theme order). Since the Goal argument of this type of idioms is fixed, it tends to be inanimate, hence, incapable of being a Recipient (which is characteristically human). Since only Goal-Recipients can be realized as the first object of a ditransitive verb, *Fixed-Goal* idioms cannot appear in the Double Object construction (i.e. Goal-Theme order). In addition, this observation accounts for the fact that *Fixed-Goal* idioms are headed by verbs that have a Caused Motion meaning. Since such idioms tend to realize their Goal argument as a Goal-Location rather than a Goal-Recipient, only verbs that can take a Goal-Location argument, can head such idioms.

Moreover, the study suggests that not only the fixed part of idioms is subject to an "animacy constraint", but also the free ("open") slots. As suggested by Tal Siloni (p.c.), the free slots in idioms tend to refer to human arguments. This observation correctly predicts that only *Fixed-Theme (Open-Goal)* idioms show the dative alternation. Since their Goal argument is always human, and thus can denote a Recipient, it can be realized as either the first or the second object of a ditransitive verb (resulting in Goal-Theme or Theme-Goal orders). This can also account for the fact that *Fixed-Theme (Open-Goal)* idioms are headed by verbs denoting a Caused Possession meaning, i.e. verbs which can take a Goal-Recipient argument.

In the spirit of O'Grady (1998) and Bruening (2010), it therefore, seems that the formation of idioms, just like the formation of "standard" compositional phrases, is governed by lexical selection. In other words, the fixed part of idioms can be reduced to head-to-head relations. More specifically, however, it seems that the form of the idiom is determined solely by the **verbal head** that licenses (the heads of) its internal arguments, as suggested by Horvath & Siloni (2008). Given that the length of Verb Phrase idioms is

rather limited, such an account is both empirically and conceptually desirable, since it posits limits on the length of possible Verb Phrase idioms.

The great benefit of the analysis proposed in this thesis is that it accounts for the behavior of idioms and their formation by using existing mechanisms, such as lexical-semantic properties, and general cognitive principles without adding new representations, mechanisms or rules to the linguistic theory.

Finally, the results of the current research show that the same asymmetry regarding complement order in English Goal ditransitive idioms is attested also in Hebrew. This provides strong support to the view that Hebrew exhibits a genuine dative alternation and has parallel constructions to the Double Object and Prepositional Dative ones in English.

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# Appendix: Ditransitive Idioms in Hebrew

All idioms collected for this research are listed below in Hebrew alphabetical order. The complement order in which they appear here is the same as listed in idiom dictionaries. The idioms of each type are also divided into *decomposable* and *non-decomposable* idioms.<sup>44</sup>

## 1. Fixed-Goal (Open-Theme) Ditransitive Idioms

#### 1.1 Decomposable Idioms

- (1) hexzir et x la- mutav returned ACC x to+the better 'made x return to the straight and narrow'
- (2) hexzir et x la- telem returned ACC x to+the furrow 'made x return to what is accustomed'
- (3) hixnis et x la- inyanim put into ACC x to+the things 'trained x to a certain task'
- (4) hixnis et x la- tmuna put into ACC x to+the picture 'brought x into the matter'
- (5) lakax et x la- lev took ACC x to+the heart 'took x to the heart, considered x very seriously'

#### 1.2 Non-decomposable idioms

(6) daxak et x la- pina<sup>45</sup>
pushed ACC x to+the corner
'pushed x into a corner, not let x any liberty of reaction'

(http://www.calcalist.co.il/local/articles/0,7340,L-3418646,00.html)

<sup>&</sup>lt;sup>44</sup> In order to determine if a specific idiom is to be considered *decomposable* or *non-decomposable*, I followed Nunberg, Sag & Wasow's (1994) criterion, according to which meanings of *decomposable* idioms can be assigned to the idiom's subparts.

When this idiom appears with an inanimate Theme, as in (i), it means 'pushed something aside'.

<sup>(</sup>i) ha-imut daxak la- pina et ha-še'ela še-amda bifney ha-ve'ida... the-confrontation pushed to+the-corner ACC the-question that-stood in front the-conference 'The confrontation pushed aside the question faced by the conference...'

- (7) hevi et x la- olam brought ACC x to+the world 'created x, delivered x'
- (8) hidbik et x la- kise glued ACC x to+the chair 'fascinated x'
- (9) horid et x le- timyon lowered ACC x to- treasure 'threw x down the drain, lost x'
- (10) hexzir et x le- axor returned ACC x to back 'made x experience the past '
- (11) hixnis et x la- kis ha- katan put into ACC x to+the pocket the small 'was much better than x'
- (12) hixnis et x la- roš put into ACC x to+the head 'understood x'
- (13) hipil et x la- krašim brought down ACC x to+the board 'floored x, beat x'
- (14) zarak et x la- klavim threw ACC x to+the dogs 'abandoned x'
- (15) *šalax et x le-kol ha- ruxot* sent ACC x to-all the spirits 'expelled x in a humiliating way'
- (16) *šalax et x le Azazel* sent ACC x to Azazel 'expelled x in a humiliating way'

### 2. Fixed-Theme (Open-Goal) Ditransitive Idioms

#### 2.1 *Decomposable* idioms

- (17) hivti'ax le-x harim ve- gva'ot promised to x mountains and hills 'promised x the moon, made extravagant promises to x'
- (18) he'evir le-x et ha- lapid passed to x ACC the torch 'passed the torch to x, gave his responsibility to x'
- (19) hera le-x et ha- derex showed to x ACC the way 'showed x the way, gave x a spiritual guidance'
- (20) hera le-x panim showed to x face 'treated x warmly, kindly'
- (21) zarak le-x ecem threw to x bone 'threw x a bone, gave someone a small reward or compliment'
- (22) maxar le-x lokšim sold to x noodles (Yiddish) 'deceived x, told x lies'
- (23) natan le-x yad<sup>46</sup>
  gave to x hand
  'agreed to participate in x, let x happen'
- (24) natan le-x yad xofšit gave to x hand free 'gave x a free hand, let x do whatever he thinks is necessary in a particular situation'

### 2.2 Non-decomposable idioms

(25) hevi le-x et ha- se'if brought to x ACC the paragraph 'annoyed x very much'

<sup>&</sup>lt;sup>46</sup> This idiom has two meanings. The meaning in (23) is only available when the Goal argument is inanimate. When the Goal is [+human] it has a different meaning, mentioned in (34).

- (26) *hevi le-x acabim* brought to x nerves 'annoyed x very much'
- (27) hixnis le-x makot put into to x bumps 'beat x'
- (28) hifna le-x et ha- gav / ha- oref turned to x ACC the back / the nape 'turned his back on x'
- (29) *hera le-x et ha- delet* showed to x ACC the door 'showed x the door, asked x to leave, fired x'
- (30) hera le-x et naxat zro'o showed to x ACC satisfaction arm+his 'beat x harshly'
- (31) zarak le-x et ha- kfafa threw to x ACC the gauntlet 'threw down the gauntlet, challenged x to an argument or a combat'
- (32) natan le-x xevel gave to x rope 'helped x'
- (33) natan le-x xaka
  gave to x fishing rod
  'gave x a fishing rod, started x on the road to self reliance'
- (34) natan le-x yad gave to x hand 'helped x'
- (35) natan le-x mana gave to x dish 'reprimand x'
- (36) natan le-x puš<sup>47</sup>
  gave to x push (English)
  'gave x a push, encouraged x'

<sup>&</sup>lt;sup>47</sup> This idiom can also appear without a Goal argument: *natan puš* meaning, made an effort.

- (37) *natan le-x perurim* gave to x crumbs 'deprived x'
- (38) šalax le-x yadayim sent to x hands 'groped x'
- (39) šalax le-x mabatim<sup>48</sup> sent to x glances 'looked at x over and over again'

### 3. Full Ditransitive Idioms<sup>49</sup>

### 3.1 Decomposable idioms

- (40) gilgel et ha- kadur la- migraš šel x<sup>50</sup> rolled ACC the ball to+the court GEN x 'passed the responsibility for a certain action to x'
- (41) hosif šemen la-medura added oil to+the fire 'added fuel to the fire, aggravated a situation'
- (42) hexzir atara le-yošna
  returned crown to-oldness
  'restored something to its previous good quality or condition'
- (43) hixnis et ha- dvarim le- proporcia put into ACC the things to propotions 'saw things in the right proportions'
- (44) hixnis roš bari le-mita xola put into head healthy to bed sick 'got into a problematic situation which has no solution'

This idiom can also realize its non-Theme argument with other prepositions such as be- ('in') or el ('to').

<sup>&</sup>lt;sup>49</sup> I excluded the idiom in (i) from my corpus-research, because it seems that it behaves differently than other *full* ditransitive idioms. In this specific idiom the verb and the Theme seem to constitute a new verb *natan dror*, which means 'released'. In addition, this idiom can appear with other Goal arguments such as *le-dimyono* ('to his imagination'), *le-maxšavotav* ('to his thoughts'), *li-lšono* ('to his language'). Therefore, it does not constitute a "true" *full* ditransitive idiom.

<sup>(</sup>i) natan dror le- yecarav gave freedom to urges+his

<sup>&#</sup>x27;acted with no inhibitions'

<sup>&</sup>lt;sup>50</sup> This idiom contains an "open" genitive slot, but since both the direct and indirect objects are present, meaning, fixed, I included this idiom within the subtype of *full* ditransitive idioms.

- (45) hikdim na'ase la-nišma
  preceded what is done to+the what is heard
  'acted quickly without understanding or hearing the whole picture'
- (46) hikdim trufa la- maka preceded medicine to+the injury 'took preventive steps against expected trouble'
- (47) *lakax et ha- inyanim la- yadayim* took ACC the things to+the hands 'took matters into one's own hands, took initative'

#### 1.2 Non-decomposable idioms

- (48) gilgel et eynav la- šama'im rolled ACC eyes+his to+the sky 'rolled one's eyes heavenward, acted righteously but hypocritically'
- (49) *hošit et cavaro le- šxita* stretched out ACC neck+his to slaughter 'sacrificed himself, willingly or unwillingly'
- (50) hošit yad le- šalom<sup>51</sup> stretched out hand to peace 'wanted to reach appeasement'
- (51) hexzir et ha- šed la- bakbuk returned ACC the demon to+the bottle 'managed to gain control on a social phenomenon that erupted again'
- (52) hešiv et nišmato la- bore returned ACC soul+his to+the creator 'returned his soul to his maker, died'
- (53) lakax et ha- xok la- yadyim took ACC the law to+the hands 'took the law into one's own hands, did something illegal in order to punish someone'

<sup>&</sup>lt;sup>51</sup> This idiom can also appear with an "open" Goal, as the following example illustrate (thanks to Tal Siloni for pointing this out to me).

<sup>(</sup>i) *hu hošit la- oyvim yad le-šalom* he streached out to+the enemies hand to-peace 'He wanted to reach appeasement with his enemies'

- (54) maxar et nišmato la-satan sold ACC his+soul to+the devil 'to be persuaded to do something which is against your beliefs and values'
- (55) maxar kerax la- eskimosim sold ice to+the Eskimos 'carry coals to Newcastle, do something that is redundant'