### Externalization in Hebrew and English Object Gap Constructions (IATL 23.6.04)

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#### **Abstract**

The embedded constituent of Hebrew object gap constructions (OGC) (e.g. the Tough Construction, the Object Purpose Clause) is nominal rather than verbal, introduced obligatorily by the prepositional element le- ('to'). I argue that it is unlikely for the gap in Hebrew to be created by Op-movement, as widely assumed for English OGCs (cf. Chomsky 1986). Rather, based on the properties of the nominal, I propose that the object gap nominal in Hebrew OGCs is formed by Externalization of the internal argument, a lexical operation that crucially involves the prepositional morpheme le- ('to'). Extending the analysis to English OGCs I show that to in the embedded constituent of OGCs is not a T(ense) head, and that this constituent in English does not have a subject position. Consequently, I argue that in English, like in Hebrew, the object gap constituent is formed by Externalization induced by the preposition to. English Externalization is hypothesized to differ from its Hebrew counterpart in taking place in syntax, rather than in the lexicon.

#### 1. Introduction

The familiar analysis of the English object gap constructions (OGC) such as the Tough Construction (TC) (1a), and the Object Purpose Clause (OPC) (1b) is based on the assumption that the embedded constituent is fully clausal (CP), and the gap is created by Op (null operator)-movement (cf. Chomsky 1986):

a. The book is easy [CP Opi [IP PRO to read ti]]
b. Bart brought the car [CP Opi [IP PRO to examine ti]]

Despite its popularity, it has been acknowledged in the literature that some of the aspects of the analysis are stipulative and at best questionable (cf. Fiengo and Lasnik 1974, Cinque 1990). For instance: (i) Why does the Op necessarily move from the object position in the TC ((1a) vs. (2a))? Op-movement can take place from either subject or object position, as witnessed by Hebrew relative clauses (2b,c):

a. \*John is easy to read the book.b. ze ha-yeled [Op še- [t yode'a la-uf]] it the-boy that- knows to+fly

'This is the boy that can fly.'

c. ze ha-tapu'ax [OP še- [ dan axal t]]

it the-apple that- Dan ate

'This is the apple that Dan ate.'

- (ii) Why is this movement impossible in the Double Object construction (DOC) (3)? Note that the Op-movement analysis predicts the OGCs (3a,b) to pattern with relative clauses, but this is not exactly the case ((3b) vs. (3d)):
  - (3) a. \*John is easy to give presents.
    - b. \*Presents are easy to give John.
    - c. \*This is the person I gave presents.
    - d. These are the books I gave John.
- (iii) If the embedded constituent is clausal, namely CP, why is it impossible to realize an expletive *there* by means of a prepositional C (4)?
  - (4) a.\*I chose Bart for there to be pictures of all over.
    - b.\*Bart is easy for there to be pictures of all over.

Compare: c. Lisa is eager for there to be pictures of Bart all over.

- (iv) Why can the embedded verb not be passivized (5)?
  - (5) a. \*Lisa is easy to be pleased.

Compare: b. It is easy to be pleased.

c. Lisa is eager to be pleased.

Once we shift attention to the Hebrew OGCs, additional questions arise.

- (v) Why is the embedded constituent in the Hebrew OGCs nominal rather than verbal (6)?
  - (6) ha-sefer kal \*lehavin/le-havana
    the-book easy to+understand/to-understanding
    'The book is easy to understand.'

- (vi) Why must the nominal constituent be introduced by the prepositional element *le*-(7)? Notice that this question cannot be answered trivially (e.g. subcategorization), as the absence of *le* does not automatically render the sentence ungrammatical, but rather it eliminates the object gap interpretation.
  - (7) ha-yeled kal (le-) havana
    the-boy [is] easy (to)-understanding
    without le-: 'The boy understands (things) easily' (no object gap reading)
    with le-: 'The boy is easy to understand' (object gap reading)

The main claim of my analysis is that the embedded constituent in OGCs is formed by Externalization of the internal argument, an operation that crucially involves the prepositional morphemes, *le-* ('to') in Hebrew, *to* in English.

The paper is organized as follows: in section 2, based on the properties of the nominal in Hebrew OGCs, I motivate lexical Externalization in Hebrew. Section 3 establishes that the embedded constituent in English OGCs is not clausal and argues that, like in Hebrew, it is formed by Externalization, though in syntax rather than in the lexicon. The consequences of the analysis in Hebrew and English are discussed in section 4. Section 5 addresses briefly the function of the embedded constituent in OGCs.

#### 2. Externalization in Hebrew

- 2.1 The nature of the object gap nominal and its syntactic realization
  As observed by Engelhardt (1998), the embedded constituent in Hebrew OGCs is
  formed with an event-nominal (e-N), rather than a result nominal (8).
  - (8) ha-teoriya kala \*le-mivxan/le-bxina the-theory easy to-test/to-testing 'The theory is easy to test.'

An e-N is known to function as an argument only (Grimshaw 1990). But in OGCs it is clearly predicative. This is demonstrated in (9a), where referring back to the nominal by a pronoun is impossible:

(9) a. ha-sefer haya kal li-[kri'a]<sub>i</sub>. \*hi<sub>i</sub> nimšexa xaci ša'a.

the-book-masc. was easy to-reading-fem. It-fem. continued half hour.

Compare: b. ha-sefer<sub>i</sub> haya kal li-kri'a. hu<sub>i</sub> nikra tox xaci ša'a.

the-book-masc.was easy to-reading-fem. It-masc. was-read inside half hour.

'The book was easy to read. It was read in half an hour.'

If the nominals of OGCs are *e*-Ns, the question arises how come they are predicative, rather than argumental. Let us consider two existing proposals. I will return to the additional properties of the object gap nominals afterwards.

### 2.1.1 Formation of a predicative constituent

- (i) <u>Op-movement</u>: The syntactic operation which turns an argumental CP into a predicative one (e.g. a relative CP, CP in OGCs) is the null operator (Op)-movement familiar from Chomsky 1977, 1986, Browning 1987, Rothstein 2001, among others. For instance, in the relative clause (10a) and the English TC (10b), the Op generated in object position moves to spec-CP and binds its trace, creating an operator-variable chain rendering the CP predicative, a CP with an open position:
  - (10) a. The book [ $_{CP}$  Op<sub>i</sub> that [ $_{IP}$  Dan bought  $t_i$ ]] is interesting b. The book is easy [ $_{CP}$  Op<sub>i</sub>[ $_{IP}$  PRO to read  $t_i$ ]]

The question of interest is whether a similar syntactic operation is plausible for the *le*-nominal sequence in Hebrew OGCs.

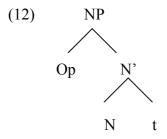
To sharpen the following discussion, let me note first an additional property of the e-N of OGCs (observed by Engelhardt 1998). Unlike e-Ns, which can be either definite or indefinite (11b), the e-N in OGCs is obligatory indefinite (11a):

(11) a. *ha-teoriya kala le-bxina/\*la-bxina*the-theory easy to-testing/to+the-testing
b. (*ha)-bxina šel ha-teorya*the-testing of the-theory

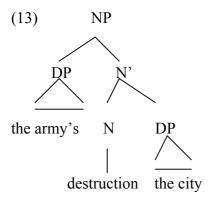
Following previous work on Hebrew nominals (cf. Siloni 1997, Borer 1999) I will take the obligatory indefiniteness to indicate the absence of the functional head D (see

also Engelhardt 1998). Accordingly, it will be assumed that the syntactic projection of the nominal in OGCs is NP rather than DP.

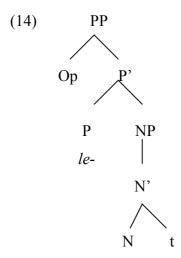
If so, the *le*-nominal sequence can be analyzed either as an NP (with *le*- affix), or as a PP. If it is an NP, the Op base generated as the internal argument of the N, can move only to spec-NP, as shown in (12):



It is rather obvious that the Op-movement in (12) is illicit, as the specifier of an NP is not an operator position, i.e. it is an A- rather than an A'- position, as a theta-role can be assigned there (Ritter 1988, Szabolcsi 1992, Siloni 1994, 1997 and references cited therein) (13).



If the *le*-nominal sequence is a PP, then an additional position is available, the specifier of the PP:



Even if the specifier of the PP headed by *le*- is an A'-position, (14) is problematic, as the Op moves out of the nominal. In principle, A'-movement out of nominals in Hebrew is not attested, as shown in (15):<sup>1</sup>

(15) a. bart ti'er et ha-pi'anu'ax šel ha-kod

Bart described Acc the-deciphering of the-code
'Bart described the deciphering of the code.'

b.\*ma bart ti'er et ha-pi'anua'x?

What Bart described Acc the-deciphering

c.\*et ha-kod bart ti'er et ha-pi'anu'ax

Acc the-code Bart described Acc the-deciphering

### Compare:

(16) a. bart nisa lefa'ane'ax et ha-kod

Bart tried to+decipher Acc the-code

'Bart tried to decipher the code.'

b. ma bart nisa lefa'ane'ax?What Bart tried to+decipher'What did Bart try to decipher?'

c. et ha-kod, bart nisa lefa'ane'ax

Acc the-code, Bart tried to+decipher

'The code, Bart tried to decipher.'

 $^{1}$  It should be noted though, that movement out of predicative nominals is sometimes possible in Hebrew (Ivy Sichel p.c.).

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Given the above, I conclude that without some additional stipulations, Op-movement in the *le*-nominal sequence is unlikely to be the right operation to create a predicative phrase, NP or PP.<sup>2</sup>

- (ii) Engelhardt's (1998) activity nominals: Engelhardt (1998) argues that the nominal in OGCs (and some other generic contexts) is a 'defective' kind of argument taking nominal. This kind of nominal is referred to as activity rather than event nominal (A-NOM, as opposed to E-NOM in Engelhardt 1998). The defective nature of these nominals is hypothesized to derive from the absence of D. It is implicit in Engelhardt's proposal that the option to project either an NP or a DP is equally available for simple and event nominals. However, e-Ns are not on a par with simple nominals. Both can be arguments (projecting DPs), but only the latter can be across copula predicates (NPs) ((17a) vs. (17b)) (Grimshaw 1990, following Higginbotham 1985).
  - (17) a. Dan is a teacher.
    - b. \*This was (the) destruction of the city.

Thus the occurrence of *e*-Ns without D cannot be treated as a possibility that in principle exists for any nominal. In other words, even if the assumption that object gap nominals lack D is on the right track, the absence of D has to be motivated.

### 2.2 Additional surprising properties of object gap nominals

#### 2.2.1 Realization of arguments

Following Grimshaw (1990), e-Ns are derived from the corresponding verbs by suppression of the external argument (the Agent). Consequently, on a par with verbs, their arguments are phonetically realized (18b,c) (internal arguments are realized

<sup>&</sup>lt;sup>2</sup> This conclusion is consistent with the fact that there is no iteration of the embedded constituent in Hebrew OGCs:

<sup>(</sup>i) a. \*dan hexin marak reyxani le-šixnu'a šel yosi le-axila/le'exol
Dan prepared soup aromatic to-persuading of Yosi to-eating/to+eat
'Dan prepared an aromatic soup to convince Yosi to eat.'

b. \*marak ko reyxani kal le-šixnu'a šel yosi le-axila/le'exol soup so aromatic easy to-persuading of Yosi to-eating/to+eat 'Such an aromatic soup is easy to convince Yosi to eat.'

obligatorily, whereas the realization of the suppressed Agent is optional). However, as shown in (18a) neither Agent nor Theme can be phonetically realized either as full DPs or as pronominal clitics in object gap nominals:

(18) a. ha-sefer<sub>i</sub> kaše/huva \* li-kri'a šelo<sub>i</sub> /\*li-kri'a šel dan
the-book [is] difficult/[was] brought to-reading of+it/to-reading of Dan
Compare: b. kri'a šel ha-sefer/šelo
reading of the-book/of+it
'reading of the book/of it'
c. kri'a šel dan et ha-sefer
reading of Dan Acc the-book
'Dan's reading of the book'

It is worth noting that although the arguments are not realized, it is not the case that they have been reduced from the argument structure of the nominal. The presence of Agent is implicated by the grammaticality of the Instrument (19a), and that of Theme by the possibility to realize Goal (19b) (Reinhart and Siloni 2004 for the former, Engelhardt 1998 for the latter):

(19) a. ha-sefer kal li-kri'a im zxuxit magdelet
the-book easy to-reading with glass magnifying
'The book is easy to read with a magnifying glass.'
b. matanot ele kašot le-xaluka le-yeladim
presents these difficult to-distribution to-children
'These presents are difficult to distribute to children.'

# 2.2.2 The by-phrase

Unlike e-Ns, which are known to license *by*-phrases (20c), object gap nominals do not license *by*-phrases (20a,b):

(20) a. \*ha-šati'ax kaše le-nikuy al-yedey dan the-carpet [is] difficult to-cleaning by-Dan
b. \*ran hevi et ha-oto le-cvi'a al-yedey dan
Ran brought Acc the-car to-painting by Dan

Compare: c. *nikuy/tikun šel ha-oto al-yedey dan nidxa* cleaning/repairing of the-car by- Dan [was] postponed 'Cleaning/repairing of the car by Dan was postponed.'

### 2.2.3 Manner adverbials

Finally, manner adverbials can occur in e-Ns in Hebrew (21b), but not in object gap e-Ns (21a):

(21) a. \*ha-šati'ax kaše/huva le-nikuy be- yesodiyut the-carpet [is] difficult/brought to-cleaning in-thoroughness 'The carpet is difficult/was brought to clean thoroughly.'

Compare: b. *nikuy* ha-šati'ax be-yesodiyut haya me'ayef cleaning the-carpet in-thoroughness was tiring 'Cleaning the carpet thoroughly was tiring.'

The table in (22) summarizes the properties of the nominal introduced by *le*- in OGCs, as opposed to the properties of an e-N.

(22)

Properties	le-N	e-N
Function	predicate	argument
External argument realization	-	+
Internal argument realization	-	+
Definiteness	-	+
Manner AdvP	-	+
By-phrase	-	+

### 2.3 The analysis

The basic idea of my proposal is that the predicative nature of the e-N of OGCs is the result of a lexical operation, referred to as Externalization.

Drawing on the different functions of le- in Hebrew, I propose that le- introducing the

e-N in the OGC is a prepositional lexical affix, rather than a syntactic P-head. Its lexical combination with an e-N induces externalization of the N's internal theta-role giving rise to a noun (labeled  $l_e$ N, for convenience) with an external slot (Ext), projecting a  $l_e$ NP, rather than a PP or a DP.

More specifically, I propose that (lexical) Externalization (induced by *le-*) bears a certain similarity to Passivization; it involves arbitrary saturation of the Agent (Sat<sub>ARB</sub>, in the spirit of Chierchia 1995) and removal of (Genitive) Case. Consequently, the Theme is externalized, namely assumes the status of an external slot, as the one posited for AP or PP modifiers (23):

#### (23) <u>Lexical Externalization in Hebrew</u>

It is worth noting that Externalization does not affect the *e* argument of the nominal, which is crucially involved in the interpretation of OGCs (see section 5).

I postpone the discussion of the consequences of (23) until after I introduce Externalization in English. But before that, some supporting evidence for lexical Externalization in Hebrew is in place.

First, viewing *le*- ('to') as a lexical affix, rather than an independent syntactic P-head, is completely reasonable. As briefly mentioned, *le*- in Hebrew instantiates various functions, among them Dative Case marking, where it has been analyzed as a lexical affix (cf. Landau 1994, Botwinik-Rotem 2004 and references cited therein). Further, consider the conjunction in (24a) that shows that it is impossible to omit *le*- on the second conjunct. Given (23), the impossibility to omit *le*- on the second conjunct follows; if *le*- creates a different kind of a nominal, this nominal can be conjoined only with the same kind of nominal, namely a *le*NP. Note that it is not the case that an affixal *le*- cannot be omitted, in principle. As witnessed by the conjunction of Goal arguments in the Hebrew Dative construction (24b), Dative *le*-, which is also a lexical affix, can be omitted (if the conjoined nouns are indefinite).

(24) a. ha-sefer kal li-kri'a ve-\*(le-) nitu'ax the-book [is] easy to-reading and-(to-)analyzing 'The book is easy to read and to analyze.'

Compare: b. *natati matanot le-yeled ve-(le-)yalda*[I] gave presents to-boy and-(to-) girl
'I gave presents to a boy and a girl.'

The conjunction facts in (24a) would be difficult to account for if *le*- is viewed as a syntactic P-head, because a complement of P can be a conjoined nominal (*me'al arim ve-kfarim*, 'above cities and villages').

### 3. Externalization in English

As mentioned at the onset of the paper, the most familiar analysis of OGCs in English (and Romance) is the Op (null operator)-movement analysis repeated in (25). Under this analysis the complement of the main predicate (*tough* A, matrix verb) is fully clausal (CP), and the gap in the object position of the embedded constituent is the trace of the Op (Chomsky 1977, 1981, 1982, 1986a, 1993; Browning 1987; Tellier 1991, among others):<sup>3</sup>

a. The book<sub>i</sub> is easy [CP Op<sub>i</sub> [IP PRO<sub>arb</sub> to read t<sub>i</sub> ]]
b. Dan brought the car<sub>i</sub> [CP Op<sub>i</sub> [PRO to repair t<sub>i</sub>]]

The strongest empirical support for the Op-movement analysis (i.e. for the A'-movement which underlies it) is based on the subjacency effect attested in these constructions (26) (for brevity, I illustrate it only for the English TC). (26a) is grammatical, as the A'-movement of the Op proceeds successive cyclically. However, in (26b) two bounding nodes (NP, IP) are crossed resulting in ungrammaticality (Chomsky 1973):

- (26) a. This book is easy for us [ $_{CP}$  Op<sub>i</sub> [ $_{IP}$  PRO to arrange for the committee [ $_{CP}$  t<sub>i</sub> [ $_{IP}$  PRO to read t<sub>i</sub>]]]]
  - b. \*This book is easy for us [ $_{CP}$  Op<sub>i</sub> [ $_{IP}$  PRO to insist on [ $_{NP/DP}$  the principle [ $_{CP}$  t<sub>i</sub> that [ $_{IP}$  the committee should read t<sub>i</sub>]]]]]

Under the null hypothesis, the interpretation of OGCs is the same across languages.

<sup>3</sup> But see Cinque 1990, where it is argued that the Op in some constructions, among them the TC and OPC, is base generated in the spec-CP and binds a *pro*.

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That is, the embedded constituent in English OGCs should be of the same kind as in Hebrew ( $_{le}$ NP). However, under the clausal Op-movement analysis this cannot be the case. Even if the CP is predicative (25), it cannot have an unsaturated e variable that plays an important role in the interpretation of OGCs; although the embedded verb has such a variable (Davidson 1967), it is bound by the tense operator associated with T (Higginbotham 1985). If so, a predicative CP is not a par with the embedded constituent in Hebrew OGCs ( $_{le}$ NP), but it should be.

It is worth noting that although it is common to take the Op-movement analysis as obligatory consisting of the Op-movement and of a clausal complement (CP), this is not the only possibility. One can argue against the clausal projection of the embedded constituent, while maintaining the movement part of the analysis (provided that an appropriate A'-position is supplied). This is, in fact, the proposal I argue for here. More specifically, I propose that *to* in English OGCss is not an infinitival tense marker. Rather, it is a syntactic P-head that combines with a VP and externalizes the internal theta-role of the verb (i.e. it functions as  $P_{pred}$ ), forming in syntax a predicative PP. Since P, as opposed to T, is not associated with a tense operator, the e variable of the verb embedded in the PP is not existentially bound, on a par with the e variable of the  $f_e$ NP in Hebrew.

In what follows, I will first introduce some evidence for the non-clausal nature of the *to*-VP sequence of OGCs, showing that *to* in these constructions differs from the infinitival *to* and that there is no subject position in the embedded constituent of the OGCs. I will then discuss the details of Externalization in English.

# 3.1 'to' is not T

- (i) <u>Aspectual have</u>: Jones (1991) notes that the occurrence of the aspectual have is infelicitous in OGCs (27b,c), as opposed to its felicitous occurrence in the fully clausal Infinitival Relative (IR) (27a): <sup>4,5</sup>
- (27) a. "Moby Dick" is a famous book [ $_{IR}$  Op $_{i}$  [PRO to have read  $t_{i}$ ]] (before you make it to college).
  - b. ?? "Moby Dick" will be easy [to have read ei] (before you make it

<sup>&</sup>lt;sup>4</sup>Following Williams (1984), Infinitival Relatives (IR) in Jones (1991) are assumed to be clausal, as opposed to the verbal constituents in OGCs which, by hypothesis, are not clausal.

<sup>&</sup>lt;sup>5</sup> In Jones (1991) to is viewed as part of the VP, rather than as a distinct P-head.

to college).

c. \*I bought it i [to have read ei ] (at least before graduating).

The aspectual (perfective) *have* is claimed by Williams (1984) to occur only if T (Aux, in his terms) is present, as it has to interact with it. The ungrammaticality of (27b,c) thus supports the claim that the verbal constituent in OGCs does not have a Thead.

- (ii) <u>VP-ellipsis</u>: It is a familiar property of English that in many cases a VP can be elided leaving the infinitival *to* behind (28). However, this is completely impossible in the English TC (29). According to Williams (1984), the VP cannot be deleted if it is not a sister of T:<sup>6</sup>
  - (28) a. John is eager to please his teachers, but Mary is reluctant to.b. John wanted to dance, but Mary didn't want to.
  - (29) \*Your paper is easy to read, but your book is difficult to.
- (iii) Adverbial placement: Finally, notice that the placement possibilities of the so-called quantificational adverbs (e.g. *seldom, often*, etc.) in the embedded constituent of OGCs (30b,c) are not identical to those in the embedded infinitivals elsewhere (30a):
  - (30) a. Bart decided [CP to (often) watch avant-guard films (often)]
    - b. Avant-guard films are difficult [to (\*often) watch (often)]
    - c. I bought "Metropolis" [to (\*often) watch (often)]

On a reasonable assumption that these adverbs are interpreted in relation to an event, i.e. they need an event variable to quantify over, they can occur either VP-internally, or immediately above the VP, if the VP occurs with the tense operator (T). That the latter is ungrammatical in OGCs supports the claim that *to* in these constructions is

<sup>&</sup>lt;sup>6</sup> See Jones (1991:92, 115) for a different view on what restricts VP deletion in English, and why VP deletion is felicitous in the OPC:

<sup>(</sup>i) John bought "Bambi" [to read] and Mary bought it [to ]as well.

not T.

### 3.2 No subject position

- (i) <u>there-insertion</u>: It has been noted (Fiengo and Lasnik 1974, Jones 1991), that the verbal constituent of OGCs resists *there-*insertion, namely realization of an expletive subject by means of prepositional complementizer (repeated in (31)). In contrast, *there-*insertion is possible in the infinitival clause of the expletive subject construction headed by a *tough* A, or in an IR, as shown in (32). On the assumption that there is no subject position in the embedded constituent of OGCs, the ungrammaticality of (31) follows. (Note, that given the grammatical (32a), the ungrammaticality of (31a) cannot be attributed to some property of the *tough* A):
  - (31) a. \*Bart is tough for there to be pictures of all over.b. \*I chose Bart for there to be pictures of all over.
  - (32) a. It is tough for there to be pictures of Bart all over.b. Bart is a guy for there to be pictures of all over.(Adapted from Jones 1991)
- (ii) <u>Disjoint reference</u>: A lexical subject disjoint in reference from the Experiencer can be introduced in the expletive subject construction (33a), but not in the TC (33b) (Chomsky 1977, 1981; Jones 1991, among others). This is accounted for, given that (i) the second PP is necessarily the subject of the embedded clause, as the *tough* A can realize only one Experiencer, and (ii) there is no subject position in the embedded constituent in the TC:
  - (33) a. It is easy for the rich [for the poor to do the hard work]b. \*Hard work is easy for the rich [for the poor to do]

### 3.3 Syntactic Externalization

In light of the above, the embedded constituent of OGCs (*to*-VP) is not on a par with an infinitival CP. The morpheme *to* is not T, and the constituent lacks subject position. If *to* is not realizing T, analyzing it as P is most natural. After all, *to* is a preposition. Once *to* is analyzed as a prepositional element, it is plausible to view the

embedded constituent in English OGCs on a par with the  $l_e$ NP in Hebrew. There is however a certain difference between English in Hebrew regarding the prepositional morphemes  $l_e$ - and  $t_o$ ; unlike  $l_e$ -,  $t_o$  is not a lexical affix but rather a syntactic head. Thus, like Hebrew  $l_e$ -,  $t_o$  functions as  $P_{pred}$  (i.e. an externalizer), but it is a syntactic  $P_{pred}$ . Consequently, the embedded constituent in OGCs in English is a PP rather than a VP (or a TP). On a par with the lexical Externalization, the syntactic combination of  $P_{pred}$  with a VP involves removal of Objective Case, saturation of the external argument and externalization of the internal one (34).

# (34) Syntactic Externalization in English

$$\begin{array}{cccc} [_{P} \text{ to}] & + [_{VP} \text{ V}_{Obj \text{ Case}}] & \boldsymbol{\rightarrow} & & [_{PP} \text{ to VP}] \\ & & e, \, \Theta_{Ext}, \, \Theta_{Int} & & e, \, \Theta_{Sat}, \, Ext \end{array}$$

A couple of phenomena attested in English OGCs suggest that the syntactic Externalization in English involves a different mechanism than that in Hebrew. The possibility to add a resultative secondary predicate (35) and the existence of long distance Externalization (36) are taken to indicate that syntactic Externalization, unlike its lexical counterpart, involves Op-movement to spec PP (37).

- (35) The house will be easy to paint  $t_i$  blue<sub>i</sub>.
- (36) This book is easy to convince Lisa to read.
- (37) This film is easy [PP Op<sub>i</sub> to [VP to watch  $t_i$  ]]

Externalization by means of Op-chain is to be construed as follows. The removal of Objective by *to* renders the Op-chain in OGCs 'illicit' regarding Case; it cannot be assigned the internal theta-role of the verb (at LF), and the latter is externalized (and discharged elsewhere).

### 4. The consequences

In the proposed analysis the difference between English and Hebrew is that in the latter Externalization takes place in the lexicon, whereas in the former the same occurs in syntax. Externalization, thus, falls under the 'Lex/Syn (Lexicon/Syntax)

parameter' (Siloni 2002, Reinhart and Siloni 2004), from which the cluster of properties attested in OGCs in English and Hebrew is expected to follow.<sup>7</sup>

# **Hebrew and English**

- (i) The non-realization of the external and internal arguments is the most direct consequence of Externalization the external argument (Agent) is saturated and the internal one is externalized and assumes the status of an external slot (to be closed by identification, see section 5).
- (ii) Since Externalization (lexical or syntactic) and Passivization crucially involve saturation of the external argument, these operations are mutually exclusive. This accounts for the impossibility to passivize the verb in English (repeated in (38)), and for the ungrammaticality of the *by*-phrase in Hebrew (repeated in (39)):
  - (38) \*Lisa is easy to be pleased.
  - (39) a. \*ha-šati'ax kaše le-nikuy al-yedey dan the-carpet [is] difficult to-cleaning by-Dan
    - b. \*ran hevi et ha-oto le-cvi'a al-yedey dan

      Ran brought Acc the-car to-painting by Dan

### Hebrew

(iii) Externalization creates a predicative nominal that cannot be associated with definiteness (or indefiniteness). Consequently, its combination with D is precluded, accounting for the obligatory indefiniteness of the nominal (40):

(40) ha-sefer<sub>i</sub> kaše/huva li-kri'a/\*la-kri'a
the-book [is] difficult/[was] brought to-reading/to+the-reading
'The book is difficult/was brought to read.'

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<sup>&</sup>lt;sup>7</sup> The parameter states that thematic arity operations such as Reflexivization, Reciprocalization and Middle formation, can take place either in the lexicon (e.g. Hebrew, Russian, English), or in the syntax (e.g. French, Italian, German). In this respect, Externalization is different - both Hebrew and English are 'lexicon languages' (see above), and yet Externalization is lexical in Hebrew, but syntactic in English. According to the analysis developed here, this difference follows, at least partially, from the morpho-syntactic status of the externalizing morpheme (*le-* vs. *to*), not from the setting of the 'lex-syn parameter'. Importantly, since Externalization does not add, remove or alter the theta-roles of a predicate (similarly to Passivization), it is allowed to apply either in the syntax or in the lexicon (see Siloni 2002 for the exact formulation of the principle that defines the division of labor between the lexicon and the syntax).

- (iv) On the assumption that a manner adverbial is adjoined at the DP (or D')-level, it cannot combine with the *leNP*, as the latter does not have a DP-layer:
  - (41) ha-sefer<sub>i</sub> kaše/huva li-kri'a (\*bi-mhirut) the-book [is] difficult/[was] brought to-reading in-haste

### **English**

- (v) The absence of the clausal functional categories, TP and CP, accounts straightforwardly for the impossibility to realize the expletive *there* by means of prepositional complementizer (42):
  - (42) a.\*I chose Bart for there to be pictures of all over.b.\*Bart is easy for there to be pictures of all over.
- (vi) On the assumption that the verb in the DOC does not have structural Objective the Theme has inherent Accusative (Larson 1988), and the Goal is licensed in a separate VP headed by the abstract verb HAVE (cf. Den Dikken 1995) Externalization cannot apply to it. This derives the impossibility to externalize either Goal or Theme in the English DOC (43):
  - (43) a. \*John is easy to give presents.b. \*Presents are easy to give John.

### English vs. Hebrew

In Hebrew externalizing *le*- is affixal. It can attach to Ns (the externalizing *le*-), but also to Vs, forming infinitival Vs (*lehavin* 'to+understand'). Why can an infinitival verb not be an object gap constituent (repeated in (44))?

(44) ha-sefer kal \*lehavin/le-havana the-book easy to+understand/to-understanding 'The book is easy to understand.'

The externalizing le- (P<sub>pred</sub>) is clearly distinguished from the infinitival le-, i.e. lehavin

('to+understand') can be interpreted in Hebrew only as an infinitival verb. Following Stowell (1982), infinitive is *zero* tense, rather than absence of tense. Thus Hebrew infinitive verbs, on a par with the finite ones, combine obligatorily with the functional head T forming clausal projections, CPs (Hazout 1995). CP is not a legitimate object gap constituent, as it does not have a free *e* variable (see section 3).

In English *to* is not affixal, rather it is a syntactic P-head. As proposed here, it can combine with a VP and induce externalization upon removal of Objective Case (and saturation of the Agent). But the preposition *to* can also take a nominal complement (*to the boy*). Why *to* with a nominal complement is not an externalizer? On the assumption that the externalizing *to* can remove only Objective, when *to* combines with a nominal, the Genitive of the nominal is not removed. Consequently, the Opchain has Case, and externalization does not occur (as the chain is assigned the internal theta-role of the nominal).

# 5. The function of leNP/PP in the object gap constructions

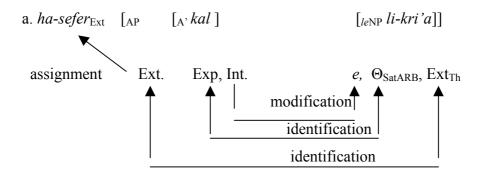
In the OPC construction, the predicative phrase formed by Externalization (leNP in Hebrew, PP in English) is analyzed as a secondary predicate of the internal argument of the main verb, along lines proposed by Rothstein (2000, 2004) for resultative constructions (e.g. *Dan wiped the table clean*) (44) (for a more detailed discussion of this issue, see Botwinik-Rotem 2004):

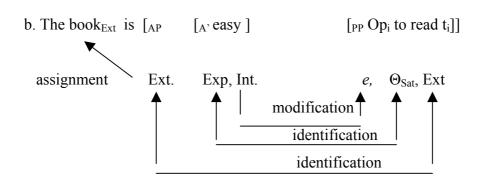
(45) a. dan 
$$[VP \ [V \ hevi]]$$
  $[DP \ et \ ha-oto]_i$   $[leNP \ le-tikun]_{[Exti]}$  b. Dan  $[VP \ [V \ brought]]_{[DP \ the \ car]_i}$   $[PP \ Op_i \ to \ repair \ t_i]_{[Exti]}$ 

In the TC, the <sub>le</sub>NP/PP and the *tough* adjective are argued to form a complex AP predicate, triggered by modification of the *e* argument of the embedded constituent by the internal argument of the *tough* A (46). As a result, the complex *tough* predicate, unlike the *tough* adjective itself, has an external argument (the externalized theta-role of the N/V). Viewed this way, the analysis of the TC explains and settles the long-standing controversy associated with the thematic status of the subject position in the TC (cf. Chomsky 1981, 1986) (see Botwinik-Rotem for a more detailed discussion).

<sup>&</sup>lt;sup>8</sup> The analysis follows the assumption that the *tough* As lack an external argument (cf. Chomsky 1981). Being inherent predicates, they are predicated of an expletive subject through their external (non-semantic) slot (Rothstein 2001).

# (46) The analysis of the Tough Construction





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