Hebrew possessive datives: corpus evidence for the role of affectedness

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August 19, 2009

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1   Introduction

When asked to translate (1-a) into English, Hebrew speakers normally propose (1-b):[1]

(1) a. axalti le-yosi et   ha-banana.
         I.ate   to-Yosi ACC the-banana
     b. I ate Yosi's banana.

This looks like a typical *external possession* construction, that is, a construction where one of the verb's syntactic arguments is interpreted as the possessor of another argument of the same verb, and not as a participant in the event, at least not in an obvious sense (Payne and Barshi 1999b). As with external possession constructions in other languages, especially in the European linguistic area (König and Haspelmath 1998), this construction is not completely interchangeable with the noun-phrase-internal possessive construction, shown in (2-a):

(2) a. axalti et   ha-banana šel yosi.
         I.ate   ACC the-banana of Yosi
         I ate Yosi's banana.

It has been suggested, both for Hebrew (starting with Berman 1982) and for other languages, that at the root of the semantic distinction between the external possessive dative (PD) construction and the internal genitive construction is the notion of *affectedness*: the dative possessor is perceived as affected in some way by an event involving his or her object, while genitive sentences carry no such implication. This notion of affectedness in question is relatively broad: the possessor does not have to undergo any actual

change, but can instead be benefited, inconvenienced or concerned by the event. In Wierzbicka's (1988) terms, in choosing the PD over the genitive the speaker is thinking of the event as something that *happened to* the possessor, not only to his or her possession. In other words, the difference is not so much truth conditional (O'Connor 2007), but rather a difference in perspective: in choosing the PD, I am pointing my camera at the possessor, so to speak (Velázquez-Castillo 1999, using Kuno's (1987) notion of empathy).

As we will see below, Hebrew is exceptionally liberal with respect to this affectedness condition. This has led some to question whether it in fact holds for Hebrew at all (Landau 1999). This paper sets out to assess the validity of this condition, using both grammaticality contrasts and statistical analysis of corpora. Section 2 shows that while Hebrew is indeed more liberal than other European languages in licensing PD, the same forces that govern its distribution in those languages are active in Hebrew as well. However, while in other languages these forces are grammatical restrictions, in Hebrew they show up as statistical usage tendencies. This illustrates the continuum between discourse and grammar: functionally motivated discourse tendencies may be differently grammaticalized by different languages (Givón 1979, Hawkins 1994, Bresnan 2007 and many others).

Section 3 then shows that the affectedness condition can account for a range of phenomena, some of which have been previously attributed to other factors. Finally, Section 4 presents data that call into question the status of the affected PD as a possessive construction, showing that possession is a tendency rather than a necessary condition. At the same time, it will be shown that affectedness is not a necessary condition for using PD either. The picture that emerges is of a construction in a process of change, held together not by an essential meaning component shared by all its instances,

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but by family resemblance, with affectedness having both a synchronic and a diachronic explanatory role.

2 Hebrew PD in an areal European perspective: a corpus study

While external possession in general is fairly widespread in the languages of the world, the use of the dative construction for this purpose is largely confined to European languages (König and Haspelmath 1998). This is an areal rather than genetic trait: König and Haspelmath report PD constructions in such non-Indo-European languages as Maltese, Hungarian, and indeed Hebrew, which acquired it only recently. The question arises how similar the Hebrew construction is to the Standard Average European prototype laid out in König and Haspelmath's survey.

This section will examine how the scales they propose fare with respect to the Hebrew PD. It will turn out that while the grammar of Hebrew PD does not impose any of the restrictions König and Haspelmath find in comparable constructions in other European languages, these restrictions do turn up in Hebrew as statistical tendencies, providing support both to the typological scales in question and to the concept of typological scales in general. As these tendencies can be linked to the overarching notion of affectedness motivating the typological scales, this result will lend support to the role of this notion in the meaning of PD.

2.1 Introducing typological scales: the animacy scale

Animacy plays an important role for different grammatical phenomena across languages. Silverstein's (1976) proposed the animacy hierarchy shown in

(3): the lower a category is on this hierarchy, the less vividly animate it is perceived to be.

(3)   1st/2nd p. pronoun ⊂ 3rd p. pronoun ⊂ proper name ⊂ animate ⊂ inanimate

This hierarchy can also be conceived of as a hierarchy of empathy (Seiler 1983, Kuno 1987): the higher an entity is on the scale, the more speakers tend to empathize with it, that is, to take its point of view when presenting the event. König and Haspelmath argue that this hierarchy functions as a typological scale. By this they mean that each language selects a point along the scale, allowing only entities that fall to the left of this point to serve as PD possessors in that language, and ruling out everything else. Portuguese, for example, only allows pronominal possessors, putting the cut-off point immediately after 3rd person pronouns:

(4)   Portuguese (König and Haspelmath 1998, p. 570)

    a.   *A mãe   está lavando os cabelhos ao   menino.
        the mother is   washing the hairs   to.the child
        'The mother is washing the child's hair.'

    b.   A mãe   está lhe/te/me   lavando os cabelhos.
        the mother is   to.him/to.you/to.me washing the hairs
        'The mother is washing his/your/my hair.'

Such a scale predicts that not all of the logically possible combinations will in fact be attested. For example, we do not expect to find a language that allows inanimate possessors and pronominal possessors, but disallows proper names.

    Most European languages put the cut-off point after the animate nouns category, allowing animate possessors, whether pronominal or full noun phrases, but disallowing inanimate possessors:

(5) German (Neumann 1996, cited in Haspelmath 1999)

    a. Der Stein fällt dem   Mann auf den Kopf.
       the stone falls the:DAT man   on the head

       'The stone falls on the man's head.'

    b. *Der Stein fällt dem   Auto aufs Dach.
       the   stone falls the:DAT car   on.the roof

       'The stone falls on the roof of the car.'

Hebrew, on the other hand, does not place this restriction, as the following

attested examples illustrate:

(6)   a. im lo holex, az   efšar   le-haxlif   la-mexonit et
       if not goes,   then possible to-replace to.the-car ACC
       ha-manoa.[2]
       the-engine

       'If it doesn't work out you can replace the car's engine.'

    b. nira   li   dafakti   la-maxšev   et
       seems to.me I.screwed.up to.the-computer ACC
       ha-sapak.[3]
       the-power.supply

       'Looks like I screwed up the computer's power supply.'

    c. xotxim   la-agvanya   et   ha-kipa ve-meroknim
       cut:PRS:3PL to.the-tomato ACC the-top and-empty:PRS:3PL
       et   toxn-a.[4]
       ACC inside-POSS:3SG

       'You cut the top out of the tomato and hollow it out.'

    d. xaval laharos   la-ir   et   ha-tadmit rak biglal
       pity   to.destroy to.the-city ACC the-image only because
       moaca metupešet.[5]
       council stupid

       'It's a shame to destroy the city's image just because of a stupid

       city council.'

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[2]`http://www.gclub.co.il/phpbbheb/viewtopic.php?p=1879558&sid=6713dd291c202dec9f65e351902c0fd8`
[3]`http://www.iatraf.co.il/showthread.php?t=104417`
[4]`http://www.cookshare.co.il/modules.php?name=Recipes&op=viewrecipe&recipeid=5272&offset=4433`
[5]`http://www.geocities.com/brb14_buffy4/fics/f104.doc`

We see that the grammar of Hebrew PD allows the whole range of possessors, regardless of their place on the animacy hierarchy. Still, as section 2.3 will show, usage data shows a clear preference for highly animate nouns as posessors. First, however, we will digress to describe the corpus used in this work.

2.2 The Israblog corpus

None of the existing Modern Hebrew corpora were suitable for the purposes of this study: most of them were in a formal or written register (parliament session protocols, newspaper articles), and thus less likely to contain instances of PD, which is still considered inappropriate for formal contexts. The two informal language corpora available at the time of writing were very small (less than 3 million tokens combined), and therefore unsuitable for work on PD, which occurs once in every few hundred sentences. The corpus created for the purposes of this work was ripped in September 2008 from `www.israblog.co.il`, a blog hosting site, and cleaned up using a custom markup removal program. It contains 50 million tokens, extracted from several thousand different blogs, and is thus fairly varied in register and age of author. While these are written texts, rather than transcriptions of real speech, they hopefully constitute a better approximation of colloquial language than other corpora.

The corpus was morphologically analyzed and disambiguated (part-of-speech tagged) using `BGUTagger` (Adler and Elhadad 2006).[6] Unfortunately, no syntactic parser was available for Hebrew at the time of writing.

The next stage involved picking out the PD sentences. Out of the set of sentences with a potential dative marked argument – that is, an argument

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[6] I thank Yoav Goldberg for his assistance in running the morphological analyzer.

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preceded by the proposition *le-* – those that contained one of a group of 50 common verbs selecting the dative preposition *le-*, such as *natan* 'give', were automatically filtered out to make the manual selection task more manageable. This includes verbs as in (7), where a possessive construal is actually possible:

(7) ha-texnai   hexzir   li   et   ha-maxšev.
     the-technician gave.back to.me ACC the-computer
     'The technician returned my computer.'

     or: 'The technician gave me the computer back.'

     or: 'The technician returned the computer (to someone else) for me.'

Another requirement was that the sentences include a noun interpreted as a possessum while not overtly marked as one, that is without a genitive possessor. For instance, sentences such as (8-a), where a possessive relation is not detectable, were excluded, while sentences such as (8-b) were included:

(8) a. saba   šeli yaklit   li   et   ha-gmar.
         grandfather my will.tape to.me ACC the-finals
         'My grandfather will tape the finals for me.'

     b. saba   šeli yenake   li   et   ha-xeder.
         grandfather my will.clean to.me ACC the-room
         'My grandfather will clean my room (for me).'

2.3   The effect of animacy in Hebrew

Recall the hierarchy of animacy, repeated here:

(9) 1st/2nd p. pronoun $\subset$ 3rd p. pronoun $\subset$ proper name $\subset$ animate $\subset$ inanimate

We have seen that Hebrew PD does not impose a grammatical restriction on the animacy of the possessor. However, if our hypothesis is correct, we

still expect this hierarchy to influence the distribution of PD in Hebrew: the higher the possessor is on this hierarchy, the more likely it should be to be expressed in a PD construction. In this section we will break this scale down into its components, and show how this prediction is borne out. The counts in this section are based on a corpus of 1124 hand-verified PD sentences and 493 genitive sentences extracted from the Israblog corpus.

2.3.1 Pronominality

The animacy hierarchy predicts that PD will be more common with pronominal possessors than with full NP possessors. Indeed, pronouns tend to denote topics, which tend to be associated with central participants in the event, participants the speaker empathizes with (Kuno 1987), and therefore more likely to be profiled as affected by it (Ariel 1990). The counts indeed show a striking difference (Table 1):

Table 1: Pronominality of possessor

	Pronouns	Full NPs	Total
PD	1070 (95.2%)	54 (4.8%)	1124
Genitive	346 (70.1%)	147 (29.9%)	493

While pronouns form the majority of possessors in both constructions, the preference for pronouns in PD is much more marked ($p \approx 2 \cdot 10^{-16}$, Fisher's exact test).

2.3.2 Animacy of full NPs

Leaving out generic full NPs, for which animacy cannot be easily determined (such as *kulam* 'everyone, everything'), we reach the following results:

As expected, inanimate possessors are rarer in PD than in the genitive ($p < 0.005$, Fisher's exact test). The absence of inanimate possessors from

Table 2: Animacy of full NPs

	Animate	Inanimate	Total
PD	25 (100%)	0 (0%)	25
Genitive	106 (75.1%)	35 (24.9%)	141

this small corpus should not, of course, be taken as evidence for their un-grammaticality in general (cf. examples (6) above).

2.3.3   Person of pronoun

The animacy hierarchy predicts that 1st and 2nd person pronouns should be more common in PD sentences than in genitive sentences. Havers (1911) reports a similar finding for Latin. This prediction meets mixed results in the corpus:

Table 3: Person of pronoun

	1st	2nd	3rd
PD	787 (80.3%)	33 (3.3%)	160 (16.4%)
Genitive	180 (54.2%)	33 (9.2%)	119 (35.8%)

1st person pronouns are much more common in PD, as expected. On the other hand, 2nd person pronouns show the opposite tendency: their proportion in PD is significantly lower than in the genitive. As the corpus we are using is made up of diary-like texts, the overall number of 2nd person pronouns is small, so it is not clear what conclusions should be drawn from this fact. Perhaps we can speculate that the alignment of 2nd person with 3rd person pronouns owes to the fact that in writing the addressee is not any more present than any other entity, and thus the speaker is not particularly inclined to take the addressee's point of view.

2.4   Inalienability of possessum

Another factor that affects the cross-linguistic distribution of PD is the hierarchy of alienability:

(10)   body part ⊂ garment ⊂ other contextually unique item

All languages that have a PD construction allow it in cases where the possessum is a body part. In some languages, however, body parts are the only possessums allowed:

(11)   a.   French (König and Haspelmath 1998, p. 572)

        * Je lui   ai   cassé la fenêtre.
          I   to.him have broken the window

        'I broke his window.'

    b.   German (ibid.)

        Ich habe ihm   das Fenster zerbrochen.
        I   have to.him the window broken

        'I broke his window.'

In this case, then, French puts the cut-off point immediately after the body part category, whereas German puts it at the bottom of the scale (that is, everything is allowed). Still, according to our hypothesis, even in languages that allow both body parts and other possessums in PD, the distribution of possessums is expected to be skewed towards body parts. Put another way, when a body part is involved, the chances that the speaker will choose PD over the genitive increase. Strikingly, in Czech this preference is grammaticalized – genitive possession is banned with body part possessums:

(12)   Czech (Fried 1999, p. 482)

    a.   Šlapal   jí   na nohy.
        step:PP:SG:MASC 3SG:FEM:DAT on foot:ACC:PL:FEM

'He stepped on her feet.'

b. #Šlapal na její nohy.
   step:PP:SG:MASC on her:ACC foot:ACC:PL:FEM
   'He stepped on some feet of hers.'

Fried reports that (12-b) "invokes the image of a heap of foot-like objects being stepped on". Hebrew, liberal as always, does not grammaticalize either direction: body parts and other possessums are allowed both in PD and in the genitive. However, PD is still favored for body parts, as illustrated in the following count, comprising all the possessive sentences in the first 500,000 sentences of the corpus:

Table 4: Inalienability of possessum

	Common body parts	Other possessums	Total
PD	185 (16.4%)	939 (83.6%)	1124
Genitive	228 (5.0%)	4319 (95.0%)	4547

The automatic search was restricted to a set of common body parts:

(13) *yad* 'hand', *regel* 'foot', *roš* 'head', *ayin* 'eye', *ozen* 'ear', *beten* 'stomach', *ecba* 'finger', *lev* 'heart', *mo'ax* 'brain', *guf* 'body', *panim* 'face', *se'ar* 'hair'

Table 4 shows that the proportion of body parts in PD sentences is more than three times higher than in genitive sentences. Another way to present the same data is in Table 5:

Table 5: Effect of inalienability on choice of construction

	PD	Genitive	Total
Common body parts	185 (44.7%)	228 (55.3%)	413
Other possessums	939 (17.8%)	4319 (82.2%)	5078

In other words, when faced with the decision between the two possessive constructions, a speaker is much more likely to choose the PD if the

possessum is a body part than otherwise.

2.5   Discussion

The corpus study in Section 2 illustrated the role of a set of semantic factors in favoring the PD construction. PD was more likely to be used the closer the possessed object was to the possessor's body and the more the speaker empathized with the possessor. These factors could both be linked to an overarching notion of affectedness.

We have seen how a cross-linguistic prototype, easily visible as a set of grammatical restrictions in some languages, can be used to understand the statistical patterning of actual usage even in languages where it is not part of grammar. One way to explain this is to argue that the same cognitive notion (affectedness in this case) is active both in the languages that grammaticize it and in the languages that do not. In other words, this notion is part of the synchronic meaning of the construcion. These facts can at the same time be given a diachronic explanation: once a construction has been borrowed, it can gradually expand to encompass situations where it would not have been used in the original language. Still, even in the borrowing language it will be more common in those original, canonical situations.

3   More distributional evidence for affectedness

In Section 2 we examined the influence of affectedness on PD on the statistical distribution of normal usage – in the core of the construction, so to speak. In this section we move to the periphery, charting the grammatical limits of this construction. Previous researchers have sought to understand these limits by recourse to structural principles, related to the argument structure of the verb used (Borer and Grodzinsky 1986, Landau 1999). In

contrast, this section will show that here too the explanatory burden should be placed on the degree to which the possessor was affected by the event as a whole, rather than on the verb alone.

3.1 Perception events

Landau (1999) (following Shibatani 1994) argues that non-agentive perception verbs (*see*, *hear*) are not compatible with PD:

(14) *ra'iti le-yosi et   ha-kalba.
      I.saw   to-Yosi ACC the-dog
      'I saw Yosi's dog.'

As he himself acknowledges (note 14), this generalization is overstated. The verb *ra'a* 'see' can in fact appear in PD, especially with body part possessums, but also with other possessums, when invasion of privacy is implied:

(15) a. hi ra'ata lo   et   kol ha-klafim ve-gilta   še-ma
          she saw   to.him ACC all the-cards and-discovered that-what
          še-hu   mastir   behexlet lo to'em et   ha-sxum
          that-he was.hiding definitely not matches ACC the-amount
          še-hu   himer alav.[7]
          that-he bet   on.it
          'She saw his cards and discovered that what he was hiding
          definitely did not match the amount he bet.'

      b. hi hayta im   maxsof kaved ve-hu ra'a la   et
          she was   with cleavage heavy and-he saw to.her ACC
          ha-xazia.[8]
          the-bra
          'She was wearing (a shirt) with a low neckline and he could see
          her bra.'

Landau considers this an idiomatic phrase rather than a genuine use of PD.

However, this pattern is not unique to *ra'a* 'see':

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[7]http://stage.co.il/Stories/75352
[8]http://forums.gamer.co.il/gamer2/php/replieslist.php?TopicID=918822&UserID=257713

(16) a. nora kama   še-at   šoma'at li   et   ha-lev   gam
     awful how.much that-you hear   to.me ACC the-heart also
     bli   milim.[9]
     without words
     'It's awful the way you can hear my heart even without words
     (i.e., read my feelings).'

   b. ha-leyda hayta lelo   epidural ve-kol
     the-birth was   without epidural and-all
     beyt ha-yoldot   šam'a la   et   ha-ce'akot.[10]
     the.department.of.obstetrics heard to.her ACC the-screams
     'She gave birth without epidural and the whole department of
     obstetrics heard her screams.'

And neither is it unique to Hebrew:

(17) a. Italian (König and Haspelmath 1998, p. 568)
     Le   ho   visto le   gambe.
     to-her I.have seen the legs
     'I saw her legs.'

   b. Finnish (Pylkkänen 2002, p. 47)
     Riika   näki Sanna-lta aluspaida-n.
     Rikka:NOM saw Sanna-ABL undershirt-ACC
     'Riika saw Sanna's undershirt.'

   c. Spanish (Google)
     Le   vi   las manos.
     to-her I.saw the hands
     'I saw her hands.'

These facts cast some doubt on the characterization of PD *ra'a* 'see' as
idiomatic. In fact, these are precisely the contexts where we would expect
a perception verb to fit well in a PD construction: only in these cases can a
perception event be considered as harmful.

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[9]`http://www.thecage.co.il/blog/userblog.php?postid=130491&blog_id=12764&replyto=413535`
[10]`http://www.starmed.co.il/forum/62/msg/1358234`

Landau also predicts a sharp contrast between agentive and non-agentive perception verbs. However, this generalization too is not borne out by the data. In fact, the use of the analogous agentive verb *histakel* 'look' with PD is biased towards precisely the same contexts as *raa* 'see', though perhaps in a less dramatic way. This can be shown in a web search. We searched for the following four frames:

(18)   a. $PD_{m,f}$: mistakel   la   al
                      look:PRS:M:SG to:F:3SG at

          b. $Gen_{m,f}$: mistakel   al * šela
                      look:PRS:M:SG at * of:F:3SG

          c. $PD_{f,m}$: mistakelet   lo   al
                      look:PRS:F:SG to:M:3SG at

          d. $Gen_{f,m}$: mistakelet   al * šelo
                      look:PRS:F:SG at * of:M:3SG

And annotated the results for possessum type, using the following labels: intimate body parts (BP), other body parts, clothing items, picture objects (including photos, videos and so on) and other objects. The results were as follows:

Table 6: *histakel* 'look': Possessum type

	Intimate BP	General BP	Clothing	Pictures	Other
$PD_{m,f}$	40	10	1	0	0
$Gen_{m,f}$	18	20	4	13	25
$PD_{f,m}$	10	9	2	0	0
$Gen_{f,m}$	6	21	3	9	17

The differences in both groups between PD and the genitive are striking: PD with *histakel* 'look' is only found with inalienable possessums, with a strong bias toward intimate body parts,[11] while the genitive with the same verb appears freely with pictures and other possessums. These results are statistically significant (χ^2, $p < 0.000002$ for the first pair, after correcting

for empty cells). They remain so when picture possessums, which arguably reflect an extended and non-possessive use of the genitive, are discarded (χ^2, $p < 0.000003$), and even when comparing only the three inalienable possession subclasses ($p < 0.005$).

Some of the possessums found only with the genitive would indeed sound odd to a native Hebrew speaker if used in PD, especially if the use of *look* is figurative or the possessum relatively abstract:

(19)   a.   ani mistakel al ha-moral   šela.[12]
            I   look   at the-morale its.

       b. ?ani mistakel la   al ha-moral.
           I   look   to.it at the-morale
           'I look at its (=the team's) morale.'

(20)   a.   im ata mistakel al karyerat ha-nihul   šela...[13]
            if   you look   at career:CS the-management her

       b. ?im ata mistakel la   al karyerat ha-nihul...
           if   you look   to.her at career:CS the-management
           'If you look at her management career...'

These results indicate that the agentive perception verb *histakel* 'look' too shows a preference for invasion-of-privacy contexts in PD. The difference between *histakel* 'look' and *ra'a* 'see' turns out to be a difference in degree: both of them occassionally occur with non-body part possessum, but favor body parts (cf. Example (29) below). This contradicts Landau's proposal that predicts a categorical difference between the two verbs.[14]

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[12]Adapted from `http://www.asoccer.co.il/index.php?showtopic=21831`

[13]`http://sports.walla.co.il/?w=/7/397057/@@/item/printer`

[14]This difference in degree can be explained by the fact that volitional acts are perceived as more possessor-affecting than non-volitional acts, though there is certainly more to be said about this. Delbecque and Lamiroy (1996) report a similar tendency for Spanish (p. 96).

3.2 Whole event rather than verb class

Other classes of verbs are rare or impossible in PD. This applies to subject experiencer verbs, for example, as Shibatani (1994) reports for various languages and Landau (1999) replicates for Hebrew:

(21)   a.   *gil ahav le-rina et   ha-tisroket.
              Gil loved to-Rina ACC the-hairstyle
              'Gil loved Rina's hairstyle.'

        b.   *gil hitpale   le-rina al   ha-ma'amar.
              Gil was.puzzled to-Rina about the-article
              'Gil was puzzled at Rina's article.'

The corresponding genitive sentences are acceptable, for example:

(22)   gil ahav et   ha-tisroket   šel rina.
        Gil loved ACC the-hairstyle of Rina
        'Gil loved Rina's hairstyle.'

The unacceptability of (21) is not much of a surprise if we assume that affectedness is a condition for using PD: in normal conditions, Gil's mental states do not affect Rina.

It is important to stress that it is not the verb as such that determines the acceptability of PD, but rather the entire event. The verb classes laid out by Landau simply tend to be used where the possessor is unlikely to be affected. A case in point is Landau's Verbs with Subject Matter arguments, such as *hikxiš* 'deny' or *diber* 'talk'. While indeed rare in PD constructions, in the right context these verbs are in fact acceptable:

(23)   kol ha-zman medabrim li   al   ha-cicim.[15]
        all the-time they.speak to.me about the-breasts
        'People keep talking about my breasts.'

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[15] http://shin1.co.il/ya.php?sid=4093671

Examples like (23) are uncommon not for structural reasons related to the verb's argument structure, but rather due to the fact that talking events do not usually affect the person talked about.

A further piece of evidence for the contribution of the entire event comes from sentences where the entity in the possessor slot is semantically a creator. We know that in general the possessor position in PD can also be filled by a creator (Landau 1999, p. 5); but when the creator is not affected by the event, PD is not acceptable even when the verb and arguments are kept constant. Consider the contrast in (24):

(24)   a.   bi-zman še-hu   haya ba-šerutim   axalti lo   et
                at-time that-he was at.the-bathroom I.ate to.him ACC
                ha-stek.
                the-steak
                'When he was at the bathroom I ate his steak.'

        b.   *šamati   še-hu šef me'ule, aval od lo axalti lo
                I.have.heard that-he chef excellent but still not I.ate to.him
                et   ha-stekim.
                ACC the-steaks
                'I've heard that he's a great chef, but I haven't eaten his steaks yet.'

Another clear diagnostic is the dead possessor test. Hebrew, like most European languages (König and Haspelmath 1998), disfavors dead possessors in PD, a restriction not shared by genitive constructions. Example (25), for instance, is generally acceptable only if the mother is alive:

(25)   cavati   le-ima   šeli et   ha-xeder.
        I.painted to-mother my ACC the-room
        'I painted my mother's room (for her).'

It is hard to see how one can account for this set of facts only by recourse to verb class restrictions, without taking affectedness into account.

4 Affected and possessive?

This section takes up the question of whether the notion of affectedness can supplant possession altogether as the defining property of PD. It will turn out that both of the notions are indispensable.

4.1 Association rather than possession

Verbs of appearance call into question the characterization of the PD construction as a *possessive* dative construction, as the examples in (26) illustrate:

(26) a. hitxil le-šai ši'ul yaveš.[16]
          started to-Shai cough dry
          'Shai started having a dry cough.'
      b. lifnei ke-xodeš va-xeci hofi'u li akicot
          before approximately-month and-half appeared to.me bites
          megardot.[17]
          itching
          'About a month and a half ago itching insect bites appeared on my skin.'

These sentences cannot be paraphrased with a genitive construction; for instance, since the speaker did not have the insect bites at the time of the event described in (26-b), the paraphrase in (27) makes no sense:

(27) lifnei ke-xodeš va-xeci hofi'u akicot adumot
      before approximately-month and-half appeared bites   itching
      šeli.
      my
      'A month and a half ago there appeared some itching insect bites of mine.'

The examples in (28) illustrate more generally that the relation between the 'possessor' and the 'possessum' can be broader than what would nor-

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mally be considered as possession:

(28)   a. kibiti   le-yosi et   ha-or.
            I.turned.out to-yosi ACC the-light
            'I turned out the light (??Yosi's light) for/on Yosi (for example, when he was working, in the middle of his party, because he asked me to).'

       b. kulam   horsim lo   et   kol ma še-hu bana.[18]
            everyone destroys to-him ACC all what that-he built
            'Everyone destroys everything he has built (??everything he has built and now belongs to him).'

In these cases the dative-marked argument is not a possessor in a strict sense. This provides further evidence that the precise relation between the dative-marked argument and the direct object is determined contextually and not necessarily encoded in grammar.

4.2   Affectedness to the rescue?

Section 2 showed that PD is normally used to express possession when a degree of affectedness is involved. Section 4.1 further illustrated that PD can be used when a relation of possession does not hold, so long as the dative argument is affected. The natural conclusion would be that PD in fact encodes affectedness, and the possessive interpretation, when it arises, is always inferred. However, such a conclusion would be premature. As we saw in Section 3.1, perception verbs are predominately found in invasion of privacy contexts. There are exceptions to this rule, however:

(29)   a. pa'am hi patxa exad mi-sifrei   ha-rexev . . .
            once   she opened one of-books:CS the-car   . . .
            ve-efšar   haya [lir'ot la   et   ha-barak ba-eynaim].[19]
            and-possible was [to.see to.her ACC the-light in.the-eyes]
            'Once she opened one of the car books . . . and one could see the

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[18]http://www.popup.co.il/?p=993

light in her eyes.'

b. ze guf be-hithavut… [ro'im   lo   et   ha-hatxala
   it body in-emergence… [see:PRS:PL to.it ACC the-start
   šel ha-raglaim ve-ha-yadaim], aval adain lo   yod'im
   of the-legs   and-the-hands], but still not know:PRS:PL
   ex   hu yera'e.[20]
   how he will.look
   'This body (institution) is just coming into coming… One sees
   the beginning of its legs and hands, but one still can't tell how
   it will look.'

c. ve-ha-bikoret   al ima   šeli, ani od lo ro'a la
   and-the-criticism on mother my, I   still not see to:F:3SG
   et   ha-sof.[21,22]
   ACC the-end
   'And this criticism of my mother, I still don't see the end of it.'

It is hard to see in what way the possessor is affected in the events de-
scribed by these sentences, especially in (29-b) and (29-c) where the pos-
sessors are inanimate. Likewise, examples (30), all stative and with body
part possessums, do not appear to imply any medical problems or a physical
inconvenience:

(30)   a. ha-se'ar magi'a la   ad   sof   ha-gav.[23]
          the-hair arrives to-her until the-shoulders
          'Her hair goes down to her shoulders.'

       b. se'ar mesulsal kisa   lo   et   ha-xaze.[24]
          hair curly   covered to.him the chest
          'His chest was covered with curly hair.'

       c. az   lo zaharu lo   ha-einaim kmo še-hen   zoharot
          then not glowed to.him the-eyes   like that-they glow

[19]http://e.walla.co.il/?w=/273/1246597
[20]http://www.gogay.co.il/content/article.asp?id=6847
[22]http://www.beofen-tv.co.il/cgi-bin/chiq.pl?%E3%F4%F7%E8_%F7%E9%E1%E5%F6%E9
[22]This example is also interesting because it shows the effect of the pronominality con-
straint (section 2.3.1): full NPs are dispreferred in the PD possessor position. To avoid
violating this constraint, the speaker uses a left dislocation structure. (I thank Mira Ariel
for pointing this out to me.)
[23]http://anime-il.showme.co.il/index.php?showtopic=100726
[24]http://www.gogay.co.il/sipurim/story.asp?id=8210

axšav.[25]
now
'His eyes didn't glow then like they do now.'

The conclusion is that affectedness, even of the most general kind, is a tendency rather than an essential feature licensing PD. In examples (29) and (30), PD looks like a genuine external possession construction, completely interchangeable with the genitive.

4.3 Discussion

In this section we have seen that a neat delimitation of the PD construction is not possible. Not all PD sentences involve possession, and at the same time they do not all involve affectedness. A plausible diachronic explanation is that the construction started out encoding affectedness, as it still does in other European languages and as dative constructions in general tend to do. Since there is usually a possessum involved, the construction has been reanalyzed as a possessive construction.

5 Other factors

This section surveys other factors that influence the variation between PD and the genitive construction. A more thorough investigation of these factors is left for future research.

5.1 Inalieniability and proximity

As discussed in Section 2.4 above, the prototypical case for PD, both in Hebrew and cross-linguistically, is that of a body part possession. In Hebrew this prototypical case can be extended considerably. It appears that the

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[25]`http://sc.tapuz.co.il/shirshurCommuna-7610-3230480.htm`

axis of extension is not the inalienability of the possessum, contra König and Haspelmath, but rather the perceived physical proximity of the possessum to the possessor (Shibatani 1994, Landau 1999). Evidence for that is, for example, the fact that kinship terms are not particularly common as possessums:[26]

(31)   ?hu hika li   et   ha-aba.
             he   hit to.me ACC the-father
             'He hit my father.'

As evidence for proximity, consider the following example:

(32)   naflu li   ha-maftexot.
             fell   to.me the-keys
             1. 'I dropped my keys (the keys fell from my hands).'
             2. 'My keys fell down (in general, e.g. off the table).'

While the second interpretation in (32) is not impossible, the first interpretation is much more common. In other words, PD is more natural when the possessum is seen as an extension of the possessor's body. This resembles the situation in French, reported by Diffloth (1974) (cited in Shibatani 1994). Diffloth brings the following example:

(33)   On lui   a   tiré dans les pneus.
             one to.him has shot in   the tires
             'People shot in his tires.'

He notes that (33) can *only* be used with the understanding that the subject "was in the car, in fact in the driver's seat, at the time of shooting, with

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[26]Fried (1999) reports that in Czech kinship relations are in fact more common as possessums than proximate alienable objects. She proposes the following inalienability scale:

(i)   Body parts ⊂ kinship relations ⊂ close alienable entities ⊂ distant alienable entities

Apparently the axis of extension varies among language.

the whole vehicle, tires included, considered to be in his personal sphere."
Here we see again how a grammatical constraint in French translates into a
usage preference in Hebrew.

A related fact is that human possessums appear to be less acceptable in
PD:

(34)   a.   nafal li   ha-kadur.
             fell   to.me the-ball
             'My ball fell down.'

        b.   ?nafla li   ha-marca.
             fell   to.me the-professor
             'My professor fell down.'

Indeed, humans are less likely to be thought of as extensions of the posses-
sor's body.

5.2   The situation hierarchy

Another scale proposed by König and Haspelmath is one that we have not
investigated in the quantitative corpus study, the *situation hierarchy*. The
idea is that PD is preferred the more dynamic and change-inducing the event
is:

(35)   Patient-affecting ⊂ dynamic non-affecting ⊂ stative

As with the other hierarchies presented above, Hebrew sits at the bottom
of the situation hierarchy as well. PD can also be used when the possessum
is not affected by the event:

(36)   ani acalem   lax   et   ha-darkon.
        I   will.photocopy to.you ACC the-passport
        'I will photocopy your passport (usually, for your benefit).'

The passport in (36) does not undergo change as a result of this event, and still this is a perfectly acceptable PD sentence. Non-dynamic verbs appear to be possible in PD as well:

(37)   a.   az   lo   zaharu lo   ha-einaim kmo še-hen   zoharot
              then not glowed to.him the-eyes   like   that-they glow
              axšav.[27]
              now
              'His eyes didn't glow then the way they do now.'

          b.   hu mitxamem yoter-miday ve-kvar   hizi'a   li
              it warms   too-much   and-already was.sweating to.me
              ha-yad.[28]
              the-hand
              (of the speaker's new iPhone:) 'It warms up too much, my hand was already sweating.'

Examples (37) contain emission verbs (Levin 1993). These verbs fit well in PD despite the fact that they do not denote an event, but rather a state (normally temporary).[29]

Next, verbs of bodily state, such as *ache*, *spin (of head)* and *itch* (Levin 1993), make an especially interesting test case, since they distinguish sharply between the eventivity and mental affectedness conditions. For example, the body part possessum in sentences such as (38) does not undergo a change, nor is it a participant in an event, but its possessor is nonetheless adversely affected by it:

(38)   ko'evet li   ha-beten.
        hurts   to.me the-stomatch
        'My stomach hurts.'

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[27] `http://sc.tapuz.co.il/shirshurCommuna-7610-3230480.htm`
[28] `http://www.macblog.co.il/archives/162`
[29] The observation that emission verbs are compatible with PD, at least when the possessum is inalienable, is due to Tal Siloni (class lecture 2006).

Table 7 shows the number of Google matches for a number of such common sensations, expressed by PD and by the genitive construction:

Table 7: Verbs of bodily state: choice of construction

	PD		Genitive	
My stomach hurts	*ko'evet li ha-beten*	437	*ha-beten šeli ko'evet*	47
My back hurt:PST	*ka'av li ha-gav*	71	*ha-gav šeli ka'av*	22
My leg itches	*megaredet li ha-regel*	20	*ha-regel šeli megaredet*	2

This table indicates that the PD is the preferred construction for this class of verbs. This is even more impressive given the fact that genitive constructions are in general more common than PD: in our corpus the genitive is four times more frequent than PD with direct object possessums.

Evidently, then, stative verbs can be good candidates for PD. Moreover, the same goes for adjectival predicates:

(39) a. meluxlax li ha-masax.[30]
    dirty to.me the-screen
    'My computer screen is dirty.'

  b. adumot lexa me'od ha-einaim.[31]
    red to.you very the-eyes
    'Your eyes are really red.'

The adjective is normally stage-level; in (39-b), for example, the red eyes are understood to reflect a temporary medical condition. Compare the ungrammatical (40):

(40) *kxulot la ha-einaim.
   blue to.her the-eyes
   'Her eyes are blue (she has blue eyes).'

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[30]http://www.fxp.co.il/archive/index.php/t-1395651.html
[31]http://www.ynet.co.il/articles/0,7340,L-3250550,00.html

We have seen that the proposed eventivity requirement does not always hold either. At the same time, most stative predicates still show a preference for the genitive, as Table 8 shows:

Table 8: Stative predicates: choice of construction

	PD		Genitive	
My hand is broken	*švura li ha-yad*	8	*ha-yad šeli švura*	23
My hand is sweating	*mazi'a li ha-yad*	2	*ha-yad šeli mazi'a*	19
My hand is shaking	*ro'edet li ha-yad*	14	*ha-yad šeli ro'edet*	33
His eyes are glowing	*zoharot lo ha-einaim*	2	*ha-einaim šelo zoharot*	15

Note that on the whole, possessive sentences with body part possessums are equally distributed between PD and genitive (as shown in section 2.4), so the results in Table 8 are significant. We see that stative predicates disprefer PD, with verbs of bodily state (Table 7) constituting an exception to this rule. A plausible reason is that verbs of bodily state profile pure mental affectedness: *my head hurts* has no objective referent meaningful to anyone other than the speaker. *My hand is broken*, on the other hand, might convey the speaker's distress, but refers primarily to objective reality.

Another explanation is that verbs of bodily state make up a distinct dative construction. This is related to the fact that PD with verbs of bodily state appears to overlap with the experiencer dative construction, as illustrated by example (41):

(41)   a.   koev li.
                 hurts to.me
                 'I am in pain.'

           b.   koev li   ha-roš.
                 hurts to.me the-head
                 'My head hurts.'

This would explain why these verbs are so pervasive in a construction that generally disprefers stative verbs, and account for the fact that they are acceptable with unergative verbs, which is unusual in PD (Tal Siloni, personal communication). The question whether this is a seperate construction or not is left for future research.

6   Conclusion

Compared to analogous constructions in other European languages, the Hebrew Possessive Dative construction is very permissive, to the point that it can be used in cases when no possessor affectedness can be perceived. At the same time, two kinds of evidence can be convincingly accounted for using the notion of affectedness in its analysis. On the one hand, statistical tendencies in actual usage have been shown to be skewed towards high-affectedness contexts. On the other, we have seen "pockets of resistance" to which the construction has not expanded (yet?), all of which have in a common a very low degree of affectedness.

A plausible explanation for all these facts is that this construction started as an affectedness construction, as in other European languages, and gradually expanded to contexts where affectedness is less and less marked. Still, PD has not evolved into a general-purpose possessive construction: this expansion has been restricted, and there remains a core area where affectedness is still part of the meaning. PD is certainly not synonymous with the genitive possessive construction (contra e.g. Landau 1999); in fact, in many cases it is not even a possessive construction, strictly speaking.

This paper has also shown how typology can be used to elucidate language-internal phenomena: constraints that are easily observable in one language, as hard grammatical constraints, can then be used to explore usage prefer-

ences in other languages where they are not part of grammar (Givón 1979, Aissen 1999, Bresnan et al. 2001).

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