Possession as a Lexical Relation: Evidence from the Hebrew Construct State

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The literature on genitives (Partee 1997, Barker 1995) has generally assumed that the relation of possession (or ownership) is a special case of contextual relations. This has been challenged by Vikner & Jensen (in press) who analyze possession as a lexical relation. This paper presents an analysis of the construct state in Hebrew supporting the view that possession is a lexical relation. The head noun of the construct state is analyzed as a function from individuals into individuals (type <e,e>) that takes the genitive phrase as its argument. In accordance with Vikner & Jensen's theory, an extra argument slot representing the genitive relation is lexically available for inherently relational nouns, and it is added to sortal nouns by a lexical rule. New data is provided to support the functional nature of the head noun and its restriction to lexical relations.

1. Introduction: The construct state in Hebrew

Construct state nominals in Hebrew (and Arabic) have received much attention in the generative literature (Borer 1984, 1996, Ritter 1988, 1991, Siloni 1991, 1997, Dobrovie-Sorin 2000 among others). This genitive construction exhibits some unique properties that can be illustrated by comparing it to a second genitive construction, known as the free state. Compare the construct state (CS) in (1a) with the free state in (1b):

(1) a. **mapat** ha-ir b. ha-**mapa** Sel ha-ir map the-city the-map of the-city both: 'The city's map' (roughly)

The two constructions exhibit the same word order - the head noun precedes the genitive phrase, but they differ in the form of their

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constituents. The head noun in the CS has a distinct morpho-phonological form, known as the "construct form", e.g. *mapat* derived from the base form *mapa* (there are also nouns that do not change their form due to phonological reasons). The genitive phrase in the CS is bare, contrasting with the genitive phrase in the free state which is marked by *Sel* 'of'.

An additional unique property of the CS pertains to definiteness, which is marked in Hebrew by the definite article ha 'the' (Hebrew lacks an indefinite article). (2a, 3a) show that the head noun of the CS cannot be marked by the definite article, while in the free state (b) examples the definite article is optional, affecting the interpretation of the genitive construction:

(2)	a.	(*ha-) galgaley the-wheels 'The buses' whe	ha-otobusim the-buses els'	b.	(ha-) galgalim (the-)wheels '(The) wheels	Sel of of the	ha-otobusim the-buses e buses'
(3)	a.	(*ha-) galgaley the-wheels 'Buses' wheels'	otobusim buses	b.	(ha-) galgalim (the-)wheels '(The) wheels	Sel of of bu	otobusim buses ses'

The necessarily-bare head noun is assumed in the literature to inherit its (in)definiteness value from the genitive phrase, a view known as "(In)definiteness Spread" (see Borer 1984, Ritter 1991, Siloni 1997 and many others). Under this view, the CS with the definite genitive phrase in (2a) is predicted to be equivalent to a simple definite DP, and the CS with the indefinite genitive phrase in (3a) to a simple indefinite DP. In this paper I will argue against this view.

The rest of the paper falls into two parts. Section 2 introduces the analysis, concentrating on the properties of its logical types; section 3 discusses the semantic aspect of the analysis: the range of genitive relations in the CS and how they are incorporated into the typal analysis.

2. The analysis and its logical aspects

The analysis concerns the lexical meaning of the construct form of nouns. I propose that the morpho-phonological change of the head noun has a semantic correlate. In particular, while the base form of the noun denotes – as is standard in the literature – a set of individuals (type $\langle e,t \rangle$), the construct form of the noun denotes a function from individuals into individuals (type $\langle e,e \rangle$). This function takes the genitive phrase as its argument, and the CS as a whole denotes the (unique) individual which is the output of the function for that input individual (cf. Jacobson 1993, Dobrovie-Sorin 2000, where a structurally evoked type-shifting rule shifts nouns in genitive constructions into $\langle e,e \rangle$ functions).

In the light of this proposal, consider again the examples in (1), repeated here as (4):

(4)	a. CS: type	e	b.	FS	_	
	N: type <e,e> mapat</e,e>	DP: type e ha-ir	(ha) (the)	λx(map'((x) & R((x,the-city))
	map 'The city's map'	the-city	λx m	k.map'(x) napa	λx.R	(x,the-city)
			m	nap	Sel of	DP: type e ha-ir the-city

In the CS (4a), *mapat* 'map' denotes a function from individuals into 'map' individuals and the genitive DP *ha-ir* 'the city' denotes an individual. Since a function is by definition single valued, the composition of these elements yields the <u>unique</u> 'map' individual that the function assigns to the input 'city' individual. This naturally accounts for why the definite article cannot mark the head noun (see again section 1): the CS as a whole denotes an individual of type e to which the definite article cannot apply. (4b) sketches the semantic composition I assume for the free state: the *Sel* 'of' phrase is a modifier denoting the set of individuals that stand in some unspecified relation \Re to (the individual denoted by) *ha-ir* 'the city'. This set is intersected with the set denoted by the head noun *mapa* 'map' to yield the set of 'map' individuals that are related to 'the city', at which point the definite article may apply.

Next, consider (5) where the head noun is plural:

(5) **anfey** ha-ec branches the-tree 'The tree's branches'

In order to deal with plurals, we assume plural individuals in the sense of Link (1983). The plural *anfey* 'branches' denotes a function of type $\langle e, e \rangle$ in which the range of the function is restricted to plural (non-atomic) individuals¹. When the individual denoted by *ha-ec* 'the tree' is fed into this

^{1.} Restricting the range of the <e,e> function to atomic or plural individuals according to the number marking on the head noun is analogous to what Dayal (1996) proposes for Skolem functions in her analysis of *which* phrases in multiple *which* questions. Note that in their classic use (wide scope indefinites, functional questions and functional relative clauses) Skolem functions relate two argument slots, while here one element is the argument of the other.

function, the output is the unique plural 'branches' individual, i.e. the maximal individual, that the function assigns to that input 'tree' individual.

The rest of this section presents two kinds of evidence to support the $\langle e,e \rangle$ analysis. Section 2.1 shows that the CS as a whole denotes an individual (type e) – the output of the $\langle e,e \rangle$ function. Section 2.2 demonstrates that this individual is unique, as entailed from its being the output of a function. The status of uniqueness is addressed in the appendix.

2.1. Evidence for type e denotation: restrictive adjectives

The behavior of purely restrictive adjectives provides evidence for the type e denotation of the CS. Note, first, that the position of the adjective in the CS is not canonical: it follows the genitive phrase instead of immediately following the head noun, as in the free state (and other NPs). If the genitive phrase is an immediate argument of the head noun as proposed here, the adjective composes with the denotation of the CS as a whole, i.e. with the (unique) individual which is the output of the <e,e> function. Consequently, a purely restrictive adjective should not be possible in this position: the CS already denotes a single individual. As (6-7) show, this prediction is borne out:

(6)	a.	#delet ha-bayit ha-axorit door(f) the-house(m) the-back(f)	(CS)
		'The house's back door'	
	b.	ha-delet ha-axorit Sel ha-bayit	(FS)
		the-door the-back of the-house	
		'The back door of the house'	
(7)	0	traday ha para ha kidmiyat	(\mathbf{CS})
()	a.	legs(pl) the cow the front(pl)	(CS)
		'The cow's front legs'	
	b.	ha-raglavim ha-kidmivot Sel ha-para	(FS)
	5.	the-legs the-front of the-cow	(12)
		'The front legs of the cow'	

(6a) is deviant because *delet ha-bayit* (lit: 'door the-house') denotes the (unique) door the function assigns to the house, so there is not set to choose the back door from. An adjective like *aduma* 'red', which can be interpreted attributively, is possible in this position: it would be predicated of the individual denoted by the CS. The plural *ragley ha-para* (lit: 'legs thecow') in (7a) denotes the maximal 'leg' individual the function assigns to the cow, i.e. the sum of the cow's legs. Being an individual, this output cannot be restricted by the adjective to denote just the front legs. Again, an attributive adjective, e.g. *xumot* 'brown', is possible. Finally, the same

restrictive adjectives are a possible modifier for the head noun in the free state (b) examples, as expected from the types proposed in (4b).

Contrary to what has generally been assumed in the CS literature, these data indicate that an adjective which follows the genitive phrase modifies the CS as a whole and not just the head noun. This accounts for its position, which is unexpected under the view that it modifies the head alone (the adjective follows the nominal it modifies – the whole CS). This account contrasts with previous ones, e.g. Ritter (1991), Siloni (1997), where the adjective was assumed to modify the head noun and its position was derived syntactically.

2.2. Evidence for uniqueness

Being the output of a function, the individual denoted by the CS is predicted to be unique. Evidence for the uniqueness status of this individual comes from cases like (8-9) where uniqueness is not dictated by world knowledge and therefore has to be attributed to the construction. Consider a context of a strike in some library, where it is clear that the library has more than one employee. In (8) the head nouns are singular and the genitive DPs are definite. The continuation (8c) which introduces a second (distinct) employee of the library (by means of a free state) is possible following the free state in (8b) but not following the CS in (8a):

- (8) a. [cs oved ha-sifriya] xasam et ha-knisa ha-raSit... employee the-library blocked Acc the-entrance the-main 'The library's employee blocked the main entrance...
 - b. [FS oved Sel ha-sifriya] xasam et ha-knisa ha-raSit... employee of the-library blocked Acc the-entrance the-main 'An employee of the library blocked the main entrance...
 - c. ...ve-od oved Sel ha-sifriya xasam et ha-axorit and-more employee of the-library blocked Acc the-rear ... and another employee of the library blocked the rear one.'

This contrast shows that the employee introduced by the CS in (8a) is unique in the context, whereas the one introduced by the (bare) free state in (8b) is not. (9) illustrates the same for plural head nouns with indefinite genitive DPs (see below on the use of the numerical *axat* 'one'):

- (9) a. [cs ovdey sifriya axat] patxu be-Svita... employees library(fem) one(fem) opened in-strike 'A library's employees went on strike...
 - b. [FS ovdim Sel sifriya axat] patxu be-Svita... employees of library(fem) one(fem) opened in-strike 'Employees of a library went on strike...

c. ... aval **ovdim axerim** hif'ilu et ha-sifriya ka-ragil but employees others operated Acc the-library as-usual ... but other employees operated the library as usual.'

When the continuation (9c) is added to (9a), the 'other employees' must be from a different library, showing that the CS introduces all the employees of the one library – it denotes a maximal individual. When the same continuation is added to (9b), the 'other employees' can be from the same library, i.e. no maximality effect is observed for the free state. In sum, these data show that the descriptive content of the CS renders the individual it denotes unique (or maximal) in the context, as would be expected if it is the output of an <e,e> function.

Before we compare this uniqueness paradigm to the '(In)definiteness Spread' view, let us note on the use of the numerical 'one' in the indefinite genitive phrases in (9). Previous work has only considered CSs with a bare genitive phrase for the indefinite cases. But in the CS environment bare singulars do not denote an individual. Instead, the CS with the bare singular denotes a sub-kind. Adding the numerical 'one' forces the specific reading. Compare the CSs in the (a) examples, where the genitive phrase is marked by 'one', with the bare genitive phrases in the (b) examples:

(10) a.	anfey or branches pir 'A pine's bran	en exad ne one nches'	b.	anfey branches 'Pine bra	oren 5 pine anches'
(11) a.	kalbat Saxer dog(f) neigh 'A neighbor's	n exad bor(m) one(m) dog'	b.	#kalbat dog(f)	Saxen neighbor(m)

(10a) can be used to refer to the branches of a specific pine tree, while (10b) does not have this meaning and it denotes a kind of branches. This is further supported by the contrast in (11): while (11a) can be used to refer to an actual dog (in a similar way to the English translation), (11b) is deviant because there is no sub-kind of dogs such that they are owned by neighbors. Since the goal of the paradigm in (8-9) is to demonstrate the uniqueness (or maximality) of the <u>individual</u> denoted by the CS, the numerical 'one' was used to get the appropriate individual denotation².

^{2.} The analysis of individual-denoting CSs presented here can be extended to account for the sub-kind cases as well. If we follow Krifka (1995) in sorting the domain of type e as to include the sort of 'concept' in addition to 'objects' ('teal individuals') and 'kinds', the $\langle e, e \rangle$ function will map concepts onto concepts to create sub-kinds. A detailed implementation of this idea requires further research.

The uniqueness paradigm presented in this section is unexpected under the "(In)definiteness Spread" approach. This approach assumes that the head of the CS inherits its (in)definiteness value from the genitive phrase. This has been formalized in syntactic terms using [±definite] features in e.g. Borer (1996), Ritter (1991), Siloni (1997), and also in semantic terms by Dobrovie-Sorin (2000) who posits an (in)definiteness preserving <e,e> function denotation for the sister of specDP³. Independent of the details of the specific analyses, they all predict (8a) to be equivalent to a simple definite DP and (9a) to be equivalent to a simple indefinite. But unlike definites which are known to exhibit uniqueness, indefinites are not expected to denote unique individuals (though they may denote specific ones). Since both with a definite and an indefinite genitive phrase the CS has been demonstrated to render the individual it denotes unique/maximal, the '(In)definiteness Spread" approach makes the wrong prediction for the indefinite cases and cannot be maintained (for more evidence against "(In)definiteness Spread", see Danon 2001).

Before we turn to the semantic content of the <e,e> function, let us summarize the logical properties of the analysis. I have argued that the denotation of the CS is the output of this function, i.e. a unique/maximal individual. Its being an individual was supported by the ban on restrictive modification, and its uniqueness was demonstrated by cases where uniqueness is not dictated by world knowledge. The latter also provided evidence against the view of "(In)definiteness Spread".

3. The semantic content of the function

The $\langle e,e \rangle$ function denoted by the construct form of the noun maps individuals onto individuals in the set denoted by the base form of the same noun. The next question to be addressed is which relations between the individuals can be expressed by these functions. To answer this question, let us first backtrack and examine the range of genitive relations in the English Saxon genitive. The first group is lexical relations, where the relation is introduced by the head noun, such as the inherent relation in (12a), partwhole in (12b) and kinship in (12c):

- (12) a. The university's address
 - b. A tree's branches
 - c. The psychologist's parents

3. Dobrovie-Sorin does not spell out the details of the functions, so it is unclear what forces a definite individual to map onto a definite individual and a variable (the denotation she assumed for indefinites) to map onto a variable. Note further that the output of a function is unique/maximal by definition: a property which could not be reconciled with the output being indefinite.

A second source for genitive relations is the context. In a context of a professional meeting about parenthood where each participant brings a pair of parents to elucidate their point, we can refer to the parents who came with the psychologist using (12c), repeated as (13a). (13b) can be used in a context involving a girl and a boy drawing a painting in order to refer to the sky in the girl's painting:

(13) a. The psychologist's parentsb. The girl's sky

Finally, the Saxon genitive can also express proper possession (i.e. ownership), as in (14):

- (14) a. A neighbor's dog
 - b. The teacher's glasses

The literature on genitives uses a lexical or contextually-supplied (two place) predicate to represent lexical and contextual relations respectively (Partee 1997, Barker 1995, Vikner & Jensen, in press). Possession (ownership), however, does not seem to fit in naturally with either of these classes. Partee (1997) and Barker (1995) analyze possession as a special case of contextual relations, because it is not associated with any particular lexical item. Vikner & Jensen (in press), on the other hand, classify possession as a lexical relation, arguing that unlike real contextual relations it is available without a supporting context. The two views are summarized in Table 1:

Partee, Barker	Genitive Relation	Vikner & Jensen
LEXICAL	inherent relation	
	part-whole	LEXICAL
PRAGMATIC	possession	
	free	PRAGMATIC

Table 1: Two views on lexical vs. pragmatic genitive relations

Section 3.1 presents the range of genitive relations in the CS which will provide empirical support for Vikner & Jensen's view. In Section 3.2 these relations are incorporated into the formal functional analysis; section 3.3 discusses the dependence among the different relations.

3.1. Genitive relations in the construct state

The Hebrew CS can express the same range of lexical relations we saw in the English Saxon genitive (cf. Examples 12):

(15) a.	ktovet	ha-universita	b.	anfey	ec	exad
	address	the-university		branches	tree	one
	'The uni	versity's address'		'A tree's	branc	hes'
с.	horey	ha-psixolog				
	parents the-psychologist					
	'The psy	chologist's parents'				

But unlike the Saxon genitive, the Hebrew CS cannot be used to express contextual relations. (16a) cannot be used to refer to the parents who came with the psychologist in the aforementioned context of the meeting about parenthood; it only has the lexical interpretation. (17a), the CS counterpart of (13b), for which no lexical interpretation is available, is infelicitous. Note that these contextual relations can be expressed using the free state in the (b) examples:

(16) a.	horey	ha-psixolog	b.	ha- horim	Sel	ha-psixolog
	parents	the-psychologist		the-parents	of	the-psychologist
	both: 'T	he psychologist's pa	rents	'(roughly)		
(17) a.	#Smey	ha-yalda	b.	ha- Samayi r	n S	Sel ha-yalda
	sky	the-girl		the-sky	C	of the-girl

This contrast between lexical and contextual relations exhibited in the CS allows us to empirically evaluate the status of possession. Interestingly, the CS can express possession, as exemplified in (18):

'The girl's sky'

(18) a.	kalbat	Saxen	exad	b.	miSkafey	y ha-mora
	dog(f)	neighbor(m)	one(m)		glasses	the-teacher
	'A neighbor's (female) dog'		'The teac	her's glasses'		

These data indicate that possession patterns with lexical relations in that it is possible in the CS, and not with contextual relations which are banned from this construction. We are therefore led to the conclusion that it <u>is</u> a lexical relation, supporting Vikner & Jensen's (in press) view (see again Table 1). The CS, however, is not the only construction that exhibits this pattern: a similar pattern has been discussed in Storto (2000a,b) for the English double genitive. Storto observes that unlike other genitive constructions in English, the double genitive does not allow for contextual interpretations, while possession (and lexical relations) are possible: 'some dogs of John' 'scan refer to dogs owned by John, but not to dogs that happen to have bitten him. The fact that we find the same pattern in two unrelated languages provides additional support to the view that possession is a lexical relation.

3.2. Deriving possible functions

Our next step is to incorporate the lexical relations into the $\langle e,e \rangle$ functions denoted by the construct forms of nouns (which I will write as $n \sim$). For relational nouns consider (19), repeated from (15a). The basic denotation of the relational noun *address* in (19b) is of type $\langle e, \langle e, t \rangle \rangle$. The corresponding construct form *address* - in (19c) is an $\langle e, e \rangle$ function which is defined only for individuals that satisfy the selectional restrictions on the outer argument of the relational noun, i.e. individuals that have an address, and it maps each of them onto an individual which stand in the *address* relation to the input individual:

(19) a. ktovet ha-universita address the-university 'The university's address'
b. address λyλx.address'(x,y)
c. address~ λy.tx(address'(x,y))

But most nouns are not relational – they merely denote a set of individuals. In order to relate them to other nouns and express the various genitive relations, Vikner & Jensen (in press) propose type-shifting rules that coerce sortal nouns (type $\langle e, t \rangle$) into relational nouns (type $\langle e, e, t \rangle$). One source for the extra argument slot is the *qualia roles* in Pustejovsky's (1993) enriched lexical entries for nouns. Pustejovsky proposes, for entirely independent reasons, that the lexical entry of a noun not only lists its argument structure, as is commonly assumed, but also its qualia structure. The qualia structure lists the essential attributes of the object, such as its relationship to other objects, its purpose and its origin. The proposed qualia roles are given in (20):

(20) Qualia structure

CONSTITUTIVE: the relation between an object and its parts. FORMAL: that which distinguishes it from a larger domain. TELIC: its purpose and function. AGENTIVE: factors involved in its origin or 'bringing it about'.

I follow the spirit of Vikner & Jensen's analysis and use qualia roles to restrict the domain and the co-domain of the <e,e> functions denoted by the construct form of nouns. The representation of part-whole relations is illustrated by (21):

(21) a. **geza** ec exad trunk tree one 'A tree's trunk'

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b. trunk Argument structure λx.trunk'(x)
Qualia structure CONSTITUTIVE: λxλy.part-of(x,y:body)
c. trunk~ λy.tx (body(y) & trunk'(x) & part-of(x,y))
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The lexical entry of *trunk* in (21b) lists its sortal denotation as well as its CONSTITUTIVE qualia role. The construct form of the noun *trunk*~ in (21c) denotes the <e,e> function whose domain is the set of individuals that satisfy the restriction introduced by the CONSTITUTIVE role; the function maps each of those individuals onto the 'trunk' individual that stands in the *part-of* relation to them⁴.

Finally, we turn to the representation of possession. Vikner & Jensen (in press) do not associate this relation with a specific lexical entry or qualia role. Instead, they claim that this relation can be freely established "between an animate being X and an item Y which X has at his or her disposal, being able to use or handle it", and they represent possession using the abstract predicate *control*. (22), repeated from (18a), illustrates how possession is derived in the CS:

(22) a.	kalbat	Saxen	exad	
	dog(f)	neighbor(m)	one(m)	
	'A neig	hbor's (female	e) dog'	
b.	dog	Argume	nt structure	$\lambda x.dog'(x)$
c.	dog~	λy.1x (ar	nimate(y) &	dog'(x) & control(y,x))

The lexical entry for dog in (22b) lists a sortal noun with no qualia structure, but since this object can be controlled, the construct form $dog \sim$ in (22c) denotes a function that maps animate individuals that have the ability to control onto 'dog' individuals that are controlled by the input individual.

3.3. Which functions are actually derived?

Having seen how different functions are derived, a natural question at this point is which function is derived in cases where more than one lexical

^{4.} Agentive relations can be derived in a similar fashion using the AGENTIVE qualia role. For instance, in *similat ha-me'acev* 'The designer's dress', the <e,e> function denoted by the construct form *similat* 'dress' maps those individuals that can create a dress onto 'dress' individuals that were created by the input individual (formally: *dress*~ $\lambda y.tx(animate(y) \& dress'(x) \& create'(y,x))$). Note that the predicate relating the two individuals can be abstract and need not correspond to an existing verb – cf. the representation of possession in (22c).

relation is available for a noun. Unlike the Saxon genitive which can be ambiguous between different relations, the CS always denotes the most 'hatural' relation available. For instance, the head noun *gag* 'roof' which in principle could allow for either part-whole or possession is combined in (23) with a genitive phrase that makes possession the only option. While the free state in (23b) can refer to the roof that my parents own (e.g. the roof of their house), this is impossible for the CS in (23a) (this example is due to Ivano Caponigro):

(23) a.	*gag	ha-horim	Seli	b.	ha- gag	Sel	ha-horim	Seli
	roof	the-parents	mine		the-roof	of	the-parents	mine
			'My parents' roof'					

These data show that the availability of a part-whole reading for the head noun blocks the availability of the possession interpretation. More generally, this seems to suggest the existence of a hierarchy of salience among genitive relations, which determines which relation is encoded in the construct form of the noun in cases where more than one relation is possible. That is, the construct form of each noun denotes a single function that encodes the most salient genitive relation available for this noun. Although the source of this hierarchy requires further research, its existence explains why contextual relation are not found in the CS: the construct form of the noun is already specified in the lexicon for a genitive relation.

4. Conclusions

In this paper I have argued that the construct form of nouns in Hebrew denotes a function from individuals into individuals (type <e,e>). It follows from the functional nature of the head noun that the CS as a whole denotes a unique/maximal individual, and this was supported by the data presented in section 2. These data also provided evidence against the view of '(In)definiteness Spread''. I have further shown that the CS allows for lexical relations and possession, but excludes contextual ones. This pattern, summarized in Table 2, supports Vikner & Jensen's view that possession is a lexical relation.

Barker, Partee	Genitive Relations	Vikner & Jensen	CS
LEXICAL	inherent relation		√ (19)
	part-whole	LEXICAL	√ (21)
PRAGMATIC	possession		√ (22)
	free	PRAGMATIC	X (16-17)

Table 2: How the construct state fits in with the views on genitive relations

The semantic content of the <e,e> functions was derived in the sprit of the analysis given by Vikner & Jensen (in press) for the English Saxon genitive, and it was based in part on lexical entries for nouns that include their qualia structure, listing the essential attributes of the noun. Each construct form was found to denote just one function encoding the most natural lexical relation available for this noun. This implies that there is a hierarchy with respect to the salience of genitive relations, and accounts for the lack of contextually supplied relations in the CS.

Appendix: The status of uniqueness

If the model (i.e. the context supplemented with our world knowledge) does not encode a unique relation between the individuals, it should be impossible to construct a function, and the CS is predicted to be infelicitous. This was not true for the cases we saw in section 2.2, but we do find this requirement with part-whole relations. In a context of a gymnast in the Olympics, compare the unique status of roS 'head' in (ia) and the maximal status of *yedey* 'hands' in (ib), with the non-unique status of *yad* 'hand' in (ic) (and note that the free state counterpart in (id) is ok, as no function is constructed):

(i)	a.	roS ha-mit'amelet	b.	yedey ha- mit'amelet
		head the-gymnast		hands the-gymnast
		'The gymnast's head'		'The gymnast's hands'
	c.	?#yad ha-mit'amelet	d.	ha-yad Sel ha-mit'amelet
		hand the-gymnast		the-hand of the-gymnast
		'The gymnast's hand'		'The hand of the gymnast'

If we change the context such that the gymnast has only one hand, e.g. in the context of the Paralympics, it becomes possible to construct a function and (ic) becomes acceptable. But the requirement for uniqueness is not absolute; it could also be satisfied by strong salience. For example, in a context of a monk engaged in copying old scripts, only one hand of the monk is relevant, and the CS in (ii) is felicitous:

 (ii) [cs yad ha-nazir] niSbera ve-hu ne'elac liSbot mi-melaxto hand the-monk broke and-he was-forced to-stop from-work-his 'The monk's hand broke, and he was forced to stop working.'

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