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Regular and Generic Possessives in Maltese

Albert Gatt, University of Brighton

1. Introduction

Recent work on the semantics of possessives has evinced a resurgence of interest in the substantive nature and provenance of the possessive relation (e.g. Barker 1995; Partee and Borschev 1998, 2000a, 2000b; Borschev and Partee 2001; Vikner and Jensen 2002) [*]. A more systematic account of these relations is made possible by developments in lexical semantic theories, which have given rise to a weakly polymorphic view of the syntax-lexical semantics interface, whereby lexical items are underspecified to some degree, and dependent on the selectional properties of other elements in their immediate syntactic environment (e.g. Pustejovsky 1995, 1998). While various approaches subscribe to some version of these hypotheses, there are important theoretical differences between them with respect to the domain in which knowledge is considered to lie, whether it is encoded in a sort system underlying the lexicon, or whether it is construed as 'world knowledge' (cf. Dölling 1995, 1997).

This paper endorses the view that the lexicon should be imputed with a limited amount of knowledge, organised as a sort inheritance hierarchy (Pustejovsky 1995). It attempts to extend the approach to possessive relations proposed by Jensen and Vikner (1994, 2004; Vikner and Jensen, 2002), based on the Generative Lexicon, to a particular class of possessive constructions. Such constructions, exemplified by expressions like *a women's magazine*, are often ambiguous between a regular, relational interpretation and an alternative 'modificational' interpretation. Anticipating the outcome of the analysis, the latter will be referred to as Generic Possessives (GPs). Focusing on data from Maltese, I will show that the possessor NP in these constructions is kind-denoting. I will argue that the GP expresses a relation holding between the entity denoted by the head noun and putative realizations of the kind denoted by the possessor NP.

2. Possessives in Maltese

Maltese has two ways of expressing possessive relations, depending on whether the head noun is alienably or inalienably possessed. The Construct State Construction (CSC), exemplified in (1), is restricted primarily to head nouns denoting kinship relations (1a) and body parts (1b) (but cf. Fabri 1996; Gatt

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2003). It has the structural properties familiar from the Construct in other Semitic languages: head and possessor NPs are juxtaposed in a right branching construction, while the head noun lacks overt determination. Although the possessor NP can be indefinite, the construction as a whole is always interpreted as definite (cf. Fabri 2001).

(1) a. omm Pietru
mother Peter
'Peter's mother'
b. id it- tifel
hand DEF- boy
'the boy's hand'

In contrast to (1), the Periphrastic Possessive Construction (PPC), which is also right-branching, requires the mediation of the possessive marker *ta'* between head noun and possessor NP. The head NP can be realised as definite or as a bare indefinite NP, as shown in (2). The PPC expresses a broader range of possessive relations than the CSC (cf. Koptjevskaja-Tamm 1996). It can also license contextually specified relations.

(2) (il-) karozza ta' Pietru
(DEF-) car POSS Peter
(i) 'Peter's car' (definite)
(ii) 'a car of Peter's' (indefinite)

2.1. Regular and generic possessives A second, orthogonal classification of possessive constructions is based on whether they have a regular (RP) or generic possessive (GP) interpretation. Some constructions are ambiguous between RP and GP readings, as shown by the English example in (3)

(3) a. a man's shoe (RP)
'a shoe belonging to/worn by a man'
b. a man's shoe (GP)
'a shoe of the kind worn by men'

The kinds of structures I am calling GPs have been observed in several languages (e.g. Chappell and McGregor 1989; Koptjevskaja-Tamm 2002, 2004; Munn 1995; Strauss 2004). In Maltese, the PPC - but not the CSC - displays the same contrast between RP and GP interpretations. Consider the examples in (4).

(4) a. il- magna ta- l- ħasil
DEF- machine POSS- DEF- washing
'the washing machine' (GP only)
b. is- sikkina ta- l- ħobż
DEF- machine POSS- DEF- bread
'the bread knife' (GP only)

As shown by the glosses, these examples only license a GP reading. Moreover, the possessor NP is always definite. This is generally the case if the possessor NP is a deverbal (4a) or mass noun (4b). That these examples only have a GP interpretation is possibly due to the dearth of regular relations that could hold between the entities denoted by the nouns involved, in the absence of a strong supporting context. When the possessor NP contains a plural count noun, as in (5), the possessor NP can be definite (5a) or indefinite (5b). Crucially, however, the GP reading is only available with a definite possessor.

(5) a. żraben ta- t- tfal
shoes POSS- DEF- children
(i) 'shoes possessed by (/ worn by) the children' (RP)
(ii) 'shoes of the kind worn by children' (GP)
b. żraben ta' xi tfal
shoes POSS some children
'shoes belonging to some children' (RP only)

The examples in (4) and (5) contrast with (6) below, where the possessor NP contains a group-denoting noun. In (6a), the GP interpretation is available whether or not the possessor NP is definite, while in (6b) it requires definiteness marking.

(6) a. għalliema ta- (l-) klassi
teacher POSS (DEF-) class
(i) 'a teacher of the/a class' (RP)
(ii) 'a class teacher' (GP)
b. suldat ta- l- armata
soldier POSS- DEF- army
(i) 'a soldier forming part of the/a regiment' (RP)
(ii) 'a soldier of the kind that belong to armies (not navies)' (GP)

Similar observations hold for singular count nouns although, as indicated in (7a-ii), the GP reading is not always readily available with certain nouns (see §2.2). However, availability of GP interpretations is not restricted by definiteness properties.

(7) a. żarbuna ta- (t-) tifel
shoe POSS- (DEF-) boy
(i) 'a shoe worn by / belonging to a boy' (RP)
(ii) ??'a shoe of the kind worn by boys' (GP)
b. difer ta- (t-) tigra
nail POSS- (DEF-) tiger
(i) 'a nail belonging to a tiger' (RP)
(ii) 'a nail of the kind possessed by members of the tiger species' (GP)

The distribution of GP and RP interpretations in the PPC, relative to the kind of possessor NP and its definiteness properties, is summarised in Table 1.

Possessor NP: nominal type	**Availability of GP reading**	
	[+*def*]	[–*def*]
mass	y	n
deverbal	y	n
plural count	y	n
group-denoting	y	y
singular count	y	y

Table 1. *Availability of GP readings with (in)definite possessor NPs*

Note that group-denoting nouns pattern with both singular and plural count nouns: GP readings with singular and group nouns are available irrespective of the definiteness properties of the possessor NP (modulo the restrictions noted in (7a) for indefinite singulars). That group nouns pattern with both singulars and plurals is unsurprising, since they license singular or plural interpretations in different contexts (e.g. Copestake 1995; Caudal 1998). Singular interpretations arise when the noun is interpreted as denoting a single group, while plural readings are available when the group noun is interpreted as denoting the sum of the group's individual members. These patterns are observable in Maltese[1], with plural subject-verb agreement (8) and singular/plural bound anaphora (9).

(8) ir- rigment { a. kell-hom jitilq-u / b. kell-u jitlaq } mil- l- inħawi
DEF- regiment { had-3Pl leave-3Pl / had-3Sg leave.3Sg } from- DEF- region

'The regiment had to leave the neighborhood'

(9) għalliema għajtet ma- l- klassi$_i$ u { a. bagħtit- ha$_i$ / b. bagħtit- hom$_i$ } barra
teacher scold.FSg with- DEF- class$_i$ and { send- PRO.FSg$_i$ / send- PRO.Pl$_i$ } out

'A teacher scolded her class and sent it/them out'

As shown below, in case the possessive relation selects for a plural/sum interpretation of the group noun, the definite article is obligatory in order to have a GP reading, as it is with plurals. Optionality of definiteness marking for GPs with such nouns, as in (6a), is permitted when the possessive relation is unselective with respect to the group/sum denotation.

2.2. The status of GPs Previous analyses of GPs have been concerned with their origin within the overall architecture of the grammar, with substantial debate over

[1] Plural subject agreement, as in (8), is marginal to some speakers. However, intuitions differ. To the present author, (8) is perfectly acceptable.

whether they should be viewed as syntactic or lexical. The rest of this section raises a number of points against the lexical analysis (see also Strauss 2004).

One predominant view has been that GPs are lexical compounds, hence N^0-level categories (e.g. Barker 1995). There is prima facie evidence for this analysis. Several languages that lack a productive process of compound formation resort to possessive constructions to express the same range of meanings (e.g. Spencer 1991; Sadock 1998). However, these 'possessive compounds' are usually semantically transparent, as shown in recent work by Johnston and Busa (1996, 1999; see also Bassac and Bouillon 2001). Such a compositional analysis is an argument in favor of a *syntactic* view of GPs (Munn 1995). Moreover, the systematic nature of the RP/GP ambiguity in examples (6) through (8) above suggests that the lexical analysis is tenable only to the extent that there is an equally systematic process of *re*analysis of syntactic constructions to lexical units (e.g. Shimamura 1999). This is theoretically and empirically unparsimonious**.** Other objections to the lexicalisation hypothesis are related to the differences between GPs and compounds. Nominal compounds resist internal modification, but this is not the case for GPs, as shown in (10).

(10) il- ħanut ibigħ żraben sbieħ ta- t- tfal
DEF- shop sell.MSg shoes beautiful POSS- DEF- children
'The shop sells beautiful children's shoes'

More generally, GPs violate Lexical Integrity (Bresnan and Mchombo 1995), whereby lexical items are opaque to syntactic processes. As Munn (1995) notes, GPs can undergo recursive modification (cf. *a very tall man's coat*). Additionally, possessor NP coordination (11) does not result in ungrammaticality.

(11) ħwejjeg ta- t- tfal u ta- n- nisa
clothes POSS- DEF- children and POSS- DEF- women
'children's and women's clothes'

In sum, there is no reason to posit a lexical analysis of GPs. This does not exclude lexicalisation in case of idiomatic or frequent usage. However, the evidence suggests that this won't account for the data across the board. The alternative is to view GPs as syntactic constructions, which paves the way for a compositional semantic interpretation. It also calls for a semantic explanation of (a) the status of the possessor NP and the origin of the systematic ambiguity between RPs and GPs; (b) the relational interpretation of GPs.

2.3 Generic possessors The intuitive characterization of GPs, as glossed in the preceding paragraphs, suggests that the denotation of the head noun is restricted in virtue of a relation holding between it and instances of the *kind* of entity denoted by the possessor NP. The main argument of this section is that GP readings arise when the possessor NP has a kind-denoting interpretation (but see §5). This is partially in agreement with Taylor (1996), whose analysis of English

possessives is based on a tripartite division between possessive compounds, generic possessives, and regular prenominal possessives.

Parametric differences have been observed in whether kind-denoting NPs (KNPs), especially plurals and mass terms, are licensed as bare or require overt determination (e.g. Krifka et al. 1995; Chierchia 1998; Carlson 1999; Longobardi 1994, 2001). Maltese patterns with Romance languages in that plural/mass terms have a kind-denoting reading only if overtly marked as definite[2]. This is evidenced by the following test, where the predicate *rari* 'is rare' is kind-selecting, as originally noted by Carlson (1977; cf. Krifka et al. 1995) and forces overt determination on plurals (12a) and mass terms (12b). Singular count nouns, on the other hand, can be indefinite (i.e. bare) in a generic context (12c).

(12)

a.	il-	klieb	rari	f'	dawn	l-	inħawi
	DEF-	dogs	rare	in	these	DEF-	parts
b.	id-	deheb					
	DEF-	gold					
c.	(il-)	kelb					
	(DEF-)	dog					

'{Dogs / gold / the dog} is/are rare in these parts'

In §2.1, group-denoting nouns in GPs were described as sharing properties with both singular count nouns and plurals, in that they license a GP interpretation whether they are definite or indefinite. This was linked to the fact that these nouns pattern with both singulars and plurals in different contexts. Thus, a verbal predicate can select for the singular/group or plural/sum interpretation of the noun and this is reflected in their agreement properties (see examples (9) and (10)). The prediction would then be that, in the case of plural noun-verb agreement with a plural/sum interpretation of a group-denoting KNP, the definite article should be obligatory, as it is with generic plurals. On the other hand, if there is singular agreement, with the predicate selecting for the singular/group reading of the KNP, the noun should license the generic reading even if indefinite. This turns out to be the case, as shown by the contrast in (13).

(13)

a.	(Ir-)	rigment	ikoll-u	ħafna	suldati
	(DEF-)	regiment	have-MSg	many	soldiers
b.	*(Ir-)	rigment	ikoll-hom		
	DEF-	regiment	have-Pl		

'The regiment has/have many soldiers'

In (13a), noun-verb agreement is in the singular, which results in optional definiteness marking. In (13b), where there is plural noun-verb agreement, the group-denoting noun has to be definite in order to license a generic interpretation. The patterns of definiteness marking on kind-denoting NPs are summarized in Table 2.

[2] Deverbal nouns also require definiteness marking for a generic interpretation.

NP: nominal type	Availability of generic interpretation	
	$[+def]$	$[-def]$
mass	y	n
deverbal	y	n
plural count	y	n
group-denoting	y	y
singular count	y	y

Table 2. *Distribution of definiteness properties in kind-denoting NPs*

Note that these patterns are precisely those observed with possessor NPs in PPCs that license a GP reading. Further evidence for the generic reference of the possessor in this construction is provided by the different degrees of acceptability of the GP reading with different singular count nouns, noted in relation to (7a) above. The latter contrasts with (14) below, in which the GP reading is readily available.

(14) difer ta- t- tigra
nail POSS- DEF- tiger
(i) 'a tiger's nail' (RP)
(ii) 'the kind of nail that belongs to members of the tiger species' (GP)

The difference between (7a) and (14) is that the possessor NP *it-tigra* refers to a well-established kind (or species), a property that has been found to be important in determining the possibility of kind-reference for an NP (cf. Krifka *et al*, 1995). To summarize, the patterns in the data support the idea that the GP possessor is a kind-denoting NP.

3. The Generative Lexicon and possessive relations in GPs

Possessive relations are distinguishable according to whether they arise from lexical (sortal) properties of the head noun, or whether they are realizations of salient relations available in discourse (cf. Barker 1995; Partee 1997). Lexical relations arise in two cases. First, the noun can be inherently relational, i.e. a two-place predicate of type $\langle e,\langle e,t\rangle\rangle$. Inherently relational nouns, (e.g. *friend, mother*) generally require a nominal argument, although the argument is occasionally suppressed (Barker 1995). While inherent relations are prototypical candidates for lexical relations, a theory of lexical semantics which is sufficiently granular can extend the range of lexical relations beyond the inherent one, via the mechanism of coercion. The GL-based theory proposed by Jensen and Vikner (1994, 2004; Vikner and Jensen 2002) uses lexical knowledge encoded in a sort hierarchy in order to provide coercion operators that shift nominal $\langle e,t\rangle$ predicates to type $\langle e,\langle e,t\rangle\rangle$. In GL, a lexical conceptual paradigm (LCP; Pustejovsky 1995) is an

underspecified representation partially composed of the four-part qualia structure illustrated below.

(15)
$$\begin{bmatrix} x & \\ \text{Qualia} & \begin{bmatrix} \textbf{FORMAL} : \text{distinguishing properties of } x \\ \textbf{CONSTITUTIVE} : \text{what } x \text{ is made of} \\ \textbf{AGENTIVE} : \text{what brought } x \text{ into being} \\ \textbf{TELIC} : \text{the purpose / function of } x \end{bmatrix} \end{bmatrix}$$

The four qualia roles constitute the 'semantic content' of a lexicalised concept or *sort*. The TELIC and AGENTIVE roles distinguish functional kinds and artifacts from natural kinds, in that the former are specified for their purpose and/or their origin (Pustejovsky 2001). The presence of a suitable coercion operator in the relevant qualia role of an LCP shifts a sortal noun to a relational type by a process of type-shifting (Partee 1987). The template logical form assumed for possessives with relational nouns is given in (16a), while in (16b), *POSS* is a placeholder for the relevant coercion operator in a nominal LCP for possessives licensing (non-inherent) lexical relations.

(16) a. $\lambda x \lambda y \left[\mathbf{N}(x, y) \right]$

b. $\lambda x \lambda y \left[\mathbf{N}(x) \ \wedge POSS(x, y) \right]$

A GL sort hierarchy can be conceived as a directed graph (see (18) below) of which an LCP is a subgraph. In (15), qualia roles are labels for relations holding between a concept *x* and other concepts in the hierarchy from which *x* inherits properties orthogonally. In this model, lexical relations arise as default instantiations of relations already encoded in the sort system. Pragmatic relations can be accounted for via a nonmonotonic reasoning process that defeats available interpretations in favour of pragmatically salient options (cf. Lascarides and Copestake 1999). The array of default lexical relations licensed by the qualia roles is summarised in Table 3, with examples.

	Qualia role	**RP/GP example**	**English translation**
Inherent	FORMAL	il-ħabib tat-tfal	the children's friend
Part-whole	CONST	is-suldat tal-armata	the army soldier
Originator	AGENTIVE	il-ktieb tal-awtur	the author's book
Purpose	TELIC	l-għalliema tal-klassi	the class teacher

Table 3. *Lexical relations licensed by the qualia roles.*

An important property of GPs is that their interpretations are always lexical. In other words, possessives with pragmatic/contextual relations do not license a GP interpretation. Moreover, the 'control' or 'legal possession'

interpretation, often viewed as the default in the absence of a lexical relation, is not present in GPs. As an example, consider (5a), reproduced in (17) below.

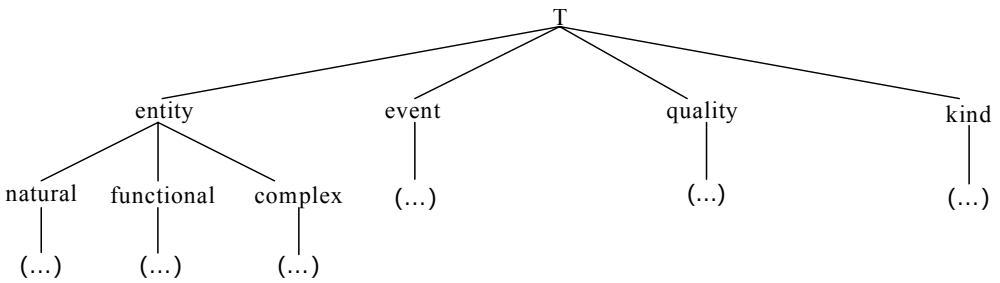
(17) żraben ta- t- tfal
shoes POSS- DEF- children
(i) 'the shoes worn by the children' (TELIC = RP)
(ii) 'the shoes owned by the children' (Control = RP)
(iii) 'children's shoes' (TELIC = GP)

As the example shows, the control relation is available in the RP reading, but not in the GP reading, which is restricted to the TELIC interpretation. Similarly external relations are not available for GPs.

4. Representing kinds in the sort hierarchy

Having summarised the framework to be adopted, I will now turn to a proposal for representing kinds in a GL sort hierarchy. Following Pustejovsky (2001), the sort system encodes a basic distinction between three top-level domains of entities, events and qualities, each of which has a tripartite distinction between natural, functional and complex sorts. Complex sorts are discussed in more detail in §5. To include kinds in the sort system, we can extend the hierarchy by introducing a domain of kinds at the top level (see Dölling 1995 for a related proposal).

(18)



The relationship between subsorts of *Entity* (σ_e) and *Kind* (σ_k) is captured as follows. For every sort σ_k, there is a corresponding σ_e in the sort hierarchy. As a result, a kind-denoting linguistic expression licenses the inference to some corresponding entity or entities that realize the kind:

(19) $\forall x\left[\sigma_k(x) \rightarrow \exists y\left[\sigma_e(y) \wedge R(y,x)\right]\right]$

According to (19), every kind entails the existence of some entity that realizes it. This recalls a proposal made by Carlson (1977), that kinds be viewed as what ties a set of entities together as realizations of the same thing. Unlike entities, kinds are not temporally or spatially bounded (although their realizations are). Carlson's

distinction between kinds and their realizations was motivated by the difference between 'generic' and 'existential' interpretations of English bare plurals in different contexts. For instance, while the predicate *be rare* licenses a generic interpretation of the subject NP in (20a), the predicate *be sitting in my back yard* does not; rather, *dogs* in (20b) is interpreted as *realizations of the kind 'dog'*. Note that it is the context (here, the predicate) that determines which of the two interpretations is adequate.

(20) a. Dogs are rare.
b. Dogs are sitting in my back yard.

The distinction between kinds and their realizations is useful in the present context because it offers a way of determining the relation that holds between the entity denoted by the head noun in a GP, and the kind denoted by the possessor NP [3]. So far I have argued that the GP possessor is a KNP. However, it is difficult to imagine how lexical possessive relations, inherited orthogonally through the qualia, could hold directly between entity-level and kind-level sorts. For instance, in what sense could a man possess (wear, manufacture, etc) the kind 'shoe'? The same objection would apply, mutatis mutandis, to the interpretation of other lexical relations, such as the *part-whole* relation, if they are allowed to hold directly between entity-level and kind-level sorts. The inference from kind-level sorts to their entity-level realizations addresses this problem. Note that (19) can be justified on linguistic grounds: just as certain predicates can select for an existential interpretation of a bare plural, so the possessor NP in a GP requires such an interpretation if the possessive relation is to be interpretable.

5. The interpretation of GPs in outline

This section is concerned with making more explicit the arguments developed in the preceding paragraphs related to the interpretation of GPs. The most parsimonious hypothesis is that the GP also expresses a relation, subject to the same array of default lexical interpretations as the RP[4]. The primary difference lies in that the GP possessor has a kind-denoting interpretation, and the possessive relation holds between an entity and a realization of the kind. The inference from a generic reading of the KNP to the existential 'realization' reading is licensed by (19).

The interpretive procedure is exemplified using two examples of PPCs with a possessor NP containing a group-denoting noun. Since group nouns have properties of both singular and plural count nouns, depending on the context,

[3] The observations made here and in the following section have benefited enormously from comments by Yury Lander, although he might not agree with everything I propose.

[4] In fact, as noted in §3, only lexical interpretations are available in GPs. The assumptions made here are motivated in more detail in Gatt (2003).

these two examples parallel the distinction between singular and plural GP possessors. An account of the behavior of group-denoting nouns requires a brief discussion of complex sorts in GL. A complex sort or *dot object* $\sigma_1 \bullet \sigma_2$ is defined as the Cartesian product of two sorts σ_1 and σ_2, denoting the set of pairs $\langle s_1, s_2 \rangle$ such that $s_1 \sqsubseteq \sigma_1$, $s_2 \sqsubseteq \sigma_2$. A relation $R(s_1, s_2)$ holds between these pairs of subsorts of the complex sort. Pustejovsky distinguishes between *endocentric* and *exocentric* complex sorts. Both have available in their LCP the dot object interpretation; however, exocentric sorts also have the individual sorts making up the dot object as part of their interpretation. That is, a particular context may distinguish between different interpretations of these dot objects, foregrounding one or the other by a coercion operation referred to as *type pumping* (Pustejovsky 2001). Alternatively, a context may be unselective with respect to the sort required, thus selecting the entire dot object. Caudal (1998) has proposed to view group-denoting nouns as dot objects, composed of the two sorts **collection** and **i-part**, in an individual part-of (*i-part*) relation (Link 1983). The sort **collection** is inherited through the noun's FORMAL role, while the **i-part** sort is inherited through CONST. A template LCP for such nouns is given in (21).

(21) **group** LCP: $\left\{ \begin{array}{l} \mathbf{group \bullet i\text{-}part}, \\ \Sigma_1[\mathbf{group \bullet i\text{-}part}] : \mathbf{group}, \\ \Sigma_2[\mathbf{group \bullet i\text{-}part}] : \mathbf{i\text{-}part} \end{array} \right\}$

As shown in (21), the LCP for a group denoting noun will make available both the **collection** and the **i-part** reading, via the two coercion operators Σ_1 and Σ_2. Thus, it is exocentric. In addition, the entire dot object reading may be selected in contexts that are unselective for a group/i-part reading. Turning next to the interpretation of GPs involving group nouns, let us first consider (22) below.

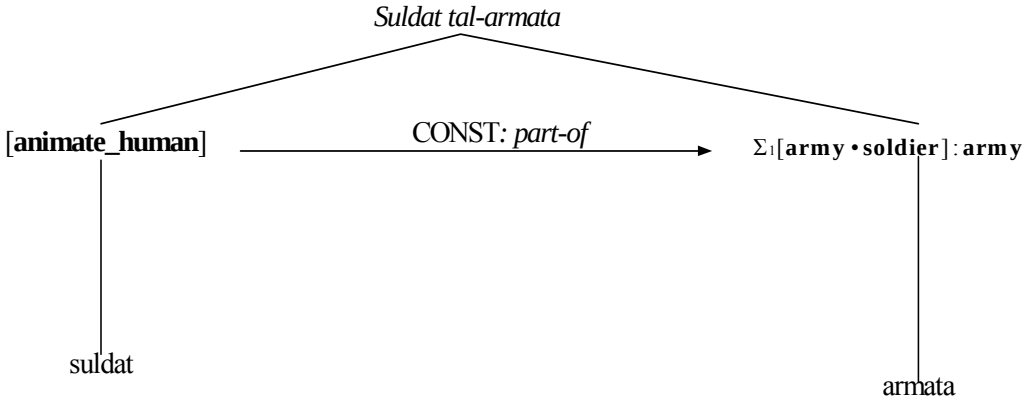
(22) suldat ta- l- armata
soldier POSS- DEF- army
(i) 'a soldier forming part of the army' (RP)
(ii) 'a soldier of the kind which belong to armies (not navies)' (GP)

As the glosses indicate, the default interpretation for the possessive relation is the part-whole relation; the qualia role involved is the CONSTITUTIVE. The group noun *armata* in (22) has a sum interpretation; thus *soldier* is understood to be part of the collectivity of soldiers making up the army. This is also reflected by the obligatory definiteness marking on the possessor NP in the GP interpretation, which parallels the behavior of plural count nouns. A bare indefinite possessor NP in this case does not allow a GP reading. The LCP for **army** in (23) is based on schema (21).

(23) **army** LCP: $\left\{ \begin{array}{l} \mathbf{army \cdot soldier}, \\ \Sigma_1[\mathbf{army \cdot soldier}] : \mathbf{army}, \\ \Sigma_2[\mathbf{army \cdot soldier}] : \mathbf{soldier} \end{array} \right\}$

This representation makes clear why the default reading of (22) is the *part-whole* relation, since something of sort **soldier** is already specified as an *i-part* of something of type **army** in the LCP. The obligatory definiteness marking for the GP is due to the coercion of the noun to the sort **army**, via the operator Σ_1. Through this operation, the noun has the plural/sum interpretation, as the diagram in (24) illustrates.

(24)



The regular possessive reading has the logical form in (25), where Q_{Co} is the CONST qualia role, interpreted as the *part-of*' relation in (25b).

(25) a. $\lambda x \lambda y \left[\mathbf{soldier}_e(x) \wedge \mathbf{army}_e(y) \wedge Q_{Co}(x,y) \right]$ =

b. $\lambda x \lambda y \left[\mathbf{soldier}_e(x) \wedge \mathbf{army}_e(y) \wedge \mathbf{part\text{-}of}(x,y) \right]$

Let us now turn to the GP reading. In this case, the possessor is a KNP, that is, it denotes a kind σ_k. However, by (19), every kind stands in a realization relation to some element of the domain of entities. Thus, letting the subscripts *k* and *e* distinguish between subsorts of *Entity* and *Kind*, we obtain the translation (26a) for the KNP *army*. In conjunction with (19), this gives rise to (26b).

(26) a. $\lambda x \left[\mathbf{army}_k(x) \right]$

b. $\lambda x \left[\mathbf{army}_k(x) \rightarrow \exists y \left[\mathbf{army}_e(y) \wedge R(y,x) \right] \right]$

The interpretation of the entire GP is as follows:

(27) $\lambda x \lambda y \left[\mathbf{soldier}_e(x) \wedge \left[\mathbf{army}_k(y) \rightarrow \exists z \left[R(z,y) \wedge Q_{Co}(x,z) \right] \right] \right]$

According to (27), the relation expressed by the GP holds between *x* of sort **soldier** and some army which is a realization of the kind $\mathbf{army}_k$. Note that the default interpretation of the possessive relation remains the same, namely the *part-of* relation arising from the CONST qualia role.

The next example is (5a), reproduced below as (28). In this case, definiteness marking on the possessor NP is optional for the GP interpretation.

(28) għalliema ta- (l-) klassi
teacher POSS- (DEF-) class
(i) 'the teacher of the class' (RP)
(ii) 'a teacher of the kind who generally teach classes (as opposed to individual students)' (GP)

Optionality of definiteness marking indicates lack of selectivity between **collective** (plural/sum) and **i-part** (individual) interpretations. The default interpretation of (28) is one in which the teacher teaches the class. Although this may be interpreted as an inherent (*teacher-of*') relation (cf. Vikner and Jensen 2002), I prefer to view this as a reading derived from the TELIC role of the LCP of **teacher**, under the assumption that this is a functional subsort of the supersort **human**. As such, it differs from its supersort in that it is specified for its 'purpose'. Eschewing an inherent relation also accounts for the differences between the behavior of this noun and inherently relational nouns such as *friend*. The latter always requires an argument, whether it is explicitly expressed or suppressed (cf. *I saw a friend* = 'I saw a friend of mine'). By contrast, nouns like *teacher* do not (cf. *I met a teacher* ≠ 'I met someone's teacher'). The LCP assumed for *teacher* is given in (29), with the *teach* event inherited through the TELIC quale, as indicated by the subscript. The interpretation for the RP is (30).

(29) **teacher** LCP: $\mathbf{animate\_human} \otimes \mathbf{teach}_{\text{Telic}}$

(30) l-għalliema tal-klassi
$\lambda x \lambda y \left[\mathbf{teacher}_e(x) \wedge \mathbf{class}_e(y) \wedge \mathbf{teach}(x, y) \right]$

Since the default relation is the TELIC *teach*, the shifted relational noun *teacher* does not require specification in terms of collective/individual readings of the group-denoting noun: the **teach**(*x*,*y*) relation holds equally of both the collectivity and its i-parts (in the sense that the teacher teaches the class as a whole, and, by default, its individual students). Turning next to the GP reading, we can maintain the default relation, with the additional requirement that the possessor NP be specified as kind-denoting. As in (28), the existence of an entity-level sort realizing the kind can be inferred via (19).

(31) $\lambda x \lambda y \left[\mathbf{teacher}_e(x) \wedge \left[\mathbf{class}_k(y) \rightarrow \exists z \left[R(z, y) \wedge Q_{Te}(x, z) \right] \right] \right]$

This section has exemplified an interpretive procedure for GPs. On the one hand, I have argued that the possessor NP in a GP denotes a kind, and it is through an inference to *realizations* of the kind that the possessive relation is interpreted. The interpretation also accounts for the properties of group-denoting nouns in possessor NPs, as well as the possessive relations licensed by their LCP. The process of type pumping explicitly addresses the relationship between these nouns and singular/plural count nouns having a kind-level interpretation. Obligatory definiteness marking on group KNPs in GP possessors is associated with their plural interpretation. When definiteness is not required for a kind-level denotation, the group noun is interpreted as a dot object. The distinction between sums and their parts is also reflected by the default interpretation of the possessive relation. For instance, a part-whole relation between head noun and possessor requires the plural interpretation of the group noun. This analysis of GPs can therefore be extended to constructions containing singular or plural possessor NPs.

5. Conclusions and open questions

This paper has defended the view that non-regular uses of possessives arise from an ambiguity of the possessor NP between an individual and a kind-denoting reading. In the latter case, the possessive relation holds between an entity and putative realizations of the kind denoted by the possessor NP. Once this is identified as one source of the RP/GP distinction, it is possible to derive the default relational interpretation of the GP, thereby retaining the minimal assumption that the possessive expresses a relation in every case, and that the substantive nature of this relation can be predicted within the framework of a richly typed, weakly polymorphic theory of the lexicon.

The same broad assumptions underlie recent attempts to give a GL-based account of the semantics of complex nominals involving linking elements in languages such as Italian (Johnston and Busa, 1996, 1999; Bassac and Bouillon, 2001). It is certainly no accident that such constructions closely resemble those that I have been referring to as GPs in the present paper, though the linking element in such ‘compounds’ is not always isomorphic to the possessive marker in these languages. As this paper has tried to show, the resemblance between compounds and possessives does not necessarily imply a lexical process. However, the exact nature of this relationship is a topic that is open for much further research. Other issues of related interest that call for further research include the study of generic phenomena in Maltese, particularly with regard to the status of the definite article in KNPs. Secondly, further cross-linguistic research is required to ascertain the generality of the findings presented here (see for instance, the papers in this volume by Strauss and Koptjevskaja-Tamm). The analysis in this paper makes a contribution in this general direction.

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