

Maltese 'collective nouns': A typological perspective

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In Maltese, as in Arabic in general, a small class of nouns possesses, in addition to singular and plural, a third form, which is commonly referred to as the "collective". However, in the general linguistic literature, the term "collective" is used with a variety of distinct meanings, raising the question: what, exactly, is the Maltese "collective" noun?

This paper proposes an answer to the above question, in the form of a semantic characterization of the Maltese "collective" noun. As a preliminary step, a semantically-based typology of number and quantification is outlined: within this typology, the primary distinction is between mass, singular and plural expressions; in turn, a plural expression may be interpreted as individual or set, and independently, as additive or non-additive, while a mass or plural expression may be interpreted as generic or non-generic. Next, the variegated usages of the term "collective" are mapped out with reference to the proposed typology: among the most common usages are those denoting mass, set, non-additive, and generic interpretations. Finally, the Maltese "collective" noun is examined within the perspective of the proposed typology, and is shown to be characterizable as a non-singular noun, which, when heading an NP, imparts it with a mass and/or plural interpretation, in accordance with the noun's countability preference.

1. Introduction

Descriptions of the Maltese noun generally distinguish, alongside singular and plural, a third form, exhibited by a relatively small class of nouns, commonly referred to as 'collective' (see, for example, Aquilina 1965:71-73, Fenech 1978:47,49, Bugeja 1979:92, Borg 1992, and Mifsud 1995, this volume). Some examples of nouns exhibiting singular, plural and 'collective' forms include *kartuna / kartuniet / kartun* 'cardboard [singular / plural / collective]', *nahla / nahliet / nahal* 'bee [singular / plural / collective]', *huta / hutiet / hut* 'fish [singular / plural / collective]', and *baqra / baqriet / baqar* 'cow [singular / plural / collective]'.

Terminologically, Maltese grammarians follow the practice of their Arabic counterparts. Thus, 'collective' nouns have been described in Classical Arabic (Haywood & Nahmad 1962:29,366-367), and in its modern regional dialects, for example Moroccan (Harrell 1965:191), Tunisian (Talmoudi 1980:131-132), Egyptian (Mitchell 1962:42-43), Chadian (Kaye 1976:104), Sudanese (Trimingham 1939:26), Syrian (Cowell 1964:297-302), Iraqi (Erwin 1969:328-330), Gulf (Qafisheh 1975:144-145), and Hijazi (Sieny 1978:10-11).

However, in general linguistic parlance, the term 'collective' is used in diverse contexts and with apparently different meanings. Moreover, from the available descriptions, it is not at all obvious how the Maltese 'collective' fits into the broad spectrum of usages of this versatile term.

The present paper attempts to shed some light on the semantic nature of the Maltese 'collective' noun. Section 2 puts forward a semantically-based typology of number and quantification. Section 3 maps out the variegated usages of the term 'collective' with reference to the proposed typology. And section 4 examines the Maltese 'collective' noun within the perspective of the proposed typology, arguing that it is most appropriately characterized as a non-singular noun, which, when heading an NP, imparts it with mass and/or plural interpretations, in accordance with the noun's countability preference.

2. A typology of number and quantification

The typology presented below draws upon a large body of literature in traditional grammar, linguistic typology, model-theoretic semantics and natural-language philosophy. The typology is semantically-based, pertaining to meanings, rather than forms. The meanings involved are most commonly associated with NPs, though they may also be associated with expressions belonging to other syntactic categories. The typology consists of four partially independent distinctions, making reference to various notions involving number and quantification. Its focus is on those notions that play a role in the various uses of the term 'collective'.¹

Within the typology of number and quantification, the most important distinction is a three-way one, between mass, singular, and plural. This distinction is illustrated by the direct-object NPs in example (1) below.

- (1) a. Jimmy ate *apple* [mass]
 b. Jimmy ate *an apple* [singular]
 c. Jimmy ate *apples* [plural]

In (1a), the NP *apple* denotes a homogeneous undifferentiated mass; in (1b), the NP *an apple* refers to a single unit of characteristic size and shape; and in (1c), the NP *apples* picks out a multiplicity of such units.²

A variety of morphosyntactic strategies are available to force mass, singular and plural interpretations; an adequate description of such strategies is beyond the scope of this paper.³ Worthy of note, however, is the fact, exemplified in (1a), that the simplest form, a morphosyntactically

bare noun, is associated with the simplest meaning, mass – that which is devoid of an additional partitioning into units making counting possible.

Whereas in (1), each NP falls into exactly one of the three semantic types, in other constructions, ambiguities arise, resulting in the coalescence of mass, singular and/or plural interpretations:

- (2) a. Jimmy ate *one or more apples* [singular/plural]
 b. Jimmy ate *the apple* [mass/singular]
 c. Jimmy ate *fish* [mass/plural]

Thus, *one or more apples* is ambiguous between singular and plural, *the apple* may be interpreted as mass and singular, and *fish* is both mass and plural. In some cases, all three types coalesce:

- (3) Jimmy ate *the fish* [mass/singular/plural]

In the above example, *the fish* is ambiguous between mass, singular and plural interpretations: it may accordingly be characterized simply as unmarked with respect to the mass/singular/plural distinction, or general.⁴

Examples such as those in (2) and (3) above result from a variety of unrelated morphosyntactic factors, whose effect is to neutralize the distinctions between mass, singular and plural interpretations. Among these factors are the existence of a general definite article unmarked with respect to the mass/singular/plural distinction, and the defective number morphology of nouns such as *fish*.

In other languages, ambiguities such as the above occur more readily than in English. In particular, in many languages, morphosyntactically bare lexical items, corresponding to English bare nouns, may be assigned mass, singular or plural interpretations; they may accordingly be characterized as general.⁵

- (4) *Tagalog*
 Mansana ang kinain ni Boy [mass/singular/plural]
 apple TOP PT:PFV-eat PERS:DIR Boy
 'Boy ate apple / an apple / apples'

- (5) *Vietnamese*
 Sù' ăn táo [mass/singular/plural]
 Su eat apple
 'Su ate apple / an apple / apples'

In the above examples, Tagalog *mansana* and Vietnamese *táo* are interpreted as general: they may be understood as mass, singular, or

plural. Thus, whereas in English, bare nouns are associated with the semantically simplest of the three types, namely mass, in Tagalog and Vietnamese, bare lexical items are simply unmarked with respect to the mass/singular/plural distinction.⁶

The semantic distinction between mass NP *apple* in (1a) and general expressions *mansana* and *táo* in (4) and (5) is a subtle one.⁷ We shall therefore consider two diagnostic tests highlighting the distinction between mass and general interpretations.

The first diagnostic involves predicates whose meanings make crucial reference to the individual units underlying count interpretations, for example, predicates of size, shape, and the like: such predicates may accordingly occur in construction with general but not mass expressions. The following example is obtained from (1) by insertion of the adjective *big* before the noun *apple(s)*:

- (6) a. * Jimmy ate *big apple* [(mass)]
 b. Jimmy ate a *big apple* [(singular)]
 c. Jimmy ate *big apples* [(plural)]

Since the adjective *big* describes a property of units, it is consistent with the singular and plural interpretations of the NPs in (6b, 6c), but inconsistent with the mass interpretation of the NP in (6a) (which is, accordingly, indicated in parentheses). Now let us add the adjective *big* to the general NP *the fish* in (3):

- (7) Jimmy ate *the big fish* [(mass)/singular/plural]

Since *the fish* may be interpreted as mass, singular or plural, addition of the adjective *big* selects the singular and plural interpretations, while ruling out the mass interpretation (indicated again in parentheses). Thus, adjectives such as *big* provide a diagnostic distinguishing mass expressions, such as *apple*, from general expressions, such as *the fish*: only the latter may occur in construction with such adjectives. Let us now apply this diagnostic to *mansana* and *táo*:

- (8) *Tagalog*
 Malaking mansana ang kinain ni Boy
 big-LIG apple TOP PT:PFV-eat PERS:DIR Boy
 'Boy ate a big apple / big apples' [(mass)/singular/plural]
- (9) *Vietnamese*
 Su' ăn táo to
 Su eat apple big
 'Su ate a big apple / big apples' [(mass)/singular/plural]

As the above examples clearly show, *mansana* may occur in construction with *malaki* 'big'; similarly, *táo* may occur in construction with 'big'. In this respect, *mansana* and *táo* resemble NPs such as *the fish*, while differing from NPs such as *as apple*. The diagnostic accordingly supports the characterization of *mansana* and *táo* as general, rather than mass.

A second diagnostic distinguishing mass from general expressions is provided by the ability to function as distributive-key: an expression with wide scope, over which another expression, the distributive-share, may distribute.⁸

- (10) a. ?* *Apple* is fifty cents each [(mass)]
 b. * *An apple* is fifty cents each [(singular)]
 c. *Apples* are fifty cents each [(plural)]

In the above constructions, the distributive-key quantifier *each* is coindexed with the subject NP, assigning it a distributive-key interpretation; the predicate *is fifty cents* is then marked as distributive share. However, only plural expressions, such as *apples* in (10c), may function as distributive-key: singular expressions, such as *an apple* in (10b) cannot, and mass expressions, such as *apple* in (10a) are very awkward in such a role. Consider, now, general expressions:

- (11) *The fish* are fifty cents each [(mass)/(singular)/plural]

As noted in (3), *the fish* is general: it may be interpreted as mass, singular or plural. The availability, *inter alia*, of a plural interpretation enables *the fish* to function as distributive-key: the construction is therefore acceptable, distributivity forcing a plural interpretation on *the fish*, and ruling out alternative mass and singular interpretations (indicated in (11) in parentheses). Thus, the ability to function as distributive-key provides a diagnostic distinguishing mass from general expressions: only the latter may function as distributive-key. Let us now apply this diagnostic to *mansana* and *táo*.⁹

- (12) *Tagalog*
 Tigasampung piso ang mansana [(mass)/(singular)/plural]
 DIST-ten-LIG piso TOP apple
 'Apples are ten piso each'
- (13) *Vietnamese*
 Táo mỗi quả năm trăm đồng
 apple each CL five hundred dong
 'Apples are five hundred dong each'

As is evident from the above examples, *mansana* and *táo* may indeed function as distributive-key; their behaviour resembles *the fish* in (11) rather than *apple* in (10a). Thus, the distributivity diagnostic provides further support for distinguishing between general expressions such as *mansana* and *táo*, and mass expressions such as *apple*.

The distinction between mass, singular and plural interpretations is a property of phrases, not of lexical items. However, different lexical items may enter more or less readily into phrases associated with different types of interpretations. For example, in English, various classes of nouns occur more naturally as the heads of singular NPs than as the heads of mass or plural NPs: among these are proper nouns, such as *Jimmy*; abstract nouns, such as *applehood*; and other nouns whose reference is characteristically to a unique object, such as *linguistics*.

Of particular interest are various classes of words that occur more readily as the heads of mass, or, alternatively, count (singular or plural) expressions. The following constructions resemble those in (1), except that the noun *apple* is replaced by *water* in (14) and by *dog* in (15):

- (14) a. Jimmy drank *water* [mass]
 b. ? Jimmy drank *a water* [singular]
 c. ? Jimmy drank *waters* [plural]
- (15) a. ? Jimmy saw *dog* [mass]
 b. Jimmy saw *a dog* [singular]
 c. Jimmy saw *dogs* [plural]

As evident above, the noun *water* does not occur readily in a singular or plural NP: in order to interpret *a water* in (14b) and *waters* in (14c), one must have recourse to an atypical context, perhaps construing singular and plural as involving quantification over kinds. Conversely, the noun *dog* does not occur readily in a mass NP: again, in order to make sense of *dog* in (15a), one must introduce an unusual (and, in this case, from a canine perspective, rather unfortunate) context, such as ... *all over the driveway*, or ... *in the casserole*. Thus, *dogs* is of higher countability preference than *apple*, which in turn is of higher countability preference than *water*.¹⁰

The countability preferences of lexical items are governed by various cognitive factors, some universal, others culture-specific, determining the ways in which we perceive and conceptualize various entities such as dogs, apples and water. Countability preferences are thus semantic in nature. However, as illustrated in (14) and (15) above, countability preferences may bear a variety of formal consequences, pertaining to the types of constructions into which expressions of varying degrees of countability preference may enter.

In other languages, countability preferences may have fewer formal correlates: in such languages, expressions of high and low countability may enter more readily into the same types of constructions. Consider the Tagalog and Vietnamese versions of English (14) and (15):

- (16) *Tagalog*
 a. *Tubigang ininim ni Boy*
 water TOP PT:PFV-drink PERS:DIR Boy
 'Boy drank water/a portion of water/portions of water'
 [mass/singular/plural]
- b. *Isang tubig ang ininim ni Boy*
 one-LIG water TOP PT:PFV-drink PERS:DIR Boy
 'Boy drank a portion of water'
 [singular]
- c. *Mga tubig ang ininim ni Boy*
 PL water TOP PT:PFV-drink PERS:DIR Boy
 'Boy drank portions of water'
 [plural]

- (17) *Tagalog*
 a. *Aso ang nakita ni Boy*
 dog TOP PT:PFV-see PERS:DIR Boy
 'Boy saw dog/a dog/dogs'
 [mass/singular/plural]
- b. *Isang aso ang nakita ni Boy*
 one-LIG dog TOP PT:PFV-see PERS:DIR Boy
 'Boy saw a dog'
 [singular]
- c. *Mga aso ang nakita ni Boy*
 PL dog TOP PT:PFV-see PERS:DIR Boy
 'Boy saw dogs'
 [plural]

- (18) *Vietnamese*
 a. *Sự uống nước* [mass/singular/plural]
 Su drink water
 'Su drank water/a portion of water/portions of water'
 [singular]
- b. *Sự uống một cốc nước* [plural]
 Su drink one CL water
 'Su drank a glass of water'
 [plural]
- c. *Sự uống các nước*
 Su drink PL water
 'Su drank portions of water'

- (19) *Vietnamese*
 a. *Sự xem chó* [mass/singular/plural]
 Su see dog
 'Su saw dog/a dog/dogs'
 [singular]
- b. *Sự xem một con chó*
 Su see one CL dog
 'Su saw a dog'
 [plural]
- c. *Sự xem các chó*
 Su see PL dog
 'Su saw dogs'

Whereas in English, *water* and *dog* exhibit different morphosyntactic behaviour, in Tagalog and Vietnamese, the corresponding lexical items occur in a similar range of constructions. Thus, in Tagalog, although *tubig* 'water' is of lower countability preference than *aso* 'dog', the two words occur readily in the same environments: bare, in (16), (17a); in construction with a numeral, in (16), (17b); and with a plural marker, in (16), (17c). Similarly, in Vietnamese, although *nu'óc* 'water' is of lower countability preference than *chó* 'dog', the two lexical items occur freely in the same constructions: bare, in (18), (19a); in construction with a numeral-plus-classifier expression, in (18), (19b); and with a plural marker, in (18), (19c). Thus, in Tagalog and Vietnamese, different countability preferences are not reflected straightforwardly in different morphosyntactic behaviour.¹¹

However, Tagalog and Vietnamese differ in one salient respect. Vietnamese is well-known as a 'numeral-classifier language': as exemplified in (18), (19b), in order for a lexical item in Vietnamese to be quantified by a numeral, the numeral must occur in construction with a numeral classifier. In this respect, Vietnamese lexical items bear a superficial resemblance to English nouns of low countability preference such as *water*, which also require the use of a unit-denoting expression, for example *one cup of water*. This in turn would seem to suggest that all Vietnamese lexical items should be understood as denoting masses. For example, just as, in (18b), *nu'óc* must be understood as meaning 'water-mass' and the expression *một cốc nu'óc* accordingly interpreted as 'one glass-unit (of) water-mass', so, in (19b), *chó* might be glossed as 'dog-mass', and the expression *một con chó* accordingly interpreted as 'one animal-unit (of) dog-mass'.¹² However, such a global characterization of Vietnamese lexical items as mass-denoting would be inconsistent with the interpretations associated with expressions headed by such nouns. As shown above, bare lexical items such as *nu'óc* in (18a) and *chó* in (19a) may be interpreted not only as mass, but also as singular and plural. In fact, since the lexical item *chó*, like its English counterpart *dog*, is of high countability preference, the preferred interpretations of *chó* in (19a) are count – notwithstanding the Vietnamese penchant for cooked dog. Thus, although in Vietnamese, numerals occur in obligatory construction with numeral classifiers, the countability preferences of lexical items in Vietnamese do not differ systematically from the countability preferences of corresponding lexical items in other languages, such as Tagalog and English.¹³

The phenomenon of lexical countability preferences suggests that the ternary distinction between mass, singular and plural NPs might be more appropriately viewed as consisting of two binary distinctions: the first between mass and count, the second, within count, between singu-

lar and plural. Logically, however, the notions of mass, singular and plural may be grouped in any of the following four ways (Figure 1):

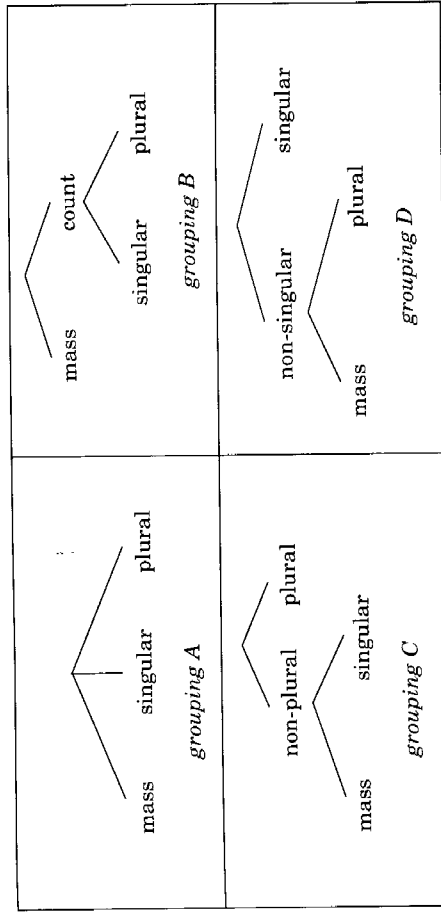


Figure 1. Mass, Singular and Plural: Four Groupings

Whereas Grouping A consists of a simple ternary branch, Groupings B, C and D involve two binary branches. In fact, as suggested by the paradigm in (2) above, each of the latter three groupings enjoys its share of supporting evidence.

Grouping B, characterizing singular and plural as count, to the exclusion of mass, is, as mentioned above, supported by the existence of lexical countability preferences making reference to the distinction between count and mass. In addition, it is supported by the predicates of size and shape which cooccur with count but not mass expressions – see examples (6)–(9) above. Further support for this grouping is provided by various quantifying expressions which effect count but not mass interpretations. In English, for example, such expressions include distributive-key universal quantifiers such as *every* and *each*, downward-entailing quantifiers such as *few*, and *less than three*, and disjunctions such as *one or two* and *one or more*, as in (2a). And finally, in 'numeral-classifier languages' such as Vietnamese, count but not mass expressions may contain numeral classifiers.

Grouping C, associating mass and singular to the exclusion of plural, is supported, in numerous languages, by the occurrence of identical 'singular' number morphology on mass and singular expressions. For example, in English, mass and singular nouns are marked as singular, as in (2b), and control singular agreement of demonstratives, verbs, and bound pronouns.

Grouping D, lumping mass and plural to the exclusion of singular, is supported, in various languages, by the existence of quantifying expressions effecting non-singular interpretations. For example, a large quantity, unmarked for mass or plural, can be specified by English *lots of*, Tagalog *marami*, Vietnamese *nhieù*, and Maltese *ħafna*. Similarly, exhaustiveness, unmarked for mass or plural, can be expressed by English *all*, Tagalog *lahat*, Vietnamese *tất cả*, and Maltese *kollha*. In particular, as suggested below, generic interpretations can be assigned to either mass or plural NPs. In English, mass and plural are also associated by the availability, for indefinite NPs, of a bare noun construction, as in (2c). Finally, as argued in Section 4 below, it is the grouping together of mass and plural as non-singular that provides a unified semantic characterization of the Maltese 'collective' noun.

Thus, although the weight of the evidence may perhaps point tentatively towards the traditional grouping of singular and plural as count, languages provide ample evidence in favour of alternative, conflicting groupings. However, for the purposes of the present paper, it is not necessary to adjudicate between these competing groupings. Accordingly, we shall remain with the null hypothesis, Grouping A, positing a simple ternary distinction between mass, singular and plural interpretations.

The second distinction within the typology of number and quantification is specific to plural interpretations: this is the binary distinction between individual and set interpretations. Consider the following examples:

- (20) a. Jimmy photographed *each of the boys* [individual]
 b. Jimmy photographed *a group of boys* [set]

Whereas in (20a), *each of the boys* is assigned an individual interpretation, in (20b), *the group of boys* is assigned a set interpretation. Accordingly, while in (20a) Jimmy will have several pictures each featuring a single boy, in (20b) he will have one or more pictures each portraying all the boys.¹⁴

Similar contrasts may be induced by means of adverbial operators:

- (21) a. Jimmy photographed *the boys* individually [individual]
 b. Jimmy photographed *the boys* collectively [set]

While in (21a), *the boys* is interpreted individually, in (21b), it is interpreted as a set. Another way of inducing similar contrasts is by selectional restrictions involving the transitive verb:

- (22) a. Jimmy kissed *the boys* [individual]
 b. Jimmy collected *the boys* [set]

Since it is practically impossible to kiss more than one person at once, the verb in (22a) forces an individual interpretation on its direct object. Conversely, since it is logically impossible to collect a single item, the verb in (22b) forces a set interpretation on its direct object.

Nevertheless, the most common situation is that in which an NP is ambiguous between individual and set interpretations:

- (23) Jimmy photographed *the boys* [individual/set]

In (23), *the boys* may be assigned either an individual or a set interpretation; it is therefore unmarked with respect to the individual/set distinction, or, in other words, a simple plural.

The two distinctions considered above, between mass, singular and plural interpretations, and between individual and set interpretations, both permit an expression to be either marked with respect to the distinction in question, or unspecified. The next two distinctions, to be considered below, differ, in that they assume the form of a binary feature, obligatorily marked as plus or minus, with no possibility of unspecification.

The third distinction within the typology of number and quantification is also specific to plural interpretations; it pertains to the binary feature of additivity. Specifically, plural expressions may be either additive or non-additive. Consider the following contrast:

- (24) a. Jimmy photographed *the boys* (= (23)) [additive]
 b. Jimmy photographed *the team* [non-additive]

In the above example, both direct-object NPs are semantically plural, and both may be interpreted in either individual or set fashion. However, whereas in (24a) the semantic plurality of *the boys* stems from the plural suffix *-s*, in (24b) the semantic plurality of *the team* is due to the meaning of the word *team*. Accordingly, even though *the boys* may be coextensive with *the team*, the latter NPs says more, namely that the boys are organized in a particular fashion. In other words, the whole is more than the sum of its constituent parts: it is non-additive.

Non-additivity is characteristically effected by particular lexical items, denoting a plurality of objects endowed with some form of additional structure. Among the many such lexical items in English are *committee*, *family*, *herd*, *collective*, and *archipelago*. Alternatively, various grammatical devices may induce non-additivity. For example, in Tagalog, one of the functions of the ambifix *ka- -an* is to form non-additive expressions, such as *kapuluan* 'archipelago' from *pulo* 'island', and *kabahayan* 'group of houses in a certain district or community' from *bahay* 'house'.¹⁵

Whereas in the preceding cases, the non-additive semantic component is idiosyncratically determined by the lexical item in question, in other cases, a grammatical marking of non-additivity may leave the nature of the non-additive meaning unspecified, to be filled in by context. In Hebrew, numerals in construction with nouns may occur either in simple form or with the nominalizing suffix *-iya* (in conjunction with internal vowel changes); when nominalized, their effect is to induce a contextual non-additive interpretation:

- (25) *Hebrew*
- | | | | |
|----|-------------------|----------------------|----------------|
| a. | cilem | <i>šloša</i> | <i>ne'arim</i> |
| | Tsvi photographed | three-M | boy-PL:M |
| | | [additive] | |
| b. | cvi | <i>šlišiyat</i> | <i>ne'arim</i> |
| | Tsvi photographed | three-NML:CON | boy-PL:M |
| | | 'three-some of boys' | [non-additive] |

Whereas in (25a), *šloša ne'arim* is additive, in (25b) *šlišiyat ne'arim* is non-additive: specifically, it entails that the three boys were related in some way, to be determined by context. For example, the form *šlišiya* is commonly used for triplets, or for a trio of singers. In the absence of a specific context, use of the NP *šlišiyat ne'arim* would be incongruous.¹⁶

The characterization of non-additive expressions such as *the team* as semantically plural is actually a half-truth: at a higher level, they may also be viewed as semantically singular.¹⁷ Thus, non-additive expressions exhibit a semantic duality, referring to a plurality of objects organized into a singularity. This of course is why only plural expressions can be subcategorized as additive or non-additive.

In various contexts, the plural and singular aspects of a non-additive expression may exhibit different degrees of relative salience. In some cases, typically involving animate expressions, this may be reflected by the morphology, as when an NP controls either singular or plural verbal agreement, and licenses either singular or plural anaphors:

- (26) a. *The team* are rehearsing their strategy.
 b. *The team* is rehearsing its strategy.

Whereas in (26a), the plural morphology highlights the multiplicity of *the team*, in (26b), the singular morphology emphasizes its unity. Different lexical items may also be associated with different degrees of plurality and singularity. Ultimately, the plurality of a non-additive expression may peter out, as, for example, in names of cities and countries, usually understood as singular, but still retaining vestigial plural interpretations.

By highlighting the whole while downplaying the constituent parts, non-additive interpretations resemble set interpretations. Indeed, there is a tendency for non-additive interpretations to be associated with set interpretations. However, these two notions are logically independent. Thus, in (24), (25b), the non-additive NPs are ambiguous between individual and set interpretations just like their additive NP counterparts in (24), (25a). Even in (26), both versions allow for both an individual interpretation, in which each team member is rehearsing strategy by himself, and a set interpretation, in which the team is rehearsing strategy together.

The fourth and final distinction within the typology of number and quantification is a binary feature applying to mass and plural interpretations: the distinction between non-generic and generic. Consider the following contrasts:

- (27) a. Jimmy ate *apple* (=1a) [non-generic]
 b. Jimmy eats *apple* [generic]
- (28) a. Jimmy ate *apples* (=1c) [non-generic]
 b. Jimmy eats *apples* [generic]

Examples (27) and (28) illustrate mass and plural direct-object NPs respectively. Within each example, the first sentence, with past tense verb, associates a non-generic interpretation with its direct object, whereas the second sentence, with present tense verb, imposes a generic interpretation on its direct object.

Genericity is a particular case of universal quantification; however, not all universally quantified expressions are generic:

- (29) a. *All the ravens* are black [non-generic]
 b. *All ravens* are black [generic]
- (30) a. *Each raven* is black [non-generic]
 b. *Every raven* is black [generic]

As suggested by (29), NPs with *all* tend to be non-generic in the presence of the definite article, but generic in its absence. As evidenced by (30), NPs with *each* are usually non-generic, while NPs with *every* are most often generic.¹⁸

In order for an NP to be interpreted as generic, it must involve universal quantification over an arbitrarily large domain. Thus, the direct object NPs in (27), (28a) are non-generic because the simple past tense of the verb specifies a punctual activity, which, by implication, could not affect an arbitrarily large amount of apple(s). Similarly, the

subject NPs in (29), (30a) are non-generic because they are both coindexed with a set of ravens provided by discourse context: in (29a) by means of the definite article, and in (30a) by dint of the anaphoric nature of the quantifier *each*.

The typology of number and quantification presented in the preceding pages may be summarized in the following diagram:

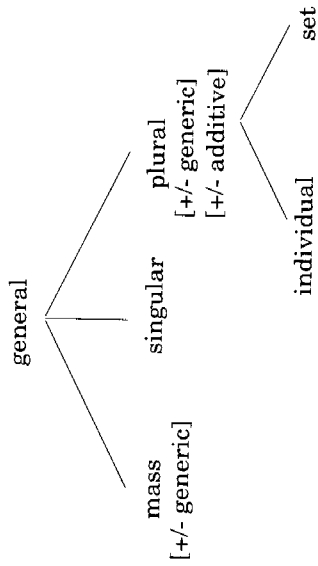


Figure 2. The Typology of Number and Quantification

In accordance with the typology, an expression may be interpreted as mass, singular or plural; alternatively, it may be unspecified with respect to the mass/singular/plural distinction, or general. A plural expression may in turn be interpreted as individual or set; alternatively, it may be unspecified with respect to the individual/set distinction. Independently, a plural expression is either additive or non-additive. Finally, a mass or plural expression is either non-generic or generic.¹⁹

3. 'Collective': the variegated uses of a term

In the presentation of the typology, in the preceding section, use of the term 'collective' was avoided.²⁰ This was not because the term has never been associated with the notions of number and quantification under discussion. Quite the contrary: the term has been associated with these notions in too many ways. In fact, the term 'collective' has been used in the context of each and every one of the four distinctions underlying the typology. Specifically, various scholars have used the term 'collective' in any or all of the following four ways:

- (31) a. 'collective' = mass
- b. 'collective' = set
- c. 'collective' = non-additive
- d. 'collective' = generic

Other scholars have used the term 'collective' in yet additional, more idiosyncratic ways. In particular, a variety of scholars have used the term as a designation not of a particular kind of meaning but rather, a particular kind of form-meaning relationship; specifically, a singular form with plural reference.

While some scholars have been quite clear in attributing to the term 'collective' just one of the above meanings, others have explicitly distinguished between different 'types' of collectives, while yet others have vacillated back and forth between different meanings, or foundered in terminological ambiguity and obscurity.

This section surveys some of the many uses and abuses of the term 'collective' in the literature, with reference to the typology of number and quantification. Its aim is to map out some of the most common uses of the term 'collective', and clarify some of the terminological confusion, thereby setting the stage for an examination of the 'collective' in Maltese.²¹

The first use of the term 'collective' pertains to the distinction between mass, singular and plural interpretations: the term is used to denote mass interpretations, as distinct from their singular and plural counterparts. The use of 'collective' as mass occurs in Goodman (1966:54), who defines 'collective predicates' such as *is pure gold* in a way that clearly identifies them with mass NPs.

The second use of the term 'collective' relates to the distinction between plural interpretations of the individual and set varieties: here, the term is used to refer to set interpretations, as opposed to individual ones. The use of 'collective' for set interpretations may be found in Vendler (1967:70-96), Dik (1972:208-215), and Wierzbicka (1980:260-264). More recently, it has assumed currency within the framework of model-theoretic semantics, as, for example, in Scha (1981), Link (1983), and Lønning (1987).²²

The third use of the term 'collective' makes reference to the distinction between plural interpretations of the additive and non-additive types: in this case, the term is used to denote non-additive interpretations, as distinct from additive ones. Some examples of this usage may be observed in F.R. Palmer (1976:77-78) and Allan (1980:550). In traditional English grammar, this would appear to be the most common use of the term, as evident in Curme (1931:539-540), Pence and Emory (1947:200-201), Strang (1963:90-91), Albaugh (1964:41), and Langendoen (1970:122). In his historical survey, Michael (1970:301-302) cites similar uses of 'collective' dating back as far as Entick (1728:6) and Kirkby (1746:65).

Whereas the above uses of the term 'collective' fall neatly into one of the types specified in (31), other scholars distinguish clearly between different types of collectives. For example, Quirk, Greenbaum, Leech

and Svartvik (1972:190) define three types of collectives: 'specific', including words such as *committee* and *herd*; 'unique', containing expressions such as *Parliament* and *The Arab League*; and 'generic', comprising phrases such as *the clergy* and *the intelligentsia*. In terms of the typology, their first two types are both non-additive, while their third type is generic.²³ Somewhat differently, Hoeksma (1983) follows the model-theoretic tradition in using the terms 'collective predicate / conjunction / reading' for set interpretations, but then reverts to the traditional grammarians' usage of the term 'collective' noun to refer to 'non-additive' expressions.

In other cases, however, different usages of the term 'collective' are conflated without explicit acknowledgement of the differences between them. In what is considered to be the classical reference grammar of Biblical Hebrew, Kautzsch (1910) uses 'collective' to include non-additive expressions such as *ʔorħo* 'caravan' and *doʔ* 'shoal of fish' (§122s); generic expressions such as *ħoʔoyev* 'the enemy' and *ħoʔarye* 'the lion' (§126m); and also expressions such as *ʔoʔom* 'man/men' and *maqgel* 'staff/staves' (§123b), which, from a semantic point of view, are unexceptional – their only peculiarity being morphological, namely that a singular form may convey either a singular or a plural meaning.

The use of the term 'collective' to denote a singular form with possible plural meaning recurs as a leitmotif alongside other, purely semantic usages of the term. Thus, Zandvoort (1957) uses 'collective' for singular forms with plural meanings such as *cattle* (pp. 100-102), but also for non-additive expressions such as *crowd* (pp. 258-260). Similarly, Link (1991) uses 'collective' for words such as *cattle* (p.134) alongside the usual model-theoretic usage for set interpretations (pp. 142-148). A detailed discussion of such forms is provided by Allan (1976), who, under the overall rubric of 'collective', distinguishes between 'collection nouns' such as *cattle*, with only singular form, and 'collectivized nouns' such as *elephant* (as in *They bagged three elephant*), with may occur in either singular or plural forms. However, in the same article, the term 'collective' is also used for mass expressions such as *coffee*, *sugar* and *tea* (p. 108).

In addition to the above-mentioned usages of the term 'collective', an array of less common usages can be observed. Reference grammars of various languages note the existence of so-called 'collective numerals'; however, from the descriptions that are provided, it is frequently difficult or impossible to ascertain in what ways 'collective numerals' differ in their interpretations from their ordinary counterparts. Thus, in a reference grammar of Chuvash, Krueger (1961:175-176) cites forms such as *viśśěšě* 'a three of them, a group of three', derived from *viśšě* 'three', characterizing collective numerals as denoting 'an accumulation

of uniform objects'. It is not at all clear how this characterization distinguishes between ordinary numerals and 'collective' ones.

Another usage of the term 'collective' recurs in some studies of Amerindian languages. Drawing upon reports by various specialists, Corbett (1992:15-17) distinguishes between 'distributive' and 'collective' plurals, citing examples such as the following, from Papago: distributive *daddaikuđ* 'several chairs (from several households – one or several chairs per household)', vs. collective *dadaikuđ* 'several chairs (from a single household)'. According to Corbett, distributive plurals are associated with different loci, whereas collective plurals are associated with a single locus – the notion of locus being at least partially culturally determined. In fact, Corbett (1995, this volume) also makes use of term 'collective' to characterize similar forms in the Caucasian language Budugh and in Italian. This use of the term 'collective' does not correspond to any of the notions discussed above.²⁴

Some idiosyncratic uses of the term 'collective' can be found in an extensive study of Tagalog morphology by Lopez (1937). In one passage (pp. 81-83), the term 'collective' is used to characterize the prefix *ka-*, deriving forms such as *kausap* 'fellow conversationalist' from *usap* 'converse', and *kaibigan* 'friend' from *ibigan* 'like'. In these cases, the prefix applies to a word denoting an activity or relationship, in order to derive a word denoting a person or thing reciprocally associated with another through that activity or relationship.²⁵ And in another section (p.30), an apparent oxymoron 'distributive-collective' is introduced for reduplicated numerals such as *isaisa* 'one by one' whose interpretation is clearly distributive-share; beneath these, the term 'unitary collective' is proposed for forms such as *mamulo* 'ten each' which are also clearly distributive-share.²⁶

Many more such examples could be cited. But the point has been made: the term 'collective' has a chequered history of use and abuse. A few scholars, however, have explicitly addressed the terminological confusion, and taken a stand. In a discussion of mass nouns, Quine (1960:91) alludes to Goodman's characterization of them as collective, and then states:

"I should indeed prefer 'collective term' to 'mass term' for words like 'water' and the like, were it not too apt to suggest such unintended cases as 'flock', 'army', etc."

Thus, Quine prefers the use of the term 'collective' for mass interpretations, but recognizes its use for non-additive interpretations as being more prevalent.

Some interesting terminological reflections concerning the 'collec-

itive' can be found in Jespersen (1913). While recognizing the non-additive meaning, as in *army*, as the 'usual type of collective', he also considers morphologically singular forms such as *cattle* to be collective, adding that they 'approach mass words' (§4.811-§4.972). And in another passage, referring to set interpretations, as in *All the angles of a triangle are 180°*, he notes that 'many logicians distinguish this meaning of the plural as a 'collective plural'. However, in the preface, in a general discussion of terminology, Jespersen acknowledges a single case of terminological confusion in his own writings – none other than the 'collective':

"In the final revision I have endeavoured to get rid of all traces of earlier drafts, some of them written many years ago, before my present views on grammar and terminology had matured. Unfortunately, however, I find that I have retained in a few passages [...] the loose employment of the word 'collective', which I thought I had discarded everywhere. I may perhaps here state succinctly what I think should be the proper distinction between a collective and a 'mass-word'. From a logical point of view, a collective, such as *family* or *clergy*, is at once singular and plural, while a mass-word, such as *water*, *measles*, or *pride*, is neither singular nor plural – no matter which number the linguistic form may happen to indicate" (pp. viii-ix).

Thus, Jespersen ultimately favours the use of the term 'collective' for non-additive interpretations. But even Jespersen found it difficult to sort out the variegated uses of the term.²⁷

One may speculate on the existence of some 'invariant meaning' underlying the assorted uses of the term 'collective', perhaps along the lines of Tobin's (1990, 1992) notion of 'semantic integrality'. However, even if such a common thread does exist, it is a unity born out of diversity. It is therefore incumbent upon anybody wishing to make use of the term 'collective' to make clear which of its diverse specific meanings is intended.

4. The Maltese 'collective' noun

Where, then, is the Maltese 'collective' noun positioned, within this terminological morass? To begin, it seems clear that in the everyday practice of Maltese grammarians, the term 'collective noun' is used simply to refer to a particular nominal form, standing in a paradigmatic relation to other nominal forms. For example, Mifsud (1995, this volume) explicitly characterizes the Maltese 'collective' as a 'morphological' category. Specifically, it is used to refer to the form with zero suffix, in

contrast to the singular form, with suffix *-a*, and plural form, with suffix *-iet*. Analogous observations hold also of Arabic grammarians, dealing with similar forms in Classical Arabic and its modern dialects.²⁸

Thus, in Maltese, the term 'collective noun' is used to define a formal category rather than a semantic one. In this respect, its usage differs from the multifarious semantic uses of the term 'collective' surveyed in the preceding section. However, it resembles the use of other semantically-based terms to denote formal categories in general linguistic theory and in the descriptions of individual languages.²⁹

Although the Maltese 'collective' noun defines a formal category, it is of interest to determine the range of meanings that may be associated with it.³⁰ As we shall now see, Maltese 'collective' nouns may be semantically characterized as non-singular. Specifically, when heading an NP, a 'collective' noun associates it with mass and/or plural interpretations, in accordance with the noun's countability preference.

Consider the following examples:

- (32) a. Pietru għandu *kartun* [mass]
Peter have-PRES:3:SG:M cardboard
'Peter has cardboard'
b. Pietru għandu *kartuna* [singular]
Peter have-PRES:3:SG:M cardboard-SG
'Peter has a cardboard'
c. Pietru għandu *tmin* [plural]
Peter have-PRES:3:SG:M eight *kartuniet*
'Peter has eight cardboards' cardboard-PL
- (33) a. Pietru ra *naħal* [mass/?plural]
Peter see-PAST:3:SG:M bee
'Peter saw bee / bees'
b. Pietru ra *naħla* [singular]
Peter see-PAST:3:SG:M bee-SG
'Peter saw a bee'
c. Pietru ra *ħames* [plural]
Peter see-PAST:3:SG:M five *naħliet*
'Peter saw five bees' bee-PL
- (34) a. Pietru kiel *ħut* [/?mass/plural]
Peter eat-PAST:3:SG:M fish
'Peter ate fish'
b. Pietru kiel *ħuta* [singular]
Peter eat-PAST:3:SG:M fish-SG
'Peter ate a fish'
c. Pietru kiel *tliet* [plural]
Peter eat-PAST:3:SG:M three *ħutiet*
'Peter ate three fish' fish-PL

- (35) a. Pietru xtara *baqar* [plural]
Peter buy-PAST:3:SG:M cow
'Peter bought cows'
- b. Pietru xtara *baqra* [singular]
Peter buy-PAST:3:SG:M cow-SG
'Peter bought a cow'
- c. Pietru xtara *żewġ* [plural]
Peter buy-PAST:3:SG:M two cow-PL
'Peter bought two cows'

In each of the above four examples, a 'collective' noun in the 'a' sentence is contrasted with a singular noun in the 'b' sentence and a plural noun in the 'c' sentence. As is evident from examples (32a)-(35a), 'collective' nouns may be assigned mass and/or plural interpretations; they may accordingly be characterized as non-singular.

However, it is not the case that both mass and plural interpretations are equally readily available for all 'collective' nouns. Specifically, whereas the availability of mass interpretations decreases from (32) through to (35), that of plural interpretations increases. This variability correlates with the countability preferences of the four nouns in question, which may be ranked as follows: *kartun* 'cardboard' < *naħal* 'bee' < *ħut* 'fish' < *baqar* 'cow'. Thus, *kartun*, with lowest countability preference, permits a mass interpretation but not a plural one, *naħal* and *ħut* permit both mass and plural interpretations to varying degrees, while *baqar*, with highest countability preference, permits a plural interpretation but not a mass one.

The availability of plural interpretations for 'collective' nouns may be gauged by the two diagnostics introduced in Section 2. Examples (36)-(39) below are obtained from (32)-(35) above by adding an adjective that can occur only with nouns of high countability preference: *kbir* 'big', *zġħir* 'small', *kbir* 'big', and *smien* 'fat' respectively.

- (36) a. *Pietru għandu *kartun kbir* [([mass])]
Peter have-PRES:3:SG:M cardboard big-SG:M
'Peter has big cardboard'
- b. Pietru għandu *kartuna kbira* [([mass])]
Peter have-PRES:3:SG:M cardboard-SG big-SG:F
'Peter has a big cardboard'
- c. Pietru għandu *tmin kbartuniet* [singular]
Peter have-PRES:3:SG:M eight cardboard-PL *kbar*
'Peter has eight big cardboards' [big-PL]
- (37) a. ?Pietru ra *naħal zġħir* [([mass])/?plural]
Peter see-PAST:3:SG:M bee small-SG:M
'Peter saw small bee / bees'

- b. Pietru ra *naħla zġħira* [singular]
Peter see-PAST:3:SG:M bee-SG small-SG:F
'Peter saw a small bee'
- c. Pietru ra *ħames zġħar* [singular]
Peter see-PAST:3:SG:M five bee-PL small-PL
'Peter saw five small bees' [plural]
- (38) a. Pietru kiel *ħut kbir* [(?mass)/plural]
Peter eat-PAST:3:SG:M fish big-SG:M
'Peter ate big fish'
- b. Pietru kiel *ħuta kbira* [singular]
Peter eat-PAST:3:SG:M fish-SG fish-SG:F
'Peter ate a big fish'
- c. Pietru kiel *tlit kbir* [singular]
Peter eat-PAST:3:SG:M three fish-PL kbar
'Peter ate three big fish' [plural]
- (39) a. Pietru xtara *baqar smien* [plural]
Peter buy-PAST:3:SG:M cow fat-PL
'Peter bought fat cows'
- b. Pietru xtara *baqra smina* [plural]
Peter buy-PAST:3:SG:M cow-SG fat-SG:F
'Peter bought a fat cow'
- c. Pietru xtara *żewġ baqriet smien* [singular]
Peter buy-PAST:3:SG:M two cow-PL fat-PL
'Peter bought two fat cows' [plural]

As evident above, the well-formedness of sentences (36a)-(39a), in which the unit-referring adjective modifies the 'collective' noun, covaries with the availability of the plural interpretation of the 'collective' noun in (32a)-(35a). Specifically, *kartun* 'cardboard', allowing only a mass interpretation in (32a), cannot occur with the adjective *kbir* 'big' in (36a); *naħal* 'bee', allowing a plural interpretation only with difficulty in (33a), occurs only with difficulty with the adjective *zġħir* 'small'; while *ħut* 'fish' and *baqar* 'cow', readily allowing plural interpretations in (34), (35a), easily occur with the adjectives *kbir* 'big' and *smien* 'fat'.³¹

Examples (40)-(43) below illustrate the varying abilities of the NPs in (32)-(35) above to function as distributive-key:

- (40) a. **Il-kartun jżen żewġ wizniet*
DEF-cardboard weigh-PRES:3:SG:M two hundredweight-PL
kull waħda
all one-F
'The cardboard weighs two hundredweight each' [([mass])]

- b. **Il-kartuna*
DEF-cardboard-SG tizen zewg wizniet
kull waħda weigh-PRES:3:SG:F two hundredweight-PL
all one-F
- c. 'The cardboard weighs two hundredweight each' [singular]
It-tmin kartuniet jiznu zewg wizniet
DEF-eight cardboard-PL weigh-PRES:3:PL two hundredweight-PL
kull waħda
all one-F
- 'The eight cardboard weigh two hundredweight each' [plural]
- (41) a. ?**In-naħal niggez* tliet irġiel kull waħda
DEF-bee bite-PAST:3:SG:M three man-PL all one-F
'The bee bit three men each' [(mass)/?plural]
b. **In-naħla nigżet* tliet irġiel kull waħda
DEF-bee-SG bite-PAST:3:SG:F three man-PL all one-F
'The bee bit three men each' [singular]
c. *Il-ħames naħliet nigżu* tliet irġiel kull waħda
DEF-five bee-PL bite-PAST:3:PL three man-PL all one-F
'The five bees bit three men each' [plural]
- (42) a. ?*Dal-ħut* iqumu lira kull waħda
this:SG:M-DEF-fish cost-PRES:3:PL lira all one-F
'This fish costs one lira each' [?mass/plural]
b. **Dil-ħuta* tqum lira kull waħda
this:SG:F-DEF-fish cost-PRES:3:SG:F lira all one-F
'This fish costs one lira each' [singular]
c. *Dawn it-tliet ħutiet* iqumu lira kull waħda
this:PL DEF-three fish-PL cost-PRES:3:SG:F lira all one-F
'These five fish cost one lira each' [plural]
- (43) a. *Il-baqar* qed jinbigħu għoxrin lira kull waħda
DEF-cow PROG sell-PRES:3:PL twenty lira all one-F
'The cow is selling for twenty lira each' [plural]
b. **Il-baqra* qed tinbigħ għoxrin lira kull waħda
DEF-cow PROG sell-PRES:3:SG:F twenty lira all one-F
'The cow is selling for twenty lira each' [singular]
c. *Iż-żewġi baqriet* qed jinbigħu għoxrin lira kull waħda
DEF-two cow-PL PROG sell-PRES:3:PL twenty lira all one-F
'The two cows are selling for twenty lira each' [plural]

Examples (40c)-(43c) indicate that plural NPs may function as distributive-key, whereas examples (40b)-(43b) demonstrate that singular NPs may not. Examples (40a)-(43a), headed by 'collective' nouns, show that the ability to function as distributive-key covaries with the availability of plural interpretations in (32a)-(35a). Specifically, *kartun*

'cardboard', allowing only a mass interpretation in (32a), cannot function as distributive-key in (40a); *naħal* 'bee', allowing a plural interpretation only with difficulty in (33a), can barely function as distributive-key in (41a); *ħut* 'fish', allowing a plural interpretation alongside a less readily available mass interpretation in (34a), can function as distributive-key though not easily in (42a), while *baqar* 'cow', with exclusive plural interpretation in (35a), functions readily as distributive-key in (43a).³² Thus, the two diagnostics discriminate between 'collective' nouns of different countability preference, both providing for constructions that are grammatical only with 'collective' nouns of high countability preference.

As shown above, the Maltese 'collective' noun may be characterized semantically as a non-singular noun which, when heading an NP, imparts it with mass and/or plural interpretations, in accordance with the noun's countability preference. Preliminary observations suggest that a similar characterization may also be appropriate for 'collective' nouns in various other dialects of Arabic. Thus, the semantics of the Maltese 'collective' noun corresponds to none of the semantically-based usages of the term 'collective' surveyed in the previous section.

The analysis presented herein may be contrasted with the semantic characterization of the 'collective' noun put forward by Mifsud (1995, this volume). Mifsud argues that the 'collective' noun is associated, in different contexts, with two different interpretations: a primary 'qualitative', or 'type' interpretation; and a secondary 'quantitative', 'plural' interpretation.³³ In broad outline, Mifsud's two interpretations correspond respectively to the mass and plural interpretations which are available in accordance with the characterization of the 'collective' noun as non-singular. Mifsud's use of the terms 'qualitative' and 'type' derives from the Arabic term *ism al-jins*, translatable as 'noun of genus'; its motivation lies in the observation that the meaning of 'collective' forms such as *kartun* 'cardboard' involves only a qualitative component, and is devoid of a complementary quantitative component. However, the use of these terms fails to reflect the fact that such a qualitative component is inherent in any and all nominal constructions, including 'collective' nouns with plural interpretations, such as *baqar* 'cows', and even overtly quantified NPs such as *tmin kartuniet* 'eight cardboards' and *żewġ baqriet* 'two cows'. What distinguishes the interpretation of forms such as *kartun* is not the presence of a qualitative component but rather the absence of a quantitative component, or, more specifically, the kind of internal structure associated with count interpretations. Thus, the characterization of such forms as mass, in accordance with the analysis proposed herein, would seem more appropriate than Mifsud's alternative characterization as 'qualitative' or 'type'.³⁴ More generally,

the semantic characterization of the Maltese 'collective' noun as non-singular, as presented in this section, would appear to be preferable on the grounds that it posits a single unified meaning, rather than a disjunction of two seemingly unrelated interpretations.

The mapping between formal and semantic categories of number in Maltese is represented schematically in Figure 3.³⁵

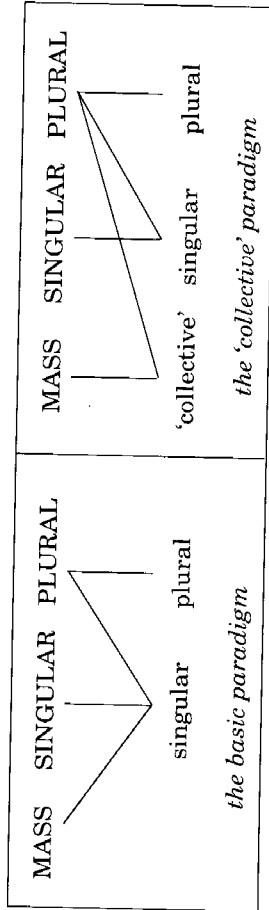


Figure 3. Formal and Semantic Number in Maltese

At bottom, in lower-case letters, are the formal number categories of the Maltese noun; above these, in upper-case letters, are the semantic categories of mass, singular and plural, associated with Maltese NPs. Lines connect the formal number categories of nouns with the semantic categories of the NPs that they may head. At left is the basic paradigm, applicable to most nouns, involving a binary distinction between singular and plural forms; to its right is the 'collective' paradigm, relevant to a small subset of nouns, involving a ternary distinction between 'collective', singular and plural.

In the basic paradigm, the singular form is associated with mass, singular, and plural interpretations, whereas the plural form is associated with plural interpretations alone. For example, the formally singular noun *fenek* 'rabbit' may head the semantically mass NP *fenek* 'rabbit', the semantically singular NP *fenek* 'a rabbit', and the semantically plural NP *ħdax-il fenek* 'eleven rabbits', while the formally plural noun *fniek* 'rabbits' may head the semantically plural NPs *fniek* 'rabbits' and *ħtiet* 'three rabbits'. (Within this paradigm, numerals greater than ten govern a formally singular noun.) In its overall pattern, this paradigm resembles similar ones in many other languages possessing a binary formal distinction between singular and plural.³⁶

In the 'collective' paradigm, the 'collective' form usurps all of the mass interpretations ordinarily associated with singular forms, and some of the plural interpretations ordinarily associated with plural forms, specifically, those not involving numerals. For example, the 'collective' noun *ħut* 'fish' may head the semantically mass NP *ħut* 'fish'

(corresponding to the semantically mass NP *fenek* 'rabbit'), and the semantically plural NP *ħut* 'fish' (corresponding to the semantically plural NP *fniek* 'rabbits'). As in the basic paradigm, though, the formally singular noun *ħuta* 'fish' may head a semantically singular NP *ħuta* 'a fish', and a semantically plural NP *ħdax-il ħuta* 'eleven fish', while the formally plural noun *ħutiet* 'fish' may head a semantically plural NP *ħutiet* 'three fish'.

Note that the 'collective' form of the 'collective' paradigm formally resembles the singular form of the basic paradigm: both are characterized by zero marking. Within the 'collective' paradigm, it is thus the singular, formed by suffixation of *-a*, which, on formal grounds, would appear to be the third, additional member of the paradigm. Semantically, however, as shown above, the 'collective' form emerges as the third, additional member of the 'collective' paradigm, encroaching on the semantic domains of both singular and plural forms within the basic paradigm. Accordingly, as the formally unmarked but semantically marked member of the 'collective' paradigm, the Maltese 'collective' noun presents a mismatch between patterns of form and meaning.

Nevertheless, the distribution of zero marking across the two paradigms exhibits a substantial degree of iconicity. Within each paradigm, zero marking is associated with mass interpretations: in the basic paradigm via singular nouns, and in the 'collective' paradigm through 'collective' nouns. Thus, in both paradigms, the simplest form, with zero marking, is that which expresses the simplest meaning, involving mass interpretations.³⁷

5. Conclusion

One wonders how many languages may have forms similar to the Maltese 'collective' noun, but under a different name. Thus, Corbett (1992) cites several Cushitic languages with a ternary paradigm distinguishing between nouns that are singular, plural, and unmarked with respect to the singular/plural distinction.³⁸ However, Corbett's sources do not make it clear whether this third form does really head count NPs, as implied by the discussion, rather than general NPs, such as bare expressions in Tagalog and Vietnamese, or perhaps non-singular NPs, as in the Maltese 'collective' noun.³⁹

It is tempting to wish for a Hercules to come along and clean out the Augean Stables of terminological confusion. (His first move might be to consign the term 'collective' to the waste-paper basket.) Unfortunately, it is much easier to propose a new, consistent, and aesthetically appealing terminology than to convince one's colleagues to adopt it. Perhaps,

then, a more realistic plea would be for linguists working on less familiar languages to make a greater effort not just to label linguistic phenomena, for example as 'collective', but, in addition, to accompany their labels with clear, explicit and detailed semantic descriptions.

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Notes

- 1 However, in the presentation of the typology in this section, no use is made of the term 'collective', so as not to prejudice the discussion in subsequent sections of the paper.
- 2 The characterization of *apple*, *an apple* and *apples* as mass, singular and plural respectively pertains to the core logical meaning of these NPs, and also to the conditions under which their use is appropriate. However, from a truth-functional perspective, a somewhat different picture emerges. If Jimmy ate seventeen whole apples, all three sentences are in fact true, though only (1c) is appropriate. If Jimmy ate a single whole apple, (1a) and (1b) are true while (1c) is false, though only (1b) is felicitous. Finally, if Jimmy ate a spoonful of crushed apple, (1a) is true while (1b) and (1c) are false. Thus, truth-functionally, (1c) entails (1b) which in turn entails (1a). In terms of truth conditions, we could accordingly characterize *apple* as mass, singular and plural; *an apple* as singular and plural; and *apples* as plural. However, in what follows, we shall avoid consideration of such truth conditional factors, limiting our attention instead to the basic logical meanings of NPs, and the conditions under which their use is appropriate.
- 3 Even the most casual examination of example (1) and subsequent examples will show that the relation between meaning and form is far from straightforward. Thus, while a one-to-one correspondence between semantic and morphological categories of

singular and plural is evident in (1b) and (1c), this correspondence cannot be maintained elsewhere. For example, the morphological category of singular is associated with the semantic category of mass in (1a); plural in constructions such as *They bagged three elephants*; and various combinations of mass, singular and plural in examples (2b), (2c), (3), and others below.

4 The term 'general' is adapted from Corbett (1992), following Andrzejewski (1960); however, it is used with a somewhat different meaning. Whereas Corbett defines general number as that which is unmarked with respect to the binary singular/plural distinction, the present paper takes general to be that which is unmarked with respect to the ternary mass/singular/plural distinction. This difference is not merely terminological. Within Corbett's typology, mass interpretations of bare nouns in English are characterized as general (p. 13), and thereby conflated with count interpretations unmarked for singular or plural, such as in (2a). However, such interpretations are clearly of different types. Moreover, as argued below, mass interpretations need also be distinguished from interpretations that are general in the sense of the present paper, i.e. unmarked with respect to the ternary mass/singular/plural distinction.

5 In the morpheme-by-morpheme glosses provided in this paper, the following abbreviations are used: CL 'classifier'; CON 'construct (state)'; DEF 'definite'; DIR 'direct (case)'; DIST 'distributive'; F 'feminine'; LG 'ligature'; M 'masculine'; NML 'nominalized'; PERS 'personal'; PVY 'perfective'; PL 'plural'; PRES 'present'; PROG 'progressive'; PT 'patient topic'; SG 'singular'; TOP 'topic'; 3 'third person'.

6 In the discussion of Tagalog and Vietnamese examples, I avoid referring to words such as *mansana* and *táo* as nouns, and to phrases headed by these words as NPs. The reason for this terminological caution is that it is not at all obvious what syntactic categories these words and expressions are most appropriately assigned to. Thus, in Gil (1987), it is argued that in Japanese and other languages, the occurrence of bare lexical items in argument positions indicates that such languages may not distinguish between categories such as N and NP. More far reaching, in Gil (1993c, 1993d, 1995a), it is suggested that in Tagalog, there may be only one open syntactic category, i.e. no distinction between nouns, verbs and adjectives, and no distinction between these lexical categories and their phrasal projections. However, as noted at the beginning of this section, the typology proposed herein is semantically based, and the meanings involved, although characteristically associated with NPs, may also be associated with expressions belonging to other syntactic categories. Thus, the semantic analysis of words and phrases such as *mansana* and *táo*, proposed above, does not depend on their syntactic characterization, as nouns, NPs, or members of a larger, undifferentiated syntactic category.

7 Indeed, as noted in note 2, with respect to their truth conditions, mass NPs such as *apple* are general, and hence synonymous with general expressions such as *mansana* and *táo*. This suggests that perhaps *apple*, *mansana* and *táo* should be assigned to the same semantic type, the differences between them being relegated to different appropriateness conditions. For example, one might characterize *apple* as semantically general, with singular and plural readings being disfavoured because of a pragmatic principle of cooperativeness: if the speaker had intended to convey a more specific singular or plural reading, various more explicit morphosyntactic devices would have been available. However, it is not clear why the same pragmatic principle would not also apply in Tagalog and Vietnamese, which also possess morphosyntactic strategies for marking singular and plural – see examples (16)–(19) below. Alternatively, one might characterize *mansana* and *táo* as semantically mass, attributing the availability of singular and plural interpretations to the application of a general rule of inference whereby unstructured mass entails more specifically structured singular and plural. (A similar assumption, albeit not spelt out explicitly, underlies the

analysis of nouns in Japanese, Korean and other languages in Gil (1987, 1989, 1990, 1991a). Again, however, it is not obvious why such a rule of inference would apply in this case in Tagalog and Vietnamese but not in English. Thus, if *apple*, *mansana* and *táo* are assigned to the same semantic type, there is no obvious way to account for the semantic differences between them.

⁸ The terms 'distributive-key' and 'distributive-share', adapted from Choe (1987), are introduced and discussed in Gil (1991a, 1991b, 1992a, 1993a,b, 1995c, this volume, to appear b).

⁹ In (12), distributivity is induced by prefixation of *ig-* and reduplication of initial CV sequence *sa-*, thereby forming a distributive numeral (see Gil 1982 chapter 6 for discussion of distributive numerals in Tagalog); in (13), distributivity is induced by the universal quantifier *môt*. In both examples the distributive-key is a bare lexical item. In (12), the marker *ang* preceding *mansana* is a case marker, and therefore does not alter the status of *mansana* as a bare lexical item (see Gil to appear for some phonological evidence to the effect that *ang mansana* constitutes a single word). In (13), *táo* is an extra-sentential topic and the remainder of the construction its sentential comment (see Li and Thompson 1976 for discussion of similar, so-called 'double-subject' constructions); thus, *táo* does not form a constituent with the quantifier-plus-classifier phrase following it, and hence it may also be considered as a bare lexical item.

¹⁰ The term 'countability preference' was introduced by Allan (1980), in an analysis of English nouns. However, since Allan determines the countability preference of a noun by the morphosyntactic environments within which it occurs, his use of the term is at least partially formal, rather than purely semantic, as in the present paper.

¹¹ Note that the singular and plural forms referring to water, in (16b), (16c) and (18b), (18c), may be interpreted as involving quantification over physical units, just like their counterparts referring to dogs, in (17b), (17c) and (19b), (19c), but unlike their English equivalents, a *water* and *waters*, in (14b), (14c), which, to the extent that they are acceptable, involve quantification over kinds. (Of course, in the case of the Vietnamese singular expression in (18b), this is less remarkable, since there is an overt classifier *côc* making explicit reference to a physical unit, a cup – see below.)

¹² Thus, Thompson (1965:193) characterizes Vietnamese 'nouns' as 'somewhat like English mass nouns'. Similar statements with regard to other 'numeral-classifier' languages can be found in Quine (1969:35-38) for Japanese, Stein (1981:105-107) for Thai, and Link (1991) for a variety of languages. In fact, the apparent parallel between numeral classifier constructions and English constructions of the form *one cup of water* is what led me to adopt this approach, and characterize the nouns of 'numeral-classifier languages' as mass-like, in Gil (1987, 1989, 1990, 1991a) – a position which I now argue is misled.

¹³ If the obligatory use of numeral classifiers in Vietnamese is not due to lexical items being associated with mass interpretations, then the question remains what makes Vietnamese into a 'numeral-classifier language'. The answer, it would seem, lies not in the quantified expression, but rather in the quantifying one, namely the numeral. Specifically, whereas English numerals such as *one* may be understood as 'one natural unit of', Vietnamese numerals such as *môt* may be understood as 'one unit of'; that is to say, they may be viewed as unspecified with regard to the unit of counting, containing an empty slot, to be filled in by the classifier. This difference between Vietnamese and English numerals is what underlies the different constituent structures of, say, *môt côc nu'óc*, in which *môt côc* quantifies *nu'óc*, and its English counterpart *one cup of water*, in which *one* quantifies *cup of water*.

¹⁴ Note that in (20a), the individual interpretation is induced by the distributive-key universal quantifier *each*. As a rule, distributive-key expressions are always indi-

vidual; however, the converse does not hold – an expression may be interpreted as individual but not as distributive-key. For example, in *Jimmy and Johnny photographed Masha and Sasha respectively*, both NPs are individual, but no relation of distributivity obtains.

¹⁵ The ambifix *ka-* *-an* may be decomposable into prefix *ka-* and suffix *-an*, both of which are independently attested. One of the functions of the prefix *ka-*, also falling loosely within the same broad semantic domain, is mentioned in Section 3 below.

¹⁶ As suggested by the glosses, a similar contrast occurs in a rather literary style of English, between *three boys* and *a threesome of boys*; however, the Hebrew non-additive construction in (25b) is somewhat less awkward than its English counterpart.

¹⁷ Indeed, as singular, they may be pluralized anew, resulting in 'doubly plural' expressions such as *the teams*, *three teams*, and *every team*. (Such doubly plural interpretations are not, however, limited to non-additive expressions; thus, corresponding to the non-additive *every team* is the additive *every eleven boys*.)

¹⁸ For more discussion of the distinction between *each* and *every*, see Gil (1991b).

¹⁹ Altogether, then, the typology defines 16 interpretation types: general; mass non-generic; mass generic; singular; plural additive non-generic; plural non-additive non-generic; plural additive generic; plural non-additive generic; plural individual additive non-generic; plural individual non-additive non-generic; plural individual additive generic; plural individual non-additive generic; plural set additive non-generic; plural set non-additive non-generic; plural set additive generic; and plural set non-additive generic.

²⁰ However, not coincidentally, the illustration of the typology made use of linguistic forms such as *collective*, *collectively* and *collected*.

²¹ The survey is based on an accidental sample of relevant works, and is not meant to be exhaustive in any way. The choice of books and articles surveyed depends embarrassingly but unavoidably upon whether I could afford to buy or xerox them, or, alternatively, whether they happened to be on a library shelf during my visit.

²² This meaning of the term 'collective' is the one which I have made consistent use of, for example in Gil (1982, 1988, 1991b, 1992, 1993b, 1995c, to appear 1995b).

²³ Though both non-additive, their 'specific' and 'unique' types differ at the level where plurality is united into singularity: whereas the 'specific' singularities are in turn pluralizable, like *team* (cf. note 17 above), the 'unique' singularities are not – in this respect they resemble other, not necessarily non-additive words such as *Jimmy*, *applehood*, and *linguistics*, discussed in the previous section.

²⁴ Forms such as Papago *daddaikud* and *dadaikud* pose an interesting analytical problem. Under one analysis, *daddaikud* might be considered as distributive-key, each chair being associated with a (different) household; in accordance with this analysis, the use of the term 'collective' to characterize *dadaikud* would then be subsumed under its use for set interpretations, as per (31b). However, an equally plausible alternative analysis is available, whereby *daddaikud* might be treated as distributive-share, each household being associated with a (different) chair; in accordance with this analysis, the use of the term 'collective' for *dadaikud* would stand in a near mirror-image relation to its use for set interpretations. Adjudication between these alternative analyses requires a much more in-depth investigation of the relevant data. (A similar problem, posed by reduplicated nouns in Hebrew, is discussed in Gil (1991b, 1995c); there, evidence is adduced in support of an analysis corresponding to the latter of the two described above, namely that in Hebrew, reduplication is a marker of distributive-share rather than distributive-key.)

²⁵ As mentioned in note 15 above, the prefix *ka-* may also form part of the ambifix *ka-* *-an*, one of whose functions is to form non-additive expressions.

²⁶ Forms such as *mamulo* are derived from a numeral stem by prefixation of *maN-*, where 'N' denotes a nasal stop replacing the first consonant of the stem while acquiring its place of articulation.

²⁷ In fact, even the passage cited above is not as crystal-clear as one might wish. Thus, the two proper collectives would appear to differ somewhat, in that while *family* is clearly non-additive, *clergy* lends itself more readily to a generic interpretation – as indeed is noted by Quirk, Greenbaum, Leech and Svartvik (see above). Similarly, while *water* and *pride* readily head mass NPs, *measles* appears to belong to the class of words that may only head singular NPs: contrast *Jimmy has more water/pride than Johnny* with **Jimmy has more measles than Johnny*.

²⁸ Occasionally, however, Maltese and Arabic grammarians distinguish between different usages of the term 'collective', following their general-linguistics counterparts, as discussed in the preceding section. Thus, for Maltese, Bugeja (1979:92) distinguishes between collective nouns of the type considered in this section, and non-additive collectives such as *kotra* 'crowd' and *merħla* 'flock'; further discussion of 'other collective types' can be found in Mifsud (1995, this volume). For Arabic, similar distinctions are made by E.H. Palmer (1874:183-184), Sterling (1904:122-124), and others.

²⁹ For example, in English, the semantically-based term 'singular noun' is used to refer to nouns with zero suffix, contrasting with nouns bearing the suffix *-s*, although such 'singular nouns' may head not only singular NPs such as *an apple* in (1b), but also mass NPs such as *apple* in (1a), and even general NPs such as *the fish* in (3). Analogously, in syntax, the semantically-based term 'determiner' is used to refer to a class of words (e.g. *the, a, some*) exhibiting certain distributional properties, regardless of whether the NPs that they form are interpreted as determined, as in *the fish*, or otherwise, as in *a fish, some fish*, and so forth.

³⁰ Sporadic citations of Arabic 'collective' nouns in the general linguistic literature provide little clue as to their meaning. Thus, Lyons (1977:462), characterizing set interpretations as 'collective' notes, 'in this connexion', the existence of a 'collective form' in languages such as Classical Arabic. In contrast, Link (1991:139-140), who also takes set interpretations to be 'collective', characterizes the Syrian Arabic form *dabban* 'fly' (considered by Arabic grammarians to be a 'collective' noun) as denoting an 'abstract concept', as opposed to a set.

³¹ An apparent counterexample to the claim that 'collective' nouns are semantically singular is cited by Corbett (1995 note 12, this volume), according to which 'if someone sued a restaurant alleging that there had been *dubbien* [the 'collective' form of 'fly'] in his soup, it would be no defense to say his accusation was untrue because there had had been only one fly involved'. However, it is clear that in Corbett's example, *dubbien* is associated with a mass interpretation, and that the unfortunate diner's complaint is valid only in the strict, truth-functional sense – cf. note 2 above. Indeed, identical facts obtain also in English, for the NP *fly* in *There is fly in my soup*: although *fly* is interpreted as mass, the diner's complaint would be true, albeit pragmatically infelicitous.

³² Note that the availability of the plural interpretation affects the morphological number of the adjective modifying the 'collective' noun: while in (36a)-(38a), where the plural interpretation is less readily available, the adjective is singular, in (39a), where the plural interpretation is more readily available, the adjective is plural. Some discussion of agreement in the context of 'collective' nouns can be found in Corbett (1995, this volume).

³³ Here, too, as in the preceding paradigm (cf. note 32), the availability of the plural interpretation bears morphological consequences: while in (41), (42a), where the

plural interpretation is less readily available, the NP headed by the 'collective' noun controls singular verbal agreement, in (43), (44a), where the plural interpretation is more readily available, the NP headed by the 'collective' noun controls plural verbal agreement.

³⁴ Terminologically, Mifsud views the latter, secondary interpretation as the 'proper' collective, which leads him to the conclusion that as a whole, the term 'collective' is a misnomer for the formally defined class of nouns under consideration.

³⁵ The confounding of mass interpretations with 'qualitative' or 'type' interpretations occurs relatively frequently in the linguistic literature; thus, Mifsud's characterization of forms such as *kartun* as 'qualitative' or 'type' is echoed by Link's (1991) characterization of the Syrian Arabic 'collective' noun as referring to an 'abstract concept' – as pointed out in note 30 above.

³⁶ Figure 3 presents a somewhat simplified version of the facts, focussing on the contrast between 'collective' nouns and their singular and plural counterparts, within the two regular paradigms. Among the many constructions not represented in Figure 3 are the dual, e.g. *jumajn* 'two days' (Fenech 1995, this volume); the double plural, e.g. *mnehrijiet* 'noses' (Fenech 1995, this volume); the so-called 'plural of types', e.g. *krachten* 'types of cardboard' (Mifsud 1995, this volume), and various singularia and pluralia tantum forms.

³⁷ For example, in Russian, a formally singular noun *krolik* 'rabbit' may head the semantically mass NP *krolik* 'rabbit', the semantically singular NP *krolik* 'a rabbit', and (in the genitive singular case) the semantically plural NP *tri krolika* 'three rabbits', while a formally plural noun *kroliki* 'rabbits' may head the semantically plural NPs *kroliki* 'rabbits' and (in the genitive plural case) *odinnadcat' krolikov* 'eleven rabbits'.

³⁸ The iconic association of zero marking with mass interpretations is a quite general linguistic phenomenon. Thus, as noted in the beginning of Section 2, in English, mass interpretations are expressed with morphosyntactically bare nouns such as *apple* in (1a). (See Gil 1987 for further discussion.)

³⁹ For example, Bayso *labantiti* 'a/the particular lion', *labanjool* 'lions', and *laban* 'lion(s)'. As pointed out in note 4, Corbett refers to this third form as 'general'.

⁴⁰ Interestingly, in most of the examples cited by Corbett, it is the third form, like in Maltese, that is morphologically unmarked. If, indeed, the singular/plural nouns in Bayso and other Cushitic languages turned out to be similar to 'collective' nouns in Arabic and Maltese, then this would point towards the existence of an areal and/or genetic distribution of the phenomenon.

References

- ALBAUGH R.M. (1964), *English, A Dictionary of Grammar and Structure*, San Francisco, Chandler Publishing Company.
- ALLAN K. (1976), "Collectivizing", *Archivum Linguisticum*, 7: 99-117.
- ALLAN K. (1980), "Nouns and countability", *Language* 56: 541-567.
- ANDRZEJEWSKI B.W. (1960), "The categories of number in noun forms in the Borana dialect of Galla", *Africa* 30: 62-75.
- AQUILINA J. (1965), *Teach Yourself Maltese*, Teach Yourself Books, London, The English Universities Press.

- BORG A. (1992), "Quantification in Maltese", Paper presented at EUROTYP Working Group 7 Meeting, Foundation for International Studies, University of Malta, Valletta, Malta, 6 April 1992.
- BUGBEA P. (1979), *Maltese, How to Read and Speak It*, Malta, A.C. Aquilina.
- CHOE J.-W. (1987), *Anti-Quantifiers and a Theory of Distributivity*, PhD Dissertation, Amherst, University of Massachusetts.
- CORBETT G.G. (1992), "A typology of number systems", *EUROTYP Working Papers*, Series 7, Number 15, The European Science Foundation, EUROTYP Programme, Berlin.
- CORBETT G.G. (1995), "Minor number and the plurality split", in BORG A. & F. PLANK (eds.), *The Maltese Noun Phrase Meets Typology*, EUROTYP Working Papers, Series 7, Number 25, The European Science Foundation, EUROTYP Programme, Berlin.
- CORBETT G.G. (this volume), "Minor number and the plurality split".
- COWELL M.W. (1964), *A Reference Grammar of Syrian Arabic (Based on the Dialect of Damascus)*, Washington, Georgetown University Press.
- CURME G.O. (1931) *A Grammar of the English Language in Three Volumes*, Volume III, Syntax, Boston, D.C. Heath.
- DIK S.C. (1972) *Coordination, Its Implications for the Theory of General Linguistics*, Amsterdam, North-Holland.
- ENTICK J. (1728), *Speculum Latinum*, London.
- ERWIN W.M. (1969), *A Basic Course in Iraqi Arabic*, Washington, Georgetown University Press.
- FENECH E. (1978), *Contemporary Journalistic Maltese, An Analytical and Comparative Study*, Leiden, Brill.
- FENECH E. (1995), "Functions of the dual suffix in Maltese", in BORG A. & F. PLANK (eds.), *The Maltese Noun Phrase Meets Typology*, EUROTYP Working Papers, Series 7, Number 25, The European Science Foundation, EUROTYP Programme, Berlin.
- FENECH E. (this volume), "Functions of the dual suffix in Maltese".
- GIL D. (1982), *Distributive Numerals*, PhD Dissertation, Los Angeles, UCLA.
- GIL D. (1987), "Definiteness, noun-phrase configurationality, and the count-mass distinction", in REULAND E.J. & A.G.B. TER MEULEN (eds.), *The Representation of (In)definiteness*, Cambridge, MIT Press: 254-269.
- GIL D. (1988), "Georgian reduplication and the domain of distributivity", *Linguistics* 26:1039-1065.
- GIL D. (1989), "Korean -ssik, a syntactic and semantic study", in KUNO S., I.-H. LEE, et al. (eds.), *Harvard Studies in Korean Linguistics III*, Seoul, Hanshin Publishing Company, 423-430.
- GIL D. (1990), "Markers of distributivity in Japanese and Korean", in HOJI H. (ed.), *Japanese/Korean Linguistics*, Stanford, The Center for the Study of Language and Information: 385-393.
- GIL D. (1991a), "Nouns, verbs, and quantification", *EUROTYP Working Papers*, Series 10, Number 1, The European Science Foundation, EUROTYP Programme, Berlin.
- GIL D. (1991b), "Universal quantifiers: a typological study", *EUROTYP Working Papers*, Series 7, Number 12, The European Science Foundation, EUROTYP Programme, Berlin.
- GIL D. (1992), "Scopal quantifiers: some universals of lexical effability", in KEFER M. & J. VAN DER AUWERA (eds.), *Meaning and Grammar, Cross-Linguistic Perspectives*, Berlin, Mouton de Gruyter, 303-345.
- GIL D. (1993a), "Nominal and verbal quantification", *Sprachtypologie und Universalienforschung* 46: 275-317.
- GIL D. (1993b), "Some principles governing the number marking of anaphors", in GIL D. (ed.), *Studies in Number and Quantification, EUROTYP Working Papers*, Series 7, Number 19, Berlin, The European Science Foundation, EUROTYP Programme, 48-68.
- GIL D. (1993c), "Syntactic categories in Tagalog", in LUKSANEYANAWIN S. (ed.), *Pan-Asiatic Linguistics, Proceedings of the Third International Symposium on Language and Linguistics*, Chulalongkorn University, Bangkok, January 8-10, 1992, Volume 3: 1136-1150.
- GIL D. (1993d), "Tagalog semantics", in GUENTER J.S., B.A. KAISER & C.C. ZOLL (eds.), *Proceedings of the Nineteenth Annual Meeting of the Berkeley Linguistics Society*, February 12-15, 1993, Berkeley, Berkeley Linguistics Society: 390-403.
- GIL D. (1995a), "Parts of speech in Tagalog", in ALVES M. (ed.), *Papers from the Third Annual Meeting of the Southeast Asian Linguistics Society*, Tempe, Arizona State University: 67-90.
- GIL D. (1995b), "The Maltese 'collective': a typological perspective", in BORG A. & F. PLANK (eds.), *The Maltese Noun Phrase Meets Typology*, EUROTYP Working Papers, Series 7, Number 25, The European Science Foundation, EUROTYP Programme, Berlin.
- GIL D. (1995c), "Universal quantifiers and distributivity", in BACH E., E. JELINEK et al. (eds.), *Quantification in Natural Languages*, Dordrecht, Kluwer Academic Publishers: 321-362.
- GIL D. (this volume), "Maltese kull: an areal-diachronic perspective".
- GIL D. (to appear a), "How to speak backwards in Tagalog", in *Pan-Asiatic Linguistics, Proceedings of the Fourth International Symposium on Language and Linguistics*, January 8-10, 1996, Bangkok, Mahidol University.
- GIL D. (to appear b), "Noun phrase types and the number marking of anaphors".
- GOODMAN N. (1966), *The Structure of Appearance*, Second Edition, Indianapolis, The Bobbs-Merrill Company.
- HARRELL R.S. (1965), *A Basic Course in Moroccan Arabic*, Washington, Georgetown University Press.
- HAYWOOD J.A. & H.M. NAHMAD (1962), *A New Arabic Grammar, Of the Written Language*, London, Lund Humphries.
- HOEKSEMA J. (1983), "Plurality and conjunction", in TER MEULEN A.G.B. (ed.), *Studies in Modeltheoretic Semantics*, Groningen-Amsterdam Series in Semantics 1, Dordrecht, Foris, 63-83.
- JESPERSEN O. (1913) *A Modern English Grammar, On Historical Principles, Part II, Syntax*, First Volume, London-Copenhagen, George Allen and Unwin.
- Ejnar Munksgaard (reprinted by John Dickens, Northampton, 1961).
- KAUTZSCH E. (1910), *Gesenius' Hebrew Grammar, Translated by A.E. Cowley*, Oxford, Clarendon Press.
- KAYE A.S. (1976), *Chadian and Sudanese Arabic in the Light of Comparative Arabic Dialectology*, The Hague, Mouton.

- KIRKBY J. (1746), *A New English Grammar*, London.
- KRUEGER J.R. (1961), *Chuvash Manual, Introduction, Grammar, Reader, and Vocabulary*, Uralic and Altaic Series, Volume 7, Bloomington, Indiana University Publications.
- LANGENDOEN D.T. (1970), *Essentials of English Grammar*, New York, Holt, Rinehart & Winston.
- LI CH.N. & S.A. THOMPSON (1976), "Subject and topic: a new typology of language", in LI C.N. (ed.), *Subject and Topic*, New York, Academic Press: 457-489.
- LINK G. (1983), "The logical analysis of plural and mass terms: a lattice-theoretical approach", in BAUERLE R., C. SCHWARZE & A. VON STECHOW (eds.), *Meaning, Use and Interpretation of Language*, Berlin, Walter de Gruyter: 302-323.
- LINK G. (1991), "Quantity and number", in ZAEFFERER D. (ed.), *Semantic Universals and Universal Semantics*, Berlin, Foris Press: 133-149.
- LÖNNING J.T. (1987), "Collective readings of definite and indefinite noun phrases", in GARDENFORS P. (ed.), *Generalized Quantifiers, Linguistic and Logical Approaches*, Dordrecht, Reidel: 203-235.
- LOPEZ C. (1937), "Preliminary study of the affixes of Tagalog", in CONSTANTINO E. (ed.), *Selected Writings of Cecilio Lopez in Philippine Linguistics*, Diliman, University of the Philippines Press: 28-104.
- LYONS J. (1977), *Semantics*, Cambridge, Cambridge University Press.
- MICHAEL I. (1970), *English Grammatical Categories and the Tradition to 1800*, Cambridge, Cambridge University Press.
- MIFSUD M. (1995), "The collective in Maltese", in BORG A. & F. PLANK (eds.), *The Maltese Noun Phrase Meets Typology. EUROTYPE Working Papers*, Series 7, Number 25, The European Science Foundation, EUROTYPE Programme, Berlin.
- MIFSUD M. (this volume), "The collective in Maltese".
- MITCHELL T.F. (1962), *Colloquial Arabic, The Living Language of Egypt*, Teach Yourself Books, London, The English Universities Press.
- PALMER F.R. (1874), *A Grammar of the Arabic Language*, London, Wm. H. Allen.
- PALMER F.R. (1976), *Semantics*, Cambridge, Cambridge University Press.
- PENCE R.W. & D.W. EMERY (1947), *A Grammar of Present-Day English*, New York, Macmillan.
- QAFISHEH H.A. (1975), *A Basic Course in Gulf Arabic*, Tucson-Beirut, The University of Arizona Press, Librairie du Liban.
- QUINE W. VAN ORMAN (1960), *Word and Object*, Cambridge, MIT Press.
- QUINE W. VAN ORMAN (1969), "Ontological relativity", in *Ontological Relativity and Other Essays*, New York, Columbia University Press: 26-68.
- QUIRK R., S. GREENBAUM et al. (1972), *A Grammar of Contemporary English*, London, Longman.
- SCHA R. (1981), "Distributive, collective and cumulative quantification", in GROENENDIJK J.A.G., T.M.V. JANSSEN et al. (eds.), *Formal Methods in the Study of Language*, Amsterdam, Mathematisch Centrum: 485-512.
- STEIN M.J. (1981), *Quantification in Thai*, PhD Dissertation, University of Massachusetts, Amherst.
- SIENY M.E. (1978), *The Syntax of Urban Hijazi Arabic*, London-Beirut, Longman, Librairie du Liban.
- STERLING R. (1904), *A Grammar of the Arabic Language*, London, Kegan Paul-Trübner & Co. Ltd.
- STRANG B.M.H. (1963), *Modern English Structure*, New York, St. Martin's Press.
- TALMOUDI F. (1980), *The Arabic Dialect of Sūsa (Tunisia)*, Göteborg, Acta Universitatis Gothoburgensis.
- THOMPSON L.C. (1965), *A Vietnamese Grammar*, Seattle, University of Washington Press.
- TOBIN Y. (1990), *Semiotics and Linguistics*, London, Longman.
- TOBIN Y. (1992), "Semantic integrality: a universal semiotic feature of language and perception", in KEFER M. & J. VAN DER AUWERA (eds.), *Meaning and Grammar, Cross-Linguistic Perspectives*, Berlin, Mouton de Gruyter, 347-365.
- TRIMMINGHAM J.S. (1939), *Sudan Colloquial Arabic*, London, Oxford University Press.
- VENDLER Z. (1967), *Linguistics in Philosophy, Ithica*, Cornell University Press.
- WIERZBIKA A. (1980), *Lingua Mentalis, The Semantics of Natural Language*, Sydney, Academic Press.
- ZANDVOORT R.W. (1957), *A Handbook of English Grammar*, London, Longmans.