

Distributive and universal quantification in Maltese

Albert J. Borg

While the distributive universal quantifier *kull* occurs before the nominal it quantifies (together with the free choice quantifier *kwalunkwe* and the determinate, non-distributive, quantifier *wiehed/certu*), the universal quantifier *kollha* occurs following the nominal it quantifies. In many instances a suprasegmental break separates this quantifier from the quantified nominal. The data relevant to these quantifiers is reviewed and it is hypothesised that the universal quantifier *kollha* is derived from the distributive universal quantifier *kull*.

1. Introduction

In preparing the following account of quantification in Maltese, I have consulted David Gil's painstaking typological work in its April 1991 version: *Universal Quantifiers: A typological study*. In this study the author opts for treating a quantifier like English *all* and its counterparts in other languages as semantically primitive and characterising quantifiers like English *every* and its equivalents in other languages as portmanteaux, combining the denotation of quantifiers like *all* with additional features.

This option is supported by a number of cross-linguistic arguments (section 2.1.), one of which, the fourth, is formulated as Universal 3, Morphosyntactic Derivation, involving the tendency in some languages for a quantifier like *every* to be derived from a simple universal quantifier like *all*. On this point, the evidence for Maltese appears to be the other way round as I will try to show, although on the other hand, on the basis of Maltese, I tend to agree with another of Gil's arguments regarding the observation that distributivity is itself a marked semantic relation.

So, since it is not at least immediately clear that the Maltese counterpart to English *every* should be derived from an equivalent to a postulated simple universal quantifier such as English *all*, in what follows I will try simply to give an account of quantificatory expressions in Maltese. The place each expression would occupy in a cross-linguistic paradigm of possibilities will have to be worked out at a later stage.

2.1. *The distributive universal quantifier kull*

In general, within the Maltese noun phrase, adjectival expressions follow the (head) noun while determiners precede it. Let us start with the morphologically simple and invariable quantifying expression *kull*, which precedes the noun it quantifies, and glossed for convenience as 'each':

- (1) Kull tifel inghata rigal.
Each boy he-was-given present
'Each boy was given a present'.

It is clear that *kull* in (1) has a distributive but universal interpretation, whereby all the members of the class *tifel* 'boy' fall under its scope: each boy receives a present.

Kull cannot occur with plural or collective nouns but peripherally can co-occur with a singular noun which is not usually regarded as countable. In this case the nominal expression is interpreted as referring to a type. Thus:

- (2) Il-kelb il-mismut, kull ilma jahsbu mishun.
The-dog the-scalded each water he-thinks-it hot-water
'The scalded dog regards all water as being hot'.

2.2. *The free choice quantifier kwalunkwe*

There are at least two quantifiers which like *kull* also occur before a singular noun. In (3) the speaker postulates that a single member

- (3) Kwalunkwe tifel jista' jghidhielek din.
Any boy he-can he-tells-it-to-you this
'Any boy can tell you this'.

of the class *tifel* 'boy' can be picked at will and what is predicated will apply equally. Here there is a component of free choice ranging over the entire membership of a particular class. Note however that *kwalunkwe* doesn't substitute for *kull* in (1). That is to say the choice out of the members of the class possible with *kwalunkwe* seems to rule out the strictly distributive universal interpretation in (1) whereby the totality of the members of the class are in fact affected by the predicate. For *kwalunkwe* to be possible in (1), the predicate has to be changed to one in which the giving of the present is encoded not as a simple fact, but as

a possibility, before which each member of the class is then understood as having an equal chance of receiving it. Thus:

- (4) Kwalunkwe tifel jista' jinjata rigal.
he-is-given present
'Any boy may be given a present'.

The context in (3) on the other hand does not exclude a distributive interpretation and *kull* easily substitutes for *kwalunkwe*. *Kwalunkwe* also occurs following a singular noun as in (5):

- (5) Aqbad borma kwalunkwe u sahanha sew.
you-take pan any and heat-it well
'Take any odd pan and heat it well'.

Here the interpretation is again one of any choice out of the members of the class, but overall, there is less force in encoding this choice than there would have been with *kwalunkwe* preceding the noun. This presumably reflects the difference between the expression as specifically a quantifier (preceding the noun) and as an adjective (following it).

Following a plural noun, *kwalunkwe* again encodes in an adjectival way, the possibility of choice, this time of a plurality of members of one class, as in:

- (6) Kienu tfal kwalunkwe li gew ighajju
they-were children any who they-came they-shout
taht it-tieqa
beneath the-window
'Those who came shouting beneath the window were just some boys (who happened to be there / came along)'.

2.3. *The determinate quantifiers wiehed/certu*

Adnominal numeral cardinal expressions precede the noun, but in the case of the number one, the resultant construction is interpreted as encoding a non-distributive but determinate, limiting choice of one member from the totality of members of the class.

- (7) Wiehed tifel mar jara x'gara.
one boy he-went he-sees what-he-happened
'A certain boy went to see what happened'.

An equivalent expression here would be *certu*, which is invariable in my idiolect, but can inflect normally in other dialects for singular and

plural, masculine and feminine. This determiner is probably more widespread than the special use of one in (7).

When only unique cardinality (without determinateness) is involved, then the expression *wieħed* follows the noun, thus:

- (8) Tifel wieħed mar jara x'gara.
'One boy went to see what happened.'

Here the interpretation is that one boy went. Since the cardinal expression for 'one' is used, as opposed to the possibility of having the noun without the definite article, the context is contrastively marked, with the overall implication that it was only one boy who went to see what happened, and that there were others who could have gone but didn't.

In both positions *wieħed* inflects for gender (masculine or feminine) but not, for the same interpretation, for number – the plural form *uħud* 'ones' occurs as not quite an alternative to the quantifier *xi* 'some', but cf. sentences (42), (43) in Borg (this volume).

Note also that other numeral cardinal expressions cannot occur following the noun they quantify but always precede it, thus:

- (9) Tliit itfal marru jaraw x'gara.
three children they-went they-see
'Three children went to see what happened.'

Here the implication that other boys might have gone but didn't, present in (8) is missing but can be achieved suprasegmentally.

3.1. The universal quantifier *kollha*

We turn now to universal quantification, considering an expression with a meaning equivalent to English 'all'.

- (10) It-tfal, kollha gew.
The children they-came
'All the children came.'

There are several points worth considering here. Notice first of all that the quantifier *kollha* is transparently related to the expression *kull* we have just been considering, and which we characterised as a distributive but universal quantifier. Secondly, comparing the morphology of both expressions it is evident that *kull* is the simpler, so that even if semantically we could agree that its interpretation is more marked, the morphology here runs counter to the semantics, with *kollha* the so called "simple universal quantifier" being morphologically the more complex.

Although a case might possibly be made for assigning the derivation of *kollha* from *kull* to diachrony (Gil, *op. cit.*) it has to be pointed out that the morphological change involved in *kollha* is not an isolated case. The suffix *-ha* is morphologically the 3rd person singular feminine object pronoun, one of a whole series involving first, second and third persons, singular and plural and in the 3rd person singular, masculine and feminine.

Many nouns take this suffix and in this case the interpretation is one of possession, e.g.

- (11) *dar* 'house' dari 'my home'
darek 'your home'
daru 'his home'
darha 'her home'

Suffixed to a verb or a preposition (with attendant morphophonemic changes) these suffixes are interpreted as object pronouns, e.g.

- (12) *ra* 'he saw' rani 'he saw me'
rak 'he saw you'
rah 'he saw him'
raha 'he saw her'
- (13) *minn* 'from' minni 'from me'
minnek 'from you'
minnu 'from him'
minnha 'from her'

Note that the first person singular suffix is usually *-i* following a noun and *-ni* following a verb. Comrie (1982) argues that a number of expressions like *għad* 'still', *donn* 'seems', *għand* 'at' which take this series of suffixes are in fact irregular verbs which take the suffixes instead of the regular verbal inflections.

Returning to sentence (10) it is also worth noting that *kollha* although semantically plural takes a singular feminine suffix. This morpho-syntactic feature is remarkable also in the light of what Gil notes from his Hebrew data, where the quantifier *kol* in its "simple universal" interpretation (= 'all') takes a definite noun in the plural but a singular indefinite noun in its distributive interpretation ('every').

Before attempting an interpretation of this feature, some more considerations on (10) are in order. There are as yet no definite conclusions

on word order in Maltese (but cf. Borg 1988, ch. 5) but notice that in the unmarked version of sentence (10) the quantifier *kollha* definitely follows the noun, whereas, as we noted earlier, all determiners, cardinal numerical expressions (except for 'one') and other quantifiers, such as *kull* and *xi* 'some' etc. definitely precede the noun.

Regarding the singular feminine suffix in *kollha* one has to note that although there are many nouns with a plural form there are others whose plural is homonymous with the singular feminine. This phenomenon is not well documented as yet, but a study is now under way on the subject. In this connection note that the universal quantifier, besides occurring with plural nouns can also occur with a collective noun but not with a determinate plural (For "collective" and "determinate plural" cf. Mifsud, this volume).

Thus we have:

- (14) a. In-nemel, kollu miet.
the-ants he-died
'All the ants died'.

where this time the quantifier has a third person singular masculine suffix, but not

- (14) b. *In-nemliet, kollu/kollha miet / mietet
he-died she-died

Notice, finally, that there are at least two renderings of sentence (10) which differ suprasegmentally as follows: in one there is definitely some kind of suprasegmental break between the nominal *it-tfal* and the rest of the sentence, signified by a comma in the appropriate place; in the other, no such break is discernible and *kollha* is treated suprasegmentally, just as if it were, say, an adjective qualifying the noun preceding it (cf. Borg, this volume). For the moment, this second alternative is set aside, but I return to it in the discussion of sentence (16) below.

All these considerations would seem to point to an explanation involving the plural nominal *it-tfal* as topic of sentence (10) and the quantifier with the suffixed pronoun as subject, that is with nominal characteristics (in Maltese many adjectives can be interpreted formally as nouns). Possibly the singular feminine could be explained as a reference to the class as a whole, which is quantified distributively (and therefore exhaustively) by *kull*. If this explanation is correct, a more accurate gloss for (10) would be the following:

- (10) It-tfal, kollha gew.
The-children each-of-it(the class of children) they-came

Note also that the nominal expression *it-tfal* can be left out without effecting the grammaticality of the sentence:

- (15) Kollha gew.

The interpretation involving recourse to the notion of "exhaustiveness" is further reinforced by the possibility exemplified in (16):

- (16) It-tfal, kollha kemm huma gew.
the-children as-much they they-came
'All the children - every single one of them - came'.

Where we have the additional expression *kemm huma*. On its own with the intonation for a question *kemm huma?* would mean 'How much do they cost'. The meaning of *kemm* obviously has to do with "extent" and *huma* is the 3rd person plural independent pronoun 'they'. It is significant that while the quantifier *kollha* is singular feminine, the independent pronoun *huma* agrees with the plural nominal *it-tfal*. The expression *kemm huma* reinforces the exhaustive interpretation of *kollha* by spelling out the precise extent of the class of individuals referred to by the subject nominal: 'all the children as many as they are' would be some sort of English equivalent here, or 'every single one of them'. This analysis however is not without its problems. I bypass for the moment the possibility that besides its occurrence as a singular feminine expression with plural nouns as in (10) (or with a singular masculine suffix with collectives), this quantifier can also agree in number (and in the singular, in gender) with its antecedent noun (cf. section 3.2 below). It is possible to have a version of (10) in which no break is perceptible between the nominal and the quantifier. And there are syntactic contexts where such a break would be clearly ungrammatical, as in sentence (17).

- (17) It-tfal kollha li gew kienu ghajjenin.
who they-came they-were tired
'All the children who came were tired'.

There is no way in which a break could occur between the nominal *it-tfal* and the quantifier *kollha* in this sentence, where *it-tfal* is also the subject of the relative clause *li gew*.

This evidence would suggest that *kollha* in (17) and in (10) in the rendering involving no suprasegmental break is interpreted as an adjective rather than as a special category of quantifier. This formal difference seems to correlate with a semantic one. The occurrence of

kollha as an adjective (without a suprasegmental break) is interpreted as universally quantifying the noun. Thus:

- (18) It-tfal kollha kellhom lapes.
 they-had pencil
 'All the children had a pencil.'

The occurrence of *kollha* as grammatical subject of the sentence (with a break following the nominal *it-tfal*), is definitely interpreted in a distributive way as in (19):

- (19) It-tfal, kollha kellhom lapes.
 'All of the children had a pencil each.'

3.2. Quantification in nominal sentences

But this quantifier occurs also in another set of contexts, again following the noun, but this time in agreement with it in number and gender as mentioned earlier. In such contexts the suprasegmental break between the nominal and the following quantifier is very definitely obligatory, at least in my dialect.

- (20) Dan it-tifel, kollu dwejjaq.
 This the-boy sorrows
 'This boy is very sad (full of sorrows).'

- (21) Din it-tifla, kollha dwejjaq.
 the-girl
 'This girl is very sad.'

- (22) Dawn it-tfal, kollhom dwejjaq.
 'These children are very sad.'

Sentences (20) to (22) show that the quantifying expression, via the suffixed pronoun, agrees with the subject nominal. These nominal sentences lacking a full verbal expression, are quite common in Maltese and there are various sub-types (for an indication cf. Borg 1987:88). Sentence (23) has a structure similar to that in sentences (20) to (22), but without a quantifier.

- (23) Dan it-tifel, imdejjaq.
 sad (sg.masc)
 'This boy is sad.'

Note the suprasegmental break between the nominal and the predicate expression. While the predicate expression *dwejjaq* in sentences

(20) to (22) is a plural noun (with no corresponding singular form in this case) the predicate expression *imdejjaq* in (23) is a past-participle and morphologically singular masculine, contrasting with a singular feminine form *imdejja* and a plural form *imdejjin*. As such, the predicate adjective clearly displays an inflection and may occur alone in an utterance with the meaning 'he is sad'. It is also quite common in Maltese to omit the subject nominal, with some of its characteristics (person, number and gender) being recoverable from the inflected verb form. These considerations make it quite plausible to suggest that the nominal expression in (23) is in fact also a topic. Suprasegmentally there is no difference between the break in (20) to (22) and that in (23), or for that matter in (10), (in the version in which such a break occurs).

The predicate nominal in the construction exemplified in (20) to (22) seems to be restricted to uncountable nouns, whether singular or plural (like *dwejjaq* 'sorrows', *mard* 'sickness', *inkwiet* 'trouble') or to plural nouns interpreted as an uncountable mass, as in (24):

- (24) Din it-tifla, kollha griehi
 wounds

'This girl is full of wounds/sores'.

where *griehi* is the plural of *griha* 'wound/sore'.

Sentences (20) to (22) and (24) clearly have what might be termed an "exhaustive" interpretation, such that the total extension of the subject nominal falls under the scope of the predicate expression in what seems to be remarkably like an equative relation (for equative predications in Maltese, cf. Borg 1987:88).

In sentence (22) with a plural nominal, the quantifier with the singular feminine suffix seems to be excluded but it could occur naturally with an inanimate plural nominal as in (25):

- (25) Dawn id-dwejjaq, kollha nervi.
 nerves

'All this sadness comes from tension'.

Here we have once again a plural nominal with a feminine singular quantifier, as in (10).

4. Conclusion

Conceivably, the so called simple universal quantifier *kollha* could be derived from the distributive quantifier *kull* in four stages, the first

being the topicalisation of the nominal to be quantified and the occurrence of the quantifying expression with an appropriate suffix in agreement with it as in sentences (20) to (22).

The second stage would then be the occurrence exemplified in (25) where a feminine singular quantifier agrees with an inanimate plural nominal. The masculine singular quantifier with a collective noun is not so frequent: indeed some of these collectives are being interpreted as plural nouns e.g. *baqar* 'cows', *siġar* 'trees' etc. As can be seen in sentence (26):

- (26) *Il-baqar, kollha hlibthom.*
 the-cows I-milked-them
 'I milked all the cows'

where the quantifier takes a singular feminine suffix and the verb takes a third person plural object pronoun co-referential with the topic *il-baqar*. Compare sentence (27) with a "genuine" collective, in which the quantifier has a singular masculine suffix and the verb takes a singular masculine object suffix co-referential with the collective topic, *in-nemel*. Notice incidentally that the suprasegmental break between the topic and the quantifier is obligatory both in sentence (26) and (27).

- (27) *In-nemel, kollu qtiltu.*
 the-ants I-killed-him
 'I killed all the ants'.

Observe further that the topic in these sentences is co-referential with the grammatical object of the verb, whereas in sentence (10):

- (10) *It-tfal, kollha ġew.*
 'All the children came'

the topic is co-referential with the grammatical subject of the verb. The third stage in the derivation of the simple universal quantifier would involve an extension of the use of the feminine singular suffix to animate plural nominals, as in (10).

And the final stage would be the re-interpretation of the expression as an adjective, involving the omission of a break between the nominal topic and the quantifier. As we have seen, this fourth stage does not take place in all occurrences of this expression. Indeed, as can be seen from a comparison of sentences (26) and (27) with (10) the nominal topic can become the grammatical subject of the sentence (and correspondingly, the quantifier interpreted as an adjective) only when it is co-referential with the subject of the verb implicit in the inflection, as in (10).

Address of the author:

Institute of Linguistics, University of Malta, Tal-Qroqq, Msida, Malta.

References

- BORG A.J. (1987-88), "To be or not to be a copula in Maltese", *Journal of Maltese Studies* 17-18:54-71.
 BORG A.J. (1988), *Il-sienna. Studju Grammatikali*, Malta: Has-Sajjied, Pubblikazzjoni ta' l-Awtur.
 BORG A.J. (this volume), "The structure of the Noun Phrase in Maltese".
 COMRIE B. (1982), "Morphological - syntactic discrepancies in Maltese sentence structure", *Communication and Cognition* 15 (3/4): 281-306.
 GIL D. (1991), "Universal quantifiers: a typological study", *European Science Foundation: Eurotyp Working Papers, Theme 7: Noun Phrase Structure*.
 MIFSUD M. (this volume), "The collective in Maltese".