

The Old Sardinian quantifier *totu* ‘all’: (Lack of) agreement and a \forall NumQ-construction

1. In most varieties of modern Sardinian, the universal quantifier *totu* ‘all’, at least when occurring prenominally, does not show agreement with the head noun (cf. Jones 1993:37), as shown in (1):

- (1) a. *totu su mese* b. *totu sa die*
 all the-M-SG month.M.SG all the-F-SG day.M.SG
 c. *totu sos meses* d. *totas sas dies*
 all the-M-PL month.M-PL all the-F-PL day.F-PL

It has been assumed in the literature that this behavior was already palpable in Medieval Sardinian (henceforth OSard), see, e.g., Blasco Ferrer (1984:93): “[Lat.] TOTTUS [...] has been fixed – starting from the first documentations – to the invariable form /tóttu/” (my translation). However, the medieval documentation of *totu* has never been studied systematically.

The basis of this talk is a corpus analysis performed using the ATLiSO corpus, allowing me to reconstruct the agreement patterns of *totu* in OSard, which was not identical to the modern system. In particular, agreement of *totu* almost regularly appears in the (fem.) singular, whereas it was usually absent with plural nouns. Apart from showing that assumptions like that of Blasco Ferrer mentioned above are untenable, the analysis (described in §2 below) brought forth an interesting syntactic construction involving numerals, which diverges from the canonical Old Sardinian pattern in showing agreement with *totu* in plural QPs. The syntactic analysis sketched in §3 below will be the main part of the talk.

2. All forms of *totu* and its variants (such as *tottu* or *tuttu*) and inflected forms in (-a-, -as, and -os [var. -us]) – together with their (sentential) contexts – were extracted from the corpus ATLiSO, which contains the almost complete documentation of OSard texts from around 1050 until the end of the 14th century. Only those data in which *totu* occurred as a prenominal modifier were selected for the study. The word order was already that of Modern Sardinian shown in (1), albeit with optionality of the definite article (note: the absence or presence of the article does not seem to have had an effect on the agreement facts).

The following table shows the overall results arranged according to the presence (+) and absence (-) of agreement:

singular		plural				total	
m. <i>totu</i>	f. 136 (100%)	m. 154 (100%)		f. 66 (100%)			
	+agr. <i>tota</i>	-agr. <i>Totu</i>	+agr. <i>totos</i>	-agr. <i>totu</i>	+agr. <i>totas.</i>	-agr. <i>totu</i>	
123	121 (89%)	15 (11,0%)	29 (18,8%)	125 (81,2)	8 (12,1%)	58 (87,9)	479

Table 1: (Lack of) agreement in OSard prenominal *totu* (corpus ATLiSO). Total occurrences with percentages in brackets. Gender and number refer to the head noun of the QP.

Since the masc. sing. form is identical to the default form used in the case of lack of agreement, it is vacuous with respect to the issue of agreement, whereas *totu* agrees with a fem. sing. head noun in 89% of the cases. Strikingly, in the plural, the situation is inverse, with the vast majority of cases showing lack of agreement both with fem. (87.9%) and masc. (81.2%) head nouns. This situation does not present major changes during the whole OSard period (except for the latest text of the end of the 14th century – this will be briefly discussed during the talk).

Interestingly, most of the cases *with* agreement in the plural can be shown to contain a numeral, forming structures of the type in (2):

- (2) *totos tres (sos) frates*
 all-M-PL three the- M-PL brother.M-PL ‘all (the) three brothers’

Apart from the striking presence of agreement, which can be shown to have been obligatory in this structure and is opposed to the tendency shown in Table 1, the word order with the numeral preceding the article is rare in Romance, although comparable to the Italian option with the conjunction *e* ‘and’: *tutti e tre i fratelli*, lit. ‘all and three the brothers’. The Italian structure has been studied by Giusti (1992:314-315; 2010: 398-399) and Bianchi (1992:60), where *tutti e tre* are argued to form a complex quantifier, called a “universal numeric quantifier” (\forall NumQ) by Cirillo (2009:ch. 4).

3. The main part of the talk will be dedicated to the syntactic analysis of these findings within the Minimalist Program (MP). Summarizing §2, we can say that the quantifier *totu* shows optional agreement with the head noun in OSard, with a strong tendency towards the lack of agreement in the plural. Once the structure in (2) is chosen, however, agreement on *totu* becomes obligatory. Abstracting away from the “exceptions” (i.e. the quantitatively under-represented options in Table 1), let us assume that an ‘average’ (or ideal) speaker of OSard had a system in which *totu* agreed either only with fem. sing. head nouns (if *totu* used with masc. sing. is analyzed as the default) or only in the singular (if *totu* used with masc. sing. is interpreted as agreement) – but not with a plural head noun. In either case, from the point of view of the MP, this can be formalized by assuming that *totu*, a Q- head, had a deficient set of phi features, a point to which I return below. In addition, to explain the structure in (2) and to explain most of the “exceptions”, we need to assume that an alternative lexical entry with full phi-features existed, too (see below for the issue of optionality).

On standard assumptions, the structure of a QP with prenominal *totu* would be as shown in (3). For the construction in (2), with the numeral, I partially follow Corver (2010) in assuming that it has the base structure in (4), avoiding, however, Corver’s problematic analysis of moving an X’-bar constituent (!) by assuming that *totu* is the specifier of CardP:

(3) [QP [Q *tot-*] [DP *sos* [NP *frates*]]]

(4) [QP [Q \emptyset _{[EPP]]] [DP *sos* [FP \emptyset [CardP *tot-* [Card *tres*] [NP *frates*]]]]]}

To derive (2) from (4), I assume that the head noun *frates* moves to FP (whose nature will be discussed in the talk), followed by remnant movement of [CardP *tot-* [Card *tres*] [NP *frates*]] to the specifier of the empty left-peripheral Q-head. The reason for the latter movement is that – although *totu* is the specifier of CardP – it must still express quantification and be moved to the regular quantifier position (i.e. the QP) for being licensed (provisionally expressed by the [EPP]-feature in (4)).

The gist of my explanation for the agreement facts is as follows: even if two alternative lexical entries for Q *totu* existed in OSard (one with defective and one with full phi-features), for (3), the speakers would prefer the defective version for economy reasons (less features = less effort). But for (4), the upper (phonologically empty) Q-head must have full phi-features because something needs to be moved here, and the operation Agree is a prerequisite for movement according to the MP. In order for Q \emptyset to be able to undergo Agree with *totu* in [spec,CardP], *totu* must be merged with a full phi set (which is $u\phi$, valued in a first step of Agree with the head noun or the numeral; for a further understanding, see Legate 2005, among others).

References: ATLiSOr = Lupinu, Giovanni (ed.) (2017): *Corpus ATLiSOr: Archivio Testuale della Lingua Sarda delle Origini*. Florence. <http://atlisorweb.ovl.cnr.it/>. ■ Bianchi, Valentina (1992). Sulla struttura funzionale del sintagma nominale italiano. *Rivista di Grammatica Generativa* 17, 105-127. ■ Blasco Ferrer, Eduardo (1984). *Storia linguistica della Sardegna*. Tübingen. ■ Cirillo, Robert J. (2009): The syntax of floating quantifiers: Stranding revisited. Utrecht. https://pure.uva.nl/ws/files/893235/63916_08.pdf. ■ Corver, Norbert (2010). Dressed numerals and the structure of universal numeric quantifiers, in J.-W. Zwart & M. de Vries, eds., *Structure Preserved. Studies in Syntax for Jan Koster*, 91-99, Amsterdam. ■ Giusti, Giuliana (1992). *La sintassi dei sintagmi nominali quantificati: uno studio comparativo*. Tesi di dottorato, Univ. of Padova. ■ Giusti, Giuliana (2002). Le espressioni di quantità in italiano antico. *Verbum* 4, 295-325. ■ Jones, Michael Allan (1993): *Sardinian Syntax*. London/New York. ■ Legate, Julie A. 2005. Phases and Cyclic Agreement. In: M. Mc Ginnis and N. Richards, eds, *Perspectives on Phases* (= MITWPL 49), 147-156. Cambridge Mass.