On number and classification in Persian

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This paper addresses two questions on the realization of number and individuation in Persian: (i) What is the role of *ta* in the language if it is not a classifier of the kind discussed for numeral classifier languages? (ii) How is the co-occurrence of the classifier and the plural marker in Persian explained within current syntactic theory of number?

First, we argue that *ta* in Persian is not an atomizer of the kind described in Chierchia (1998) and Borer (2005), but that it expresses instead quantification/countability in combination with the numeral. **Second**, *-ha* in Persian is a plural marker of category #.

Background It is shown in previous studies that measure words in some languages (English, French, Hebrew) necessarily take an *-s (two bottles of milk* while in other languages (Azeri, Persian, Ojibwe) measure words can surface in the singular (the equivalent of *two bottle of milk* is grammatical) (Author, 2015). They argue that the measure word (*bottle*) does not take a plural marker in such languages because it is generated as an individuator on the same head that the plural marker would get generated. The measure word thus assigns individuation to the head noun.

However, it is also shown that in these languages, a plural marker is available in their grammar, in some contexts and under the relevant (container) readings alongside the measure word, that means the plural marker cannot be generated under the division head. In sum, measure constructions thus provide evidence for the idea that, in addition to the dividing plural, we need a higher, counting plural. The plural marker *-ha* is proposed to be a higher plural. This proposal is consistent with the idea that number is distributed along different functional heads in the nominal spine (Wiltschko, 2008; Kramer, 2012; Mathieu 2012, 2014).

Proposal Focusing on measure words, we show that the plural cannot be placed on the division head and consequently it is forced to be generated higher. The occurrence of the measure word and *-ha* in (1) and the occurrence of the measure word, *ta* and *-ha* in (2), show us that the generic classifier *-ta* in the language is not a classifier of the type that exists in numeral classifier languages. In numeral classifier languages, both the plural marker and the classifier are treated as division heads that individuate the noun (Borer, 2005) and their occurrence is in complementary distribution, when in fact this is not actually the case in Persian.

(1)   do *guni* siibzæmini-**ha**
       two bag   potato-PL
       'two bags (full) of potatoes'

(2)   do **ta** *guni*-**ha**-ye siibzæmini
       two CL bag-PL-EZ potato
       'two bags of potatoes'

However, the availability of the plural marker and measure word, *-ha* and *ta* in (1) and (2) provide evidence that *-ha* and *ta* should be generated in a higher projection than DIVP, say in #P and QP respectively. The measure word is in DIVP and this head is already occupied. We propose that dissimilarity of *ta* to numeral classifiers arise from their being generated on different heads. As an optional classifier, *ta* is argued to be non-individuating and is part of the quantificational phrase. The function that *ta* assigns to this position is one of clustering.

(3) $[_{QP}\ ta\ [_{\#P}\ [_{DivP}\ [_{nP}\ \text{N}\ ]]]]$

In sum, we argue that the measure word is generated on the division head and *ta* being a clustering functor is generated higher, as part of the QP. In all the other constructions, e.g. the container reading construction, the measure word is not generated on the division head and thus does not induce a measure reading (following previous arguments for bare count nouns in Wilhelm (2008) we assume that individuation in Persian is morphologically null). Plural marker, not being an individuator in Persian, does not appear on DIVP and is generated in #P and the classifier is QP.

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