

Object vs. Substance Mass nouns: A cross-linguistic perspective

Background. Most research on the nature of mass nouns has concentrated on S(ubstance)-mass nouns such as *gold* or *water* – words that clearly display a common morpho-syntactic behaviour on the one hand and satisfy criteria of homogeneity and cumulativity on the other. O(bject)-mass nouns like *furniture* and *clothing*, which share the morpho-syntactic behaviour, but do not appear to be homogenous, have been for the most part relegated to exception status. Recent experimental work by Barner and Snedeker (2005), however, showed that the two classes of mass nouns give rise to different behaviour of English speaking children and adults, indicating that this distinction is systematic. It follows that the status of the S-mass/O-mass distinction requires further investigation. Is it a grammatical distinction, meaning that languages distinguish between the two types of mass nouns, or is it a reflex of world knowledge and represented linguistically only indirectly, through exceptional cases? In the latter case one would expect that not only there would be little systematicity in the grammar of an individual language but, furthermore, that there would be no systematic cross-linguistic variation in this area. In this paper we argue for the former position. We use data from unrelated languages to support the claim that the S/O-mass distinction is not an idiosyncratic property of the English lexicon but, rather, that the S/O mass distinction does have a grammatical basis and does give rise to cross-linguistic variation.

Data. One language that provides important insight to the matter is Greek. While Greek has many S-mass nouns (e.g. *Nero* (water), *Chrisafi* (gold)) there are no nouns that fall in the category of O-mass. Nouns that correspond to English *furniture* or *clothing* behave like count nouns in the relevant morpho-syntactic tests, including countability, compatibility with count determiners and so on. The fact that the entire category of O-mass nouns seems to be absent in Greek constitutes a good *prima facie* case for the hypothesis that it is a category in its own right and one to which languages show a degree of sensitivity and is the locus of variation. If this is so the following questions immediately arise:

- (1) a. What is the nature of this category?
b. how does it relate to the S-mass category?

To answer these questions, and at the same time strengthen the claim itself that O-mass is a separate semantic category which may be subject to variation, we turn to another language, Modern Hebrew. Like English, Hebrew features both S-mass and O-mass nouns. While S-mass nouns may be morphologically simple (e.g. *zahav* (gold), *xalav* (milk)), or arbitrarily complex (e.g. *mayim* (water), *hitlahavut* (enthusiasm)), Hebrew O-mass nouns (excluding several notable exceptions) are constrained to a narrow set of morphological forms. Specifically, they are deverbal, with the noun being ambiguous between the O-mass meaning and a gerundive meaning (though the latter may be dispreferred due to lexical blocking, as in *bigud* (clothing)/*halbasha* (clothing)). Some examples:

- (2) a. Kaniti **rihut** xadash la-bait
I bought new furniture for the house.

- b. Ha-**rihut** shel ha-bait nimshax ke-shvuaim
The furnishing of the house took about two weeks.
- (3) a. Ha-**shilut** mastir li et ha-nof
The signs obscure my view.
- b. Ha-**shilut** ne'esa be-kisharon rav
Putting up the signs was done with much skill.

Analysis. The fundamental claim of this paper is that the deverbal nature of O-mass nouns in Hebrew is not accidental, but rather it is at the core of their behavior. In order to account for this, we assume, as is standard, that an S-mass noun denotes a non atomic mereology, such that for a mass noun like *water*, we can say that there is a substance-denoting predicate WATER such that if WATER(x) then x is a quantity that is, or is made of or consists of WATER. We propose that O-mass nouns are not fundamentally different in terms of their denotational structure. However, there is no predicate FURNITURE such that the noun *furniture* denotes an x such that FURNITURE(x). Instead, the predicate denoted by *furniture* is the same predicate as denoted by the verb *furnish*, such that *furniture* denotes a mereology such that of any member of that mereology x , it is true that FURNISH-WITH(x). In other words, we argue that what makes O-mass nouns special is not that they lack the property of homogeneity, nor that there is something different about their structure, but rather the fact that they are always deverbal. This is overt in Hebrew, but can also be seen in some English O-mass nouns, such as *clothing* or *stuffing*. Now, with this analysis in mind we turn back to Greek and ask whether this helps us understand the lack of O-mass nouns. If the analysis proposed here is correct then the presence of O-mass terms is dependent on the availability of a specific type of nominalisation involving a predicate and an instrument-type argument. As it turns out this type of nominalisation is not found in Greek. Thus, under the approach proposed here O-mass nouns are not expected in this language and the Greek facts are predicted. In Greek, O-mass nouns are missing simply because the grammar of Greek does not make available the means to form such nouns.

Conclusion By looking at data from Hebrew and Greek, we learn that the S-mass/O-mass distinction observed in English is symptomatic of a true distinction between two ways of forming mass nouns. This core distinction, we argue, is not how speakers quantify the materials involved, but rather the nature of the argument structure of the predicate denoted by the nouns in question. This in turn allows us to further refine our view of what are the principles involved in the distribution of mass nouns cross-linguistically, and the classes they fall into.

References

- Barner, David, and Jesse Snedeker. 2005. Quantity judgments and individuation: evidence that mass nouns count. *Cognition* 97:41–66.