Plural marking on mass nouns: evidence from Greek
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Introduction: It has been noted in the literature that Greek mass nouns, unlike their English counterparts, can freely pluralize (Tsoulas 2006, Alexiadou 2011), as shown in (1). Plural marking on mass nouns has also been reported (at least) for Persian (Ghaniabadi 2012 a.o., Ojibwe (Mathieu 2012), Halkomelem Salish (Witschko 2008, 2012), and Blackfoot (Witschko 2012).

(1) a. Pefti nero apo to tavani
    fall.3SG water.NOM.SG from the.ACC ceiling.ACC.SG
    ‘Water is falling from the ceiling.’

b. Peftun nera apo to tavani.
    fall.3PL water.NOM.PL from the.ACC ceiling.ACC.SG
    ‘Water is falling from the ceiling.’

These data are problematic for semantic accounts of the mass/count distinction that treat pluralities and mass nouns in the same way, and are counterexamples to the generalization that mass nouns are incompatible with morphological plural marking in number-marking languages (Chierchia 1998 a.o.). Moreover, there is disagreement about the semantics of the plural marking in cases like (1b); Tsoulas (2006) claims that it is expletive, without any semantic contribution, while Alexiadou (2011) argues that the meaning of plural in these cases is ‘a great amount of the substance denoted by the mass noun’.

The purpose of this talk is to answer the following two questions: a) what is the meaning of the plural morpheme in cases like (1b) in Greek, and b) how can a formal theory for the distinction between count and mass nouns account for the general tendency of mass nouns to be incompatible with plural morphology, while at the same time accounting for the plural mass nouns in Greek? Regarding the first question, I disagree with both Tsoulas (2006) and Alexiadou (2011), and show that the meaning of plural marking in Greek mass nouns is that of ‘the substance denoted by the mass noun is spread over a surface in a disorderly way’. I formally represent this meaning by positing a distributivity operator. As for the second question, I adopt Chierchia’s (1998) assumption that mass nouns are inherently plural and show how such an assumption accounts for the generalization that mass nouns are incompatible with plural morphology in number-marking languages, without ruling out the Greek cases.

The meaning of plural morphology on mass nouns: Based on minimal pairs between singular and plural mass nouns like the one in (2), I argue that, informally, the meaning of the plural morpheme when attached to mass nouns in Greek is that of ‘spread over a surface in a disorderly way’.

(2) a. I katsarola exi rizi.
    the.NOM pan.NOM.SG has.3SG rice.ACC.SG
    ‘The pan has rice.’

b. I katsarola exi rizia.
    the.NOM pan.NOM.SG has.3SG rice.ACC.PL
    ‘The pan has rice all over its surface.’

The salient reading for (2a) is that the pan contains rice in compact form (for example, cooked rice waiting to be served). However, in (2b) the salient reading is that there are grains of rice scattered on the pan’s surface (for example, someone dropped rice by mistake or rice has been consumed and there are remaining grains on the pan’s surface). Moreover, in a scenario where someone has put rice in perfect, equal circles on the surface of the pan, the utterance in (2b) is no longer felicitous – the substance denoted by the mass noun has to be scattered in a disorderly way.

Formally, I argue that the plural morpheme in these cases is associated with a distributivity operator, along the lines of Balusu’s (2006) operator for Telugu. The operator is a universal quantifier, with the substance denoted by the noun being the distributive share (substance that is being distributed) and a region of space being the sorting key (what is being distributed over). Assuming $s$ is a region of space (either explicitly denoted by the sentence or otherwise implicitly provided by the context), and $\pi(s)$ is a partition of this region of space (a way of dividing the region into different cells-chunks of space), then the lexical entry for the distributivity operator is the one in (3):
Mass nouns and plural morphology: If we adopt Link’s (1983) * operator for the meaning of the plural morpheme in number-marking languages, then when the plural morpheme is attached to a count noun, a sum of pluralities is obtained. By assuming that mass nouns are inherently plural (i.e. they come with the * operator meaning built in), as Chierchia (1998) argues, we can conclude that by attaching a plural morpheme to a mass noun, the * operator is applied twice. However, applying the * operator twice has the same result as applying it once, and is therefore redundant. This is why plural morphology is, generally, incompatible with mass nouns in number-marking languages. This generalization though relies on the crucial assumption that the meaning of the plural morpheme in these languages is always associated with that of the * operator. However, it is not impossible for one morpheme in a language to be associated with more than one meanings. If we allow for the plural morpheme to have additional meanings, other than that of the * operator, then it should not be impossible for mass nouns to appear with plural morphology in the languages that have those additional meanings. This is the case for Greek: plural morphology can have the meaning of Link’s (1983) * operator, but it can also have the meaning of the distributivity operator defined in (3). When the meaning is the latter, plural morphology appears on the mass noun.

Alexiadou (2011) provides independent syntactic evidence that the plural morpheme in Greek mass nouns is not merged as the head of a functional projection NumP (the projection usually assumed to host the plural morpheme in number-marking languages), but is rather merged directly with the root, as shown in (4). The ‘regular’ count noun plural morpheme is still merged as the head of NumP in Greek.