

Countability and Linguistic Categories

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The question when something is has unity and counts as one or a single thing is as much a metaphysical question as a linguistic one: whether something has unity or is a single thing should be the basis for the applicability of predicates of number and of counting. The aim of the paper is to take a closer look at how natural language contributes to the question of unity or countability. A well known fact is that many languages display a mass-count distinction among nouns, and that that distinction goes along with the (in)applicability of number predicates and count quantifiers. Other languages may fail to display a mass-count distinction and often mark countability through the use of classifiers (Chinese).

There are two main approaches to countability (or having unity) in linguistics. The first makes use of a notion of atomicity relative to a noun extension (the tradition of Link and subsequent work). The other view is closer to most work in metaphysics (the Aristotelian tradition) and has been pursued by myself and recently Grimm and Wagiël. This view takes unity to be based on unity-constitutive conditions, such as being maximally connected or having a form or structure. On that view, unity-constituting conditions should be part of the lexical content of count nouns or classifiers. There is a third view, though, which has been pursued by linguists such as Borer and Rothstein. This is a grammar-based view of unity, which, roughly, ties unity to the use of a count noun or classifier, rather than deriving it from the conceptual content of expressions or cognitive representation or reality (let alone the real structure of things). One chief motivation for that view is the existence of object mass nouns such as *furniture* and *police force* as well as the arbitrariness of the choice of mass or count for things like pasta (*pâtes* (plural) in French) or *vegetables* (*Gemuese* (mass) in German).

One issue that has not been systematically looked at and that is highly relevant when evaluating the adequacy of the three approaches is how entities classify with respect to countability when they are denoted by categories that do not display a mass-count distinction. In English and related languages, these are verbs (with respect to the implicit Davidsonian event argument position), clauses (with respect to the content bearer they are meant to describe), adjectives (with respect to the tropes or properties they express). This paper will show in detail that at least in English and related languages such categories display a classifier system, rather than dividing into mass and count based on conceptual content or the nature of the things denoted. While some of the generalizations have been noted in my book *Parts and Wholes in*

Semantics, this paper will elaborate the empirical details significantly and discuss in depth their importance for the general issue of countability. It will show the limits Borer's and Rothstein's grammar-based accounts of countability and proposes two alternative ways of making sense of the grammar-based view.

One observation is that count quantifiers cannot act as event quantifiers without the addition of *times*, which acts as a classifier with events (Moltmann 1997, Doetjes 1997, Landman 2006):

(1) a. John jumped too much / * too many / too many times.

b. John slept / worked too little / * too few / too few times.

A new observation is that verbs select only complex quantifiers with the light noun *amount* or *deal* and not the light noun *number* or *couple* (in Kayne's 2005 sense of a light noun):

(2) John worked a great amount / deal / * number / *couple.

Another new observation is that ordinal numerals cannot act as adverbials ranking the described event in a list of events of the same type without the addition of *time(s)*:

(3) a. ??? Mary stumbled third(ly).

b. Mary stumbled a third time.

In addition to countability ensured by the classifier *times*, there are lexical specifications of countability, such as frequency expressions and *beides* 'both' (singular) in German, both of which are applicable to mass nouns as well as verbs, under suitable conditions.

The paper will discuss two options of how to make sense of grammar-based countability semantically. One of them, pursued in Moltmann (2021), is based on a particular, plenitudinous ontological view: for any entity that is a single entity there is also one minimally different from it by not being a single entity (but what one would refer to with a non-count expression). In that ontology, what is described as 'the loaf of bread' and 'the (same) bread' would be different entities, as would be 'the portion of rice' and 'the (same) rice', and an event described by a verb and an event described *time* + verb. Using a count noun, classifier, or lexical item conveying unity means selecting a unified whole, rather than its non-single correlate.

A less ontologically involving option is to make a particular use of situations that keep exactly track of the information about an entity, particular, regarding whether an entity has the feature U of being a single thing. The use of DPs will then be relativized to a reference situation type representing a referent either as having U or not, depending on whether the DP involves a classifier, a singular count noun or specific lexical expressions conveying countability. On that view, roughly, (singular) *time* denotes a (partial) unit-introducing function, mapping a pair of an event *e* and a situation type *S*, to a pair $\langle e, S' \rangle$ as follows:

(28) $[time](e, S) = \langle e, S' \rangle$, where $S' = \{s' \mid \exists s \in S, e < s' \ \& \ s' \models U(e)\}$, if *e* is bounded,

maximally continuous or connected to an occasion in the situations in S.

Here $<$ is a part-of relation and $|=$ is the relation of exact truthmaking of Fine (2017), which captures the relation of a situation representing exactly the content of a sentence.

The paper will argue that the phenomenon of pluractionality is compatible with the grammar based view, since it either involves a syntactic mass-count distinction among verbs or else a form of quantity marking within a mass domain as has been suggested by Doetjes (2008).

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