

TITLE: Mass nouns, count nouns and non-count nouns: Philosophical aspects

AUTHOR: Henry Laycock

AFFILIATION: Department of Philosophy, Queen's University, Kingston Canada K7L 3N6

EMAIL ADDRESS: Laycockh@post.queensu.ca

COMMISSIONED WORDLENGTH: 2000 words but flexible

DATE OF THIS DRAFT: 31st May 2004

100 WORDABSTRACT:

Whereas linguists often distinguish **count** and **non-count** nouns, philosophers more commonly distinguish count nouns and **mass nouns** — a dichotomy often thought to have ontological significance. Count nouns are supposedly distinguished semantically from mass nouns by some criterion of 'divided reference' ('criteria of distinctness', 'individuation', etc.). The criterion is unsatisfactory; it actually distinguishes **singular** count nouns from **non-count** nouns and **plural** count nouns alike. The count / non count dichotomy is not similarly flawed, and is purely semantic, having no ontological significance. Since count nouns are semantically **either** singular or plural, to be non-count is simply to be **neither** singular nor plural.

Mass nouns, count nouns and non-count nouns: Philosophical aspects

1. *The concept 'mass noun' and its supposed ontology.* Linguists often distinguish **count** and **non-count** nouns (**count+** and **count-** nouns; **CNs** and **NCNs**, for short). The distinction, though hardly simple, is both exhaustive and natural. In philosophical writings, by contrast, it is more usual to posit a dichotomy of count nouns and **mass nouns** — a dichotomy which is very commonly (and however vaguely) supposed to be of metaphysical or ontological significance. Since however this dichotomy is problematic in certain respects, I speak just of a **supposed** dichotomy of CNs and mass nouns, or equally, of a **putative** category of mass nouns (**putative MNs**, for short).

Perhaps the first use of an expression of the 'MN' genre occurs in Jespersen (1924), who writes of **mass words**, contrasting these with what he calls 'countables' or 'thing words'. And the thought that such words have a distinct metaphysical significance receives the following expression in his work:

There are a great many words which do not call up the idea of some definite thing with a certain shape or precise limits. I call these 'mass-words'; they may be either material, in which case they denote some substance in itself independent of form, such as ... **water, butter, gas, air**, etc., or else immaterial, such as ... **success, tact, commonsense**, and ... **satisfaction, admiration, refinement**, from verbs, or ... **restlessness, justice, safety, constancy**, from adjectives. (Jespersen, 1924, 198-201).

Subsequent writers typically differ from Jespersen in treating the domain of 'mass words' as one of **concrete** nouns exclusively; but insofar as these nouns are concerned, Jespersen's approach would seem to represent the norm. Thus if the question is raised, of what semantic element constitutes the putative MNs as a distinct category of concrete nouns, the answer tends to be that it is precisely some element of 'form-independence' — an absence of 'criteria of distinctness' (Hacker, 1980), or of a 'boundary-drawing', 'individuating', 'form-specifying' or 'reference-dividing' component in their meaning (Quine, 1960; Chappell, 1971).

In this regard, Quine nicely represents the common view. To learn a 'full-fledged general term' like 'apple' it is not enough, so he remarks, to learn 'how much of what goes on counts as apple': 'we must learn how much counts as **an** apple, and how much as another. Such terms possess built-in modes... of dividing their reference' (91). So-called 'mass terms', in contrast, do not thus divide their reference. Water, Quine writes, 'is scattered in discrete pools and glassfuls..... still it is just "pool", "glassful", and "object", not "water"... that divide their reference' (91). If such a noun is used to individuate a full-fledged substantial object, it needs an individuating adjunct. There is no learning 'how much counts as **some** water and how much counts as **some more**';

there is no such distinction to learn. This lack of a boundary-drawing element confers upon the putative MNs what Quine calls ‘the semantical property of referring cumulatively’ — as he puts it, ‘any sum of parts which are water is water’. Let us call this widely accepted criterion for distinguishing the putative MNs from CNs, in whichever of the various equivalent forms it is fleshed out, the ‘no built-in reference-division’ (**no-RD**) criterion.

To the question ‘What do the (putative) MNs **denote**?’ a characteristic answer is that, roughly and approximately, they denote the diverse varieties of **stuff**. There is a tendency to envisage some metaphysical distinction between the idea of ‘stuff’ (Jespersen’s water, butter, gas or air) and that of ‘things’, a range of discrete countables or (Aristotelian) substances — apples, rabbits, planets and the like. Furthermore these kinds of stuff, so it is said, have **instances**, commonly referred to as ‘parcels’, ‘portions’, ‘quantities’ or ‘masses’ of stuff. These instances are the denotata of such phrases as ‘the water in Canada’, ‘the butter on the table’, ‘the air in the room’, etc. This sub-theory plainly involves a semantic assumption to the effect that in referential contexts, the putative MNs are always **semantically singular**: ‘the water in Canada’ is treated as designating a single unit (a ‘parcel’, etc., of water). The difference between these ‘stuff-units’ and the familiar ‘things’ or (Aristotelian) substances is said to be precisely that the former objects are ‘form-indifferent’, or lack built-in substantial ‘criteria of distinctness’. (Substances are cookie-dough **plus** cookie cutter; these entities are **simply** cookie-dough). **Pace** Quine, stuff units, unlike substances, satisfy the principles of a **mereology** (Bunt, 1985).

2. *An illusory criterion.* Now the fundamental assumption which standardly underlies the supposed dichotomy of CNs and MNs is that **there is** a specific and more or less determinate category of concrete nouns which answers to the no-RD criterion — the putative category of MNs, to be precise. The reality, however, is that insofar as the use of ‘MN’ rests on this criterion, no such category exists.

There are, on the contrary, **two** semantically distinct categories of nouns which answer to this criterion — concrete NCNs and concrete plural CNs. The kinship of the putative MNs with concrete plural CNs is frequently remarked; it is less often noted that the no-RD criterion itself applies **identically** to the plural nouns. Thus, although we learn ‘how much counts as **an** apple, and how much as another’, there is no learning ‘how much counts as **some** apples, and how much as **more** apples’ — there is no such distinction to learn. While the singular ‘apple’ applies to just one apple at a time, ‘apples’ sets no limits on what count as apples. It is not the meaning content of the plural noun itself which sets whatever limits there may be; it is the physical contingencies of the context, including the contextual act of demonstration — ‘**these** apples’ — which demarcate the subject-matter of the discourse. ‘Apples’ incorporates no ‘criteria of distinctness’ or

boundaries for what it collectively applies to — it does not, qua plural, carve what it applies to ‘at the joints’. To play the role of designating full-fledged objects each of which **is apples**, ‘apples’ much like ‘water’ needs an individuating adjunct, ‘heap of ___’, ‘bag of ___’ and so forth. Again, if water may be characterised as ‘form-indifferent’, then apples too, collectively, may be so characterised. Much as the water in a glass might be spilled or dispersed and survive, so too might the apples in a bag. And so far as ‘cumulative reference’ is concerned, while any sum of parts each of which is **an** apple will not be **another** apple, any sum of parts which are **apples** will simply be more **apples**. The appearance of a dichotomy between CNs and some putative class of MNs thus arises purely and simply because the chosen CNs are **singular** exclusively; plural nouns are nowhere in the picture. Once plural CNs are factored in, the dichotomy with CNs just disappears.

An advocate of a putative category of MNs might perhaps protest that it would be sufficient, to adequately define such a category, to decree that it not only satisfy the no-RD criterion but also exclude plural nouns — in short, that MNs be identified with concrete NCNs. However, if there is to be **any** sort of ‘metaphysically or ontologically significant contrast’ between the CNs and the putative MNs, it is clear that this will just not do. ‘Clothing’ and ‘footwear’ are NCNs, but the contrast between these nouns and ‘clothes’, ‘boots and shoes’, etc., has no metaphysical content, and is purely semantic. Again, it **is** I think true that the no-RD ‘criterion’ is a necessary condition of any more or less deep metaphysical contrast between what might be called ‘object-involving concepts’ and ‘non-object-involving concepts’ — between, say, ‘rubble’, ‘sand’ and ‘snow’, on the one hand, and ‘mashed potato’, ‘wine’ and ‘water’ on the other. ‘Rubble’, ‘sand’ and ‘snow’ are semantically particulate — it’s part of their meaning that what these words denote is composed of discrete grains, flakes, bits and pieces — whereas no such point applies to ‘mashed potato’, ‘wine’ or ‘water’. But this, on any reckoning, is a contrast **within** the category of ‘stuff’, and does not exemplify a contrast between ‘stuff’ and ‘things’.

It is not therefore as if the no-RD criterion is merely **insufficient** for isolating the putative MNs — in need of supplementation by further criteria in order to achieve its goal. Rather, the supposed criterion goes up in smoke; there is **nothing** which remains of the putative category of MNs. If we seek to define some category of nouns which contrasts metaphysically with CNs, that is surely possible, but it cannot be on the basis of the **no-RD** criterion; the space for such a category **does not exist**. The point, in short, is not that there are no interesting metaphysical differences between concrete CNs and words like ‘cotton’, ‘wine’ and ‘water’; for there most surely are. The point is rather that **these** differences are entirely unrelated to the no-RD criterion (which applies not just to words like ‘water’, but also both to ‘clothing’ and to ‘clothes’) and are not determined by the supposed dichotomy of CNs and MNs. The RD-criterion is not what does the

trick because it *cannot* do; but no *other* criterion is generally recognised as being a constituent of the supposed CN / MN dichotomy. It is not in the slightest surprising, then, that when we look at those words which are regarded as falling within the ‘MN’ domain — and which, since they are not CNs, must at least be NCNs — it is evident that they vary considerably in theoretical significance from one author to another. A kind of taxonomic anarchy prevails. There is, then, no dichotomy of CNs and MNs, and the putative category of MNs is better off abandoned.

3. *The non-metaphysical alternative.* We are left, then, with the contrast between concrete CNs and NCNs, a contrast which, to repeat, is in no sense **equivalent** to the supposed dichotomy of CNs and MNs, since the no-RD criterion is also satisfied by CNs in the plural. Now in and of itself, this contrast is obviously just **semantic**: the contrast between, e.g., ‘clothes’ and ‘clothing’ has no ontological significance whatsoever. Indeed, even the distinction between ‘stuff’ and ‘things’ ---- which is at a high or formal level one of NCN and CN — is just semantic. Idiomatically speaking, ‘stuff’ itself (e.g. ‘the stuff in the basement’) can just denote a pile of things (old pots, chairs, etc. etc.), and the question must be raised as to how the class of so-called mass nouns is to be defined. For instance, does the class include such words as ‘furniture’, ‘baggage’, ‘footwear’ and ‘clothing’?. These words are semantically ‘atomic’ — there are standardly **units** of baggage, clothing, etc. (individual bags, pieces of clothing, etc.) not divisible into smaller units of baggage, clothing, etc. It is of these words that Quine observes: ‘The contrast lies in the terms and not in the stuff they name... “shoe”... and “footwear” range over exactly the same scattered stuff’ (1960, 91). In short, the contrast here is ‘merely’ semantical, not ontological.

Most fundamentally, what the semantic contrasts between CNs and NCNs embody are distinct notions of **amount** or **quantity**. CNs embody one particular mode for the determination and specification of amount or quantity, namely, that of **counting** through the use of natural number-related words — ‘one horse’, ‘so many things’, ‘too few clothes’, ‘a dozen eggs’, ‘a single professor’, etc. NCNs, by contrast, involve a form of what is naturally called **measurement** — so much cotton, so little water, five tons of clothing, etc.

Intuitively, counting may be described as the determination of discrete or discontinuous quantity and measuring the determination of continuous quantity. Of the two, discrete quantity seems privileged: there is exactly one non-relative way of determining the quantity of, say, eggs in a carton, which is precisely to count them. But there is no such unique way of determining, say, the quantity of cotton in a warehouse; this might be done, e.g., by volume, or by weight, or indeed by counting the number of bales; and these different measures cannot be expected to be correlated in any uniquely determinate way.

The contrast between continuous and discrete quantity is non-ontological; it is not a matter of whether something consists of discrete ‘bits’ (visible or otherwise) or not. We count planets, eggs or horses to determine their number; we may weigh sand, snow or clothing to determine its amount; and what seems crucial to ‘continuous quantity’ is that it is continuity in measurements of amount. That is, though sand, snow, and clothing all consist, in different ways, of ‘bits’ or ‘pieces’ of something, **any** real number can in principle be assigned to the measure of an amount of them. The concept of weight is such that it is intelligible to assign a weight of n kilos (where ‘ n ’ represents an integer), or $n \times \Pi$ kilos, to an amount of snow (sand, clothing, etc.). Of course, in such cases, we may be able to deal with the stuff by counting bits, and there’s nothing wrong with that; but it is not the only sort of determination of quantity one might want, nor need it be thought of as fundamental.

The concept of measurement, unlike that of counting, is such that it does not require that what is measured consist of discrete bits; in this sense, there is space for metaphysically significant distinctions within the idea of continuous quantity, hence within the contrast of continuous with discrete. It is part of the **meaning** of a NCN such as ‘furniture’ or ‘clothing’ that like a typical CN, it denotes or ranges over discrete ‘pieces’, things which could be characterised as ‘units’, ‘elements’ or ‘atoms’ of what the NCN denotes; but this is not the case with an NCN such as ‘wine’ or ‘water’. To say that there is furniture in some region is to say that there are objects characterisable as ‘pieces’, ‘items’, ‘units’ or (even) ‘elements’ of furniture in that region; to say that there is wine in some region is to say no such thing. While the concept of furniture is such that talk of furniture may at least sometimes be meaningfully re-cast as talk of physical units of furniture, the concept of wine is not such that talk of wine may be meaningfully recast as talk of physical units of wine.

4. *Semantics of non-count nouns*. It has been suggested that what underlies the kinship of plural CNs and NCNs is the fact that they are both semantically **non-singular** (Laycock, 1979). On such a view, what the no-RD criterion actually corresponds to is the semantic attribute of non-singularity. The kinship of NCNs and plural CNs is noted, among others, by Schein (1994). Schein however argues that any formalisation must involve ‘reduction to singular predication via a Davidsonian logical form’. Laycock (1998) urges on the contrary that since CNs, or their occurrences, are semantically either singular or plural, to be **non-count** is simply to be **neither** singular nor plural. The proposal is that NCNs are to be classed as semantically non-singular, simply in virtue of being non-count. And given this point, quantification involving such nouns must also be semantically non-singular. The non-singularity of NCNs is thus reflected in their non-acceptance of singular quantifiers — by the fact that we may speak (as with plural nouns) of ‘**all** water’, ‘**some** water’ and ‘**more** water’, but not in the singular of ‘**a** water’, ‘**each** water’ or ‘**one** water’. ‘Any’, ‘all’ and ‘some’ interact with NCNs much

as with essentially plural nouns — ‘All **n** **V** made of polyester’ and ‘The **n** in the warehouse **V** made of polyester’ are related in essentially the same way, whether ‘**n**’ is replaced by ‘clothes’ and ‘**V**’ by ‘are’, or ‘**n**’ is replaced by ‘clothing’ and ‘**V**’ by ‘is’. The relationships between the semantics of CNs and NCNs may then be represented in the following tableau (Laycock, 1998):

	1. Singular (‘one’)	2. Non-singular (‘not-one’)
3. Plural (‘many’)		‘things’ ‘apples’ ‘clothes’
4. Non-plural (‘not-many’)	‘thing’ ‘apple’, ‘piece of clothing’	‘stuff’ ‘water’ ‘clothing’

The inclusion of a contrast between ‘clothes’ and ‘clothing’, alongside that between ‘apples’ and ‘water’, serves to emphasize the fact that the singular / non-singular contrasts in general (and not simply the singular / plural contrasts) are first and foremost **semantic** as opposed to ontic contrasts (it being assumed that the ‘clothes’ / ‘clothing’ contrast itself is purely a semantic one).

5. *Semantics of non-count reference.* If, then, the non-singularity of NCNs as such may be relied on, the non-singularity of non-count reference plainly follows. In short, the standard assumption that denoting phrases containing NCNs are semantically singular, designating individual ‘parcels’ or ‘quantities’, must be incorrect. And difficulties with this singularity assumption have in fact been noted, especially in relation to Russell’s theory of (singular) descriptions, which maintains that **the** ‘in the singular’ involves **uniqueness**.

In effect, Russell’s plausible thought is that if, in a given context, an expression such as ‘the sheep’ is to denote a **single** sheep, then the contained general term ‘sheep’ must, in that context, have **unique** application; there can only be one salient sheep. And it is clear at least that where ‘the molasses’ does denote, the contained general term ‘molasses’ cannot possibly have unique application; whatever is **some of** some molasses is **also** molasses, and ‘the molasses’ does not denote uniquely. Though he is unable to envisage an alternative, Montague (1973) notices the paradoxical character of the singularity assumption, writing that

I would take **the** in **the gold in Smith’s ring** as the ordinary singular definite article, so that **the** @ has a denotation if and only if @ denotes a unit set, and in that case **the** @ denotes the only element in that set. But is there not a conflict here? It would seem that there are many portions of gold in Smith’s ring... Yet for **the gold in Smith’s ring** to denote, it is necessary for **gold in Smith’s ring** to denote a unit set...

Laycock (1979, 101) urges that if ‘the water in that glass’ were equivalent to ‘the quantity of water in that glass’, then what he calls ‘the logic of the (singular) definite article’ would require that there be only **one** quantity of water in the glass — in other words, that the quantity-concept is incoherent. Sharvy (1980) notes simply that ‘The Russellian analysis fails when the contained predicate is mass’ (607). And Chellas (1979) remarks that such considerations ‘call into question the very meaningfulness of quantification and identity in connection with mass terms’ (230). The less extreme conclusion would rather be that

The water in that glass contains impurities
is related to

All water contains impurities
much as

The clothes in this box are made of polyester

is related to

All clothes are made of polyester.

Both, that is, enter only into inferences which are essentially non-singular.

Bibliography

Note: This bibliography aims to document only some of the most seminal, influential or widely cited works on the topic.

Bunt, H. *Mass Terms and Model-theoretic Semantics* (Cambridge: Cambridge University Press, 1985).

Cartwright, H. 'Quantities', *The Philosophical Review* 79 (1970), 25-42.

Chappell, V. C. 'Stuff and Things', *Proceedings of the Aristotelian Society* 71 (1971), 61-76.

Chellas, B. F., 'Quantity and Quantification', in *Mass Terms, some Philosophical Problems*.

Hacker, P. 'Substance: the Constitution of Reality', in P. French, T. Uehling, and H. Wettstein (eds.), *Midwest Studies in Philosophy* 4 (Mineapolis, Minn.: University of Minnesota Press, 1979), 239-261.

Jespersen, O. *The Philosophy of Grammar* (London: Allen and Unwin, 1924), 'Mass-Words', 198-201.

Koslicki, K. 'The Semantics of Mass Predicates', *Nous* 33 (1999), 46-91.

Laycock, H. 'Theories of Matter', *Synthese* 31 (1975), 411-442. Repr. with revisions in *Mass Terms: some Philosophical Problems*.

___ 'Words without objects', *Principia*, vol. 2 no. 2 (1998), 147-182.

'Montague, R. 'The Proper Treatment of Mass Terms in English', repr. in *Mass Terms: some Philosophical Problems* (q.v.); originally published as 'Response to Moravcsik' in K. J. J. Hintikka, J. M. E. Moravcsik, and P. Suppes (eds.), *Approaches to Natural Language* (Dordrecht: Reidel, 1973).

Parsons, T. 'An Analysis of Mass Terms and Amount Terms', in *Mass Terms: Some*

Philosophical Problems, 138.

Pelletier, F. J. (ed.). *Mass Terms, some Philosophical Problems* (Dordrecht: Reidel, 1979).

Pelletier, F. J. and Schubert, L. K., 'Mass Expressions', in *Handbook of Philosophical Logic*, vol. 4 (Dordrecht: Reidel, 1989, 327-407).

Quine, W.V. *Word and Object* (Cambridge, Mass.: MIT, 1960).

Schein, B. *Plurals and Events* (Cambridge, Mass.: MIT, 1994).

'Sharvy, R. 'A More General Theory of Definite Descriptions', *The Philosophical Review* 89 (1980), 607-624.

Strawson, P. 'Particular and General', *Proceedings of the Aristotelian Society* 54 (1953-54).

Zimmerman, D. W. 'Theories of Masses and Problems of Constitution', *The Philosophical Review* 104 (1995), 53-110.

KEYWORDS: Count noun, non-count noun, plural noun, singular noun, mass noun, individuation, semantics, logic, metaphysics, ontology, mereology, stuff, matter, things, objects, substance, parcels, quantities, quantification, denoting, counting, measuring, discrete, continuous.

This document was created with Win2PDF available at <http://www.daneprairie.com>.
The unregistered version of Win2PDF is for evaluation or non-commercial use only.