ARGUMENT
Vol. 4 (1/2014)
pp. 103–122

Needing the other: the anatomy of the Mass Noun Thesis

Lajos BRONS*

ABSTRACT

Othering is the construction and identification of the self or in-group and the other or out-group in mutual, unequal opposition by attributing relative inferiority and/or radical alienness to the other/out-group. Othering can be "crude" or "sophisticated", the defining difference being that in the latter case othering depends on the interpretation of the other/out-group in terms that are applicable only to the self/in-group but that are unconsciously assumed to be universal. The Mass Noun Thesis, the idea that all nouns in certain languages are grammatically and folk-ontologically similar to mass nouns in English, is an example of sophisticated othering. According to this Thesis, (a) count nouns refer to discrete objects and mass nouns to stuff; (b) the other's language has only mass nouns and thus no count nouns; and therefore, (c) the other's folk-ontology is an ontology of mass stuffs only. There is much evidence, however, that folk-ontology is independent from language. This paper argues that the Mass Noun Thesis is a case of sophisticated othering rooted in a conflation of grammatical and ontological conceptions of mass and count nouns that is applicable to the language of the interpreter/self but not to the languages of the relevant others, and that othering in this case is driven by a need to create some radically alien other to support a scientific or philosophical theory.

KEYWORDS

othering; interpretation; philosophy of linguistics; philosophy of anthropology; folk-ontology; numeral classifiers; mass nouns

* Researcher at the Department of Philosophy, Nihon University, Tokyo, Japan, and adjunct professor of philosophy at Lakeland College, Japan Campus, Tokyo, Japan. E-mail: mail@lajosbrons.net.

Published online: 27.10.2014

1. INTRODUCTION

While we supposedly have direct access to our own minds, our understanding of others is based on considerably less reliable sources. Whether in our daily lives or in scientific contexts, interpreting others is a precarious undertaking with ample opportunity for failure. Among the failures of interpretation, "othering" is one of the most malignant: it is not just a misinterpretation of the other, but a self-serving stigmatization of that other through misinterpretation. In its crudest form, othering is the attribution of some undesirable characteristic to the other or out-group leading to the usually implicit conclusion that that other/out-group is (in some sense) inferior and/or radically alien. Othering thus creates a boundary between the in-group and the other/out-group, "justifying" exclusion, discrimination and/or subjection. The history of Western attitudes towards other peoples is littered with examples of othering, the Orientalist myths of the mystical and/or less rational East being one of the better known examples.

The humanities and social sciences occupy themselves with the interpretation of the past and present actions and writings of others, and there is little reason to assume that these fields are immune from the kinds of errors we make in our ordinary, daily interpretation of others. Nevertheless, othering is generally treated in these fields (if at all) as something other people do, not as something scientists might do. (MacQuarrie, 2010, is a notable exception.) However, Orientalism was (and is) at least as much a product of the early humanities and social sciences as of popular imagination (Said, 1978), and ethnography in particular has a troublesome history of drawing boundaries between lesser others/out-groups and superior selves/in-groups (*e.g.*, Vidich & Lyman, 1994). Furthermore, othering in the social sciences and humanities is not just a bad phase in the history of science that we have now passed — it remains a threat. Even if the crudest forms of othering such as the Orientalist myths and similar sexist myths about supposedly less rational women have now become less common (or less acceptable at least), there are more sophisticated forms of othering that are less easily exposed and disposed off. In this paper, I will argue that the Mass Noun Thesis, the idea that all nouns in certain languages are grammatically and folk-ontologically similar to mass nouns in English, is a contemporary example of such "sophisticated othering".

Sections 2 and 3 of this paper will introduce the logical forms of othering and the Mass Noun Thesis respectively. Sections 4 to 6 will analyse the argument, evidence, and motivation for the Mass Noun Thesis. The main claims of this paper are that folk-ontology is independent from language (sections 4 and 5), that the Mass Noun Thesis as a case of sophisticated othering is rooted in a conflation of grammatical and ontological conceptions of mass and count nouns that is applicable to the language of the interpreting self but not to the

languages of the relevant others (section 5), and that othering in this case is driven by a need to create some radically alien other to support a scientific or philosophical theory (section 6).

2. CRUDE AND SOPHISTICATED OTHERING

Othering can be loosely defined as the simultaneous construction of the self or in-group and the other or out-group in mutual and unequal opposition through identification of some desirable characteristic that the self/in-group has and the other/out-group lacks and/or some undesirable characteristic that the other/out-group has and the self/in-group lacks. Othering, in this way, sets up a superior self/in-group in contrast to an inferior other/out-group, and/or constructs the other/out-group as radically alien.

In the paper 'Othering, an analysis' (Brons, 2014b), I distinguished two kinds of othering based on their underlying logical structure: "crude" and "sophisticated" othering.[1] The formal structure of crude othering is rather simple (hence the qualification "crude"). There is an assumption, which is usually hidden, that it is better to have some property F than to not have that property F; an explicit assumption that the self/in-group has this property and the other/out-group does not;[2] and an implicit, enthymematic conclusion that, therefore, the other/out-group is inferior and/or radically alien. The 'and/or' in the conclusion suggests a complication, but that complication is merely apparent. The two possible conclusions are (i) that the self/in-group is superior and the other/out-group is inferior, or (ii) that the other/out-group is radically alien. These may seem to be monadic properties, but that is not the case. Superiority and inferiority are diadic relations: to be superior means to be superior to something, and the same for inferiority. And similarly, to be radically alien means to be radically alien to/for something (non-alien/familiar). Formally, the difference between the two possible conclusions is irrelevant: both can be expressed as the diadic relation $O(s,o)$, which can be read as '*s* is superior to *o* and *o* is inferior to *s*' or as '*o* is radically alien to/for *s*'. (We'll return to the two kinds of conclusions of othering in section 6.) With this in mind, and using *s* and *o* to represent self/in-group and other/out-group, respectively, the formal structure of crude othering is the following:

---

[1] The term "sophisticated" has both both positive and negative connotations. Among the latter are associations with sophistry. The negative connotations of the term (including the link to sophistry) are more appropriate here than the positive ones.

[2] Assuming bivalence, $Fx \wedge \neg Fy$ can stand for both *x* has a certain property and *y* hasn't, and *y* has a certain property and *x* hasn't. In the latter case F means not having that property. Hence, $Fx \wedge \neg Fy$ is sufficient to formalise the criterion of othering that there is "some characteristic that the self/in-group has and the other/out-group lacks and/or some characteristic that the other/out-group has and the self/in-group lacks".

1.	$\forall x,y\,[(Fx \wedge \neg Fy) \rightarrow O(x,y)]$	assumption (usually hidden)
2.	$Fs \wedge \neg Fo$	explicit assumption
3.	$O(s,o)$	1, 2 (usually implicit)

Sophisticated othering, on the other hand, is considerably more complicated. All three propositions of the crude othering argument also occur at some point in the sophisticated othering argument, but there are a few more steps and some other complications. As an illustrative example, consider the case of the "Amoral Atheists". Among religious believers the misconception occurs that atheists are necessarily amoral.[3] The argument underlying this misconception appears to be something like the following: (a) moral beliefs are religious beliefs; (b) the other has no religious beliefs; therefore (c) the other has no moral beliefs. Premise (a), however, results from an invalid generalization of (a*) my/our moral beliefs are religious beliefs.

The example illustrates that in case of sophisticated othering an important part of the argument is not directly about the other/out-group, but about a specific kind of objects that are in a specific way related to the self/in-group and other/out-group. Formally, this can be represented by means of a single diadic relation $R(x,y)$ that, depending on context, means something like 'x is a belief in the belief system of y', thus simultaneously specifying the kind of object (belief) and its relation to some social group. The objects specified have further properties that are related to each other in a particular way. If these 'further properties' are represented as A and B, then the interpreter/self holds that $\forall x,y\,[R(x,y) \rightarrow (Ax \rightarrow Bx)]$ (*e.g.* 'all beliefs (in any belief system) that are A are also B'). The whole argument has the following formal structure:

1.	$\exists x\,[R(x,s) \wedge Ax]$	observation	
2.	$\forall x\,[R(x,s) \rightarrow (Ax \rightarrow Bx)]$	observation	(a*)
3.	$\forall x,y\,[R(x,y) \rightarrow (Ax \rightarrow Bx)]$	2, generalization (invalid!)	(a)
4.	$\forall x\,[Fx \leftrightarrow \exists y\,[R(y,x) \wedge Ay]]$	definition or assumption	
5.	Fs	4, 1	
6.	$\forall x,y\,[(Fx \wedge \neg Fy) \rightarrow O(x,y)]$	assumption	
7.	$\forall x\,[R(x,o) \rightarrow \neg Bx]$	observation	(b)
8.	$\forall x\,[R(x,o) \rightarrow \neg Ax]$	3, 7	(c)
9.	$\neg Fo$	4, 8	
10.	$O(s,o)$	6, 5 and 9	

[3] The misconception seems to be rather common, in fact, although its prevalence differs widely between countries and seems to be related to education as well as other factors. See, for example, Pew Research Center, 2014.

which can be interpreted as follows in the case of the Amoral Atheists:

1. There are moral beliefs in the self/in-group's belief system.
2. All moral beliefs in the self/in-group's belief system are religious beliefs.
3. All moral beliefs are religious beliefs.
4. Being moral means (or is defined as) having moral beliefs. (Or more formally: Someone is moral if and only if she has moral beliefs.)
5. The self/in-group is moral.
6. Being moral is superior to not being moral (*i.e.* to being amoral).
7. There are no religious beliefs in the other/out-group's belief system.
8. The other/out-group has no moral beliefs.
9. The other/out-group is not moral.
10. The self/in-group is superior to the other/out-group.

What crude and sophisticated othering have in common are their assumption $\forall x,y\ [(\mathrm{F}x \wedge \neg \mathrm{F}y) \rightarrow \mathrm{O}(x,y)]$ and their conclusion $\mathrm{O}(s,o)$. Without that conclusion there is no case of othering (and of course, without hat assumption there is no such conclusion). Othering is the attribution of relative inferiority and/or radical alienness to some other/out-group. What differs between the two variants of othering is just the argument leading to that conclusion. The difference in arguments, however, implies a difference in the ways of exposing and countering othering. Crude othering is based on a valid argument, and thus the full weight of the conclusion rests on the two premises. In sophisticated othering, on the other hand, there is an obvious fallacy, the invalid step from (2) to (3), but this becomes obvious only after analysis of the argument underlying a particular case of suspected othering. Furthermore, that (3) is not validly inferred does not imply that it is false (that assumption would be a fallacy fallacy) — its falsehood needs to be shown separately. And it may be the case that one or more premises are dubious or false as well. (In case of the Amoral Atheists, the latter does not seem to be the case, however.)

3. THE MASS NOUN THESIS

The "Mass Noun Thesis" is the name given to a number of theories according to which all nouns in certain languages are grammatically and folk-ontologically similar to mass nouns in English (or another dialect of Standard Average European). Willard Van Orman Quine (1968) made a suggestion of this nature about Japanese in his argument about the indeterminacy of translation; Chad Hansen (1983) developed a famous version of the Thesis for classical Chinese,

and John Lucy (1992b) for Yucatec Maya; but the Mass Noun Thesis has also been applied to modern Chinese, to Korean, and to some other Middle and South-American languages besides Maya. What these languages have in common is a lack of plurals and articles, and a numeral classifier system,[4] resulting in the appearance that all nouns in those languages are similar to English mass nouns (and/or to collective nouns such as "cattle" and "luggage", but the distinction between mass nouns and collective nouns is rarely made in the literature on the Mass Noun Thesis).[5]

Arguments in favor of the Mass Noun Thesis typically depend on the identification of numeral classifiers with individuators (sometimes called quantifiers or mensural classifiers) such as "cup" in "a cup of water". Most languages have some form of noun classification. European and African languages typically have genders or similar noun classes, but many other languages use classifiers, morphemes (usually affixes) that specify the class to which the head noun in the noun phrase belongs. The line between noun classes and classifiers is thin, however, and between different kinds of classifier systems as well, and one form of noun classification can develop into another (Aikhenvald, 2000).

Noun classifiers are affixed either to the nouns themselves, in which case they are somewhat similar to gender-specific (or class-specific) noun endings occurring in some languages (*e.g.* Latin ~a and ~us), or to other sentence elements satisfying some kind of requirement of grammatical agreement of that sentence element with the class(-ification) of the noun to which it refers. Such agreeing classifiers can be affixed to either numerals, possessives, verbs, locatives, or deictics, but the first — that is, numeral classifiers — are the most common. For example, in Japanese, 'five cows', the example used by Quine, is either *ushi go-tou* 牛五頭 or *go-tou-no ushi* 五頭の牛. *Ushi* 牛 means cow, *go* 五 is the number 5, *tou* 頭 is the numeral classifier for large non-human mammals, and *no* の is a relational suffix or particle changing the preceding noun phrase into a subordinate phrase modifying the following noun (often similar to a genitive, but the particle has many other uses).

As a word rather than as a numeral classifier, 頭 means head, and like 頭, the Chinese characters used for most other numeral classifiers have independent meanings as well. Consequently, 牛五頭 could be alternatively transcribed as (a) 'cow five-NUM.CL' or as (b) 'cow five head'; and 五頭の牛 as (c) 'five-NUM.CL-MOD. cow', as (d) 'five head-MOD. cow', or as (e) 'five head's cow' (if の is read as a genitive). The transcriptions with 'head' (b, d and e) are very similar to English 'five heads of cattle', suggesting a mass noun interpretation of the noun 牛 (cow).

---

[4] In classical Chinese, numeral classifiers were not commonly used before the end of the Han era, however, and Yucatec Maya has optional plural marking.

[5] Mou (1999) is one of the very few exceptions.

In English and similar languages, there are two kinds of nouns: mass nouns and count nouns. The latter have articles and plurals, and can be counted directly; the former lack articles and plurals, and need individuators for counting. In numeral classifier languages all nouns are like Japanese 牛 (cow) in the example above. Hence, all nouns have the typical features of mass nouns in English. Therefore, so it is argued, they essentially are mass nouns. And because mass nouns denote stuffs rather than discrete objects, people speaking a language with only mass nouns must have a folk-ontology of masses or stuffs rather than objects; that is, they think in terms of stuffs or materials rather than in terms of things or objects (and stuffs only additionally). Lucy made such an argument, based on fieldwork, about Yucatec Maya; Hansen used a similar argument to explain Gongsun Long's (公孫龍) apparently paradoxical *Discourse on white horse* (白馬論); and Quine suggested this as a possible interpretation of the example phrase used above.

4. FORMAL STRUCTURE OF THE ARGUMENT FOR THE MASS NOUN THESIS

In summary, the argument underlying the Mass Noun Thesis is the following: (a) count nouns refer to discrete objects and mass nouns to stuffs; (b) the other's language has only mass nouns and thus no count nouns; therefore (c) the other's folk-ontology is an ontology of stuffs only (rather than of discrete objects and stuffs). This argument is identical in form to the example of the Amoral Atheists, and like that argument, it is accurately paraphrased in the ten steps formalised in section 2. By implication (as the type of argument is determined by form alone), the Mass Noun Thesis is another example of sophisticated othering.

In case of the Mass Noun Thesis, the predicate letters in the ten-step formalization have the following interpretations:

R(x,y) — x is a word in the language of y
Ax — x refers to discrete objects
Bx — x is a count noun
Fx — x has a folk-ontology of discrete objects; hereafter "object ontology"
O(x,y) — y is radically alien to/for x

Because it is assumed that all nouns are either count nouns or mass nouns, and that a folk-ontology is either an object ontology or an ontology of stuffs, the negations of Bx and Fx can be read alternatively as:

¬Bx — x is a mass noun
¬Fx — x has a folk-ontology of masses or stuffs; hereafter "mass stuff ontology"

The distinction between a mass stuff ontology and an object ontology can be stronger or weaker and symmetrical or asymmetrical, at least in principle. In the strongest version, someone with a mass stuff ontology perceives mass stuffs only. Because an object ontology is attributed to an interpreter/self or in-group that does discern mass stuffs in addition to discrete objects while symmetry would imply that someone with an object ontology perceives discrete objects only, such a strong version needs to be asymmetrical. Hence, an object ontology is a folk-ontology of discrete objects primarily and stuffs secondarily, but including both, while a mass stuff ontology is a folk-ontology of stuffs only. Weaker versions can be symmetrical, on the other hand. In the weakest version, the difference is merely a difference in default: someone with an object ontology by default perceives everything to consist of discrete objects, but can divert to a mass stuff interpretation in cases where an object interpretation is (more or less obviously) implausible (and the other way around for a mass stuff ontology). Anything weaker than this cannot reasonably be called an ontological difference. Various intermediary positions between these strongest and weakest poles are conceivable. The Mass Noun Thesis, however, is at or close to the stronger end of the spectrum. (See section 6 for an explanation for why this is the case.)

With these interpretations of the predicate letters, the formal argument (see section 2) can be read as:

1. There are words in the self/in-group's language that refer to discrete objects.
2. All words in the self/in-group's language that refer to discrete objects are count nouns.
3. All words that refer to discrete objects are count nouns. [From 2; invalid.]
4. Someone has an object ontology if and only if her language includes words that refer to discrete objects.
5. The self/in-group has an object ontology. [From 4 and 1.]
6. Not having an object ontology makes one radically alien.
7. The (language of the) other/out-group has (only mass nouns and therefore) no count nouns.
8. The other/out-group has no words that refer to discrete objects. [From 3 and 7.]
9. The other/out-group does not have an object ontology (and therefore has a mass stuff ontology). [From 4 and 8.]
10. The other/out-group is radically alien. [From 6, 5, and 9.]

Observations (1) and (2) seem unobjectionable, but whether (4) and (6) are plausible depends on the strength of the distinction between a mass stuff ontol-

ogy and an object ontology. In case of a weak version of that distinction, such as a mere difference in defaults, there is no reason why mass stuff ontologies would imply a lack of words that refer to discrete objects (that assumption only makes sense in case of a very strong version of the distinction), and therefore, (4) would be insufficient to define an object ontology. For weaker versions, (6) would be very implausible as well: a mere difference in defaults does not imply radical alienness. However, if we accept the very strong distinction between a mass stuff ontology and an object ontology assumed by the Mass Noun Thesis, then both (4) and (6) are plausible. Someone with such a radically different folk-ontology would be radically alien indeed.

If we let (6) pass, then the othering-constituting conclusion (10) depends on the conjunction of (5) and (9). Because (1) and (4) were granted, (5) is acceptable as well, but there is evidence against (9). If (9) is false, then that must mean that (8) is false, and that in turn means that (3) and/or (7) are false. After briefly considering the plausibility of the intermediate conclusion (9) in the remainder of this section, section 5 will discuss the understanding of mass nouns and count nouns that is partially represented by (3), and that determines form and content of observation (7) as well as the distinction between a mass stuff ontology and an object ontology. After exposing the flaws in the argument, the focus shifts to what motivates othering in section 6.

As mentioned in section 4, Lucy's and Hansen's versions of the Mass Noun Thesis were based on fieldwork about Yucatec Maya and an interpretation of Gongsun Long's *Discourse on white horse* respectively. Hansen's interpretation of the "White Horse Paradox" is controversial, however (*e.g.* Cheng, 2007), and Reiko Mazuka and Ronald S. Friedman (2000) argue convincingly that Lucy's findings of differences in classification of objects and stuffs by speakers of Yucatec Maya and English may be the result of differences in educational and cultural background rather than language, and could not replicate his findings for Japanese, which is grammatically similar to Yucatec Maya in the relevant respects. Furthermore, there have been many publications on the mass — count distinction and its folk-ontological effect for Japanese since the second half of the 1990s. Many of these studies focus on classification of samples as objects or stuffs by children with different native languages. Contradicting the Mass Noun Thesis, intermediate conclusion (9) in particular, findings suggest a universal ontological distinction between objects and stuffs (*e.g.* Imai & Gentner, 1997; Yoshida & Smith, 2003; Imai & Mazuka, 2006; Imai & Saalbach, 2010).

There is some evidence, however, that the structure of their language influences children's classification of ambiguous cases (*e.g.* Imai & Gentner, 1997). These tend to be more often classified as objects by speakers of English, and more often as stuffs by speakers of Japanese. This should not be interpreted as support for the weak version of the distinction between a mass stuff ontology

and an object ontology as a difference in defaults, however. A mass stuff default means perceiving things a mass stuff unless such a perception is implausible, but there is no empirical evidence for such defaults. Rather, unambiguously discrete objects are perceived as such, unambiguous mass stuffs are perceived as such, and only in ambiguous cases (in between) does language have some influence. Hence, there is no difference in folk-ontology, but merely a minor difference of perception of borderline cases (similar to, for example, different locations of the blue/green boundary for different people who make that colour distinction).

Furthermore, intermediate conclusion (9) seems to be a gross violation of the principle of charity, at least in Quine's own interpretation thereof, summarised at one point as "assertions [about the other] startlingly false on the face of them are likely to turn on hidden differences of language" (Quine, 1960: 59). (9) is not just startlingly false; it is startlingly absurd. It implies (given the Mass Noun Thesis's strong version of the object/mass ontology distinction) the conceptual priority of stuffs or masses to individual chunks or parts thereof. It implies that an infant, just because its parents speak a numeral classifier language, would learn a concept of mother-mass before learning to individuate its own mother as a part thereof. Considering the implausibility of this scenario, it does not come as a surprise that the empirical evidence shows that (9) is false, but this raises a number of questions — most obviously: Where exactly does the argument derail (if it ever was on track)? But also: Why did Quine and others propose and/or defend a version of the Mass Noun Thesis, despite its implausible and uncharitable attribution of a mass stuffs ontology to others? Answering these two questions is the aim of the following two sections.

5. MASS NOUNS, COUNT NOUNS, AND NUMERAL CLASSIFIERS

If the intermediate conclusion (9) that the other/out-group has a mass stuff ontology is false, then that implies (indirectly, see above) that either the generalised assumption (3) that all words that refer to discrete objects are count nouns, or observation (7) that the (language of the) other/out-group has only mass nouns and therefore no count nouns is false, or both.

The concise Oxford dictionary of linguistics (Matthews, 2007) defines mass nouns and count nouns as being uncountable and countable, respectively. Mass nouns are strictly speaking uncountable indeed, given that in individuator constructions like 'three cups of water', cups are counted and not water itself. As mentioned in section 3, observation (7) that the other's language has only mass nouns is based primarily on an identification of numeral classifiers with individuators such as "cup" in 'three cups of water' or "head" in 'five heads of cattle'. There are two reasons to reject this identification, however.

Firstly, English individuator constructions have the form:

[NUMERAL] [INDIVIDUATOR NOUN] of [MASS OR COLLECTIVE NOUN].

Hypothetically, this could be reordered into a more odd-sounding genitive construction:

[MASS OR COLLECTIVE NOUN]-GEN ('s) [NUMERAL] [INDIVIDUATOR NOUN],

which appears to be very similar to a numeral classifier construction like *go-tou-no ushi* 五頭の牛 ('five cows'; see section 3), but this appearance is false. A numeral classifier construction is not a genitive construction. Even if の would be read as a genitive in 五頭の牛, and 頭 as "head" rather than as numeral classifier, then the literal translation would be 'cow of five heads', and not 'five heads of cow/cattle'. More importantly, in the English phrase (either in the version with "of" or the genitive version) the individuator noun ("cup", "head", *etc.*) rather than the individuated mass or collective noun ("water", "cattle", *etc.*) is the head noun. In 'five heads of cattle', "five heads" becomes the grammatical focal point of the noun phrase and "of cattle" is mere modifier thereof, but in the numeral classifier construction it is the other way around: 五頭 (five, head) is mere adjective-like modification (a kind of number-neutral or plural predication, specifically), and 牛 (cow) remains the head noun. This is further demonstrated by the fact that the head noun takes the appropriate case suffix in a sentence. In the following example it is the noun 牛 that takes the object case suffix/particle *o* を, not 頭:

虎が牛を五頭食べた。
Tora-ga ushi-o go-tou tabe-ta.
tiger-SUBJECT cow-OBJECT five-NUM.CL eat-PAST.T
A/the/some tiger(s) ate five cows.

Secondly, the assumption that 頭 in 牛五頭 is an individuator noun like "head" in 'five heads of cattle' begs the question. An alternative — and more plausible — interpretation is that it is not a noun at all, but mere suffix, a suffix for class agreement of numerals with the quantified noun similar to inflection for gender of some numerals in Icelandic, Polish, or French.[6] Individuator nouns are independent lexical items with meanings of their own. In most cases numeral classifiers have no independent semantic value, however, even though they may be phonologically and/or graphically identical to words/characters that do have independent meaning. Furthermore, while the choice of individuator nouns is

[6] This implies, of course, that the same Chinese character has different grammatical functions in different contexts, but that is the case for very many characters.

open, usually the choice of numeral classifier is obligatory. Large non-human mammals have to be counted with *tou* 頭, cars and mechanical devices with *dai* 台 (as noun: platform, stand, *etc.*), long thin things with *hon* 本 (as noun: origin, book), flat things with *mai* 枚 (as noun originally stalk, shrub, trunk, but now only used as classifier), and so forth.[7]

Nouns do not necessarily have to be assigned to a single class, however. In gender systems class assignments are often rigid, but many French male and female versions of animal names can easily be argued to be the same lexical items with two different possible class (gender) assignments with corresponding articles and endings (the latter only for the female variants). And many Bantu languages allow for insults and word play by reassigning a noun to a class it does not normally belong to. In classifications with larger numbers of classes the same noun can belong to different classes, and the choice of numeral classifier depends on what aspect of the corresponding thing is contextually salient, or in case of ambiguity, on what aspect needs to be stressed. For example, *ika ip-piki* 烏賊一匹 is one living squid and *ika ip-pai* 烏賊一杯 is one squid as food because *hiki* 匹 is the numeral classifier of (most) small animals, and *hai* 杯 of cups of something (usually food or drink) and of a few foods that in certain conditions have a cup-like shape. And similarly, *tegami san-tsuu* 手紙三通 is 'three letters' and *tegami san-mai* 手紙三枚 is 'a three-page letter' because *tsuu* 通 is the numeral classifier of communications and *mai* 枚 of flat things such as sheets of paper. These examples also show that some numeral classifiers in some circumstances can be or are used as individuators (the first example for 'cups of', the second for 'sheets of'), perhaps adding to the confusion. In case of liquids, the aforementioned numeral classifier for long thin things *hon* 本 takes on the meaning of 'bottle', and thus *biiru juu-hon* ビール十本 is 'ten bottles of beer'. The limited flexibility of a numeral classifier system is sufficient for it to also function as a system to individuate in mass stuffs.[8] However, this occasional use

[7] These examples of numeral classifiers also illustrate that in many cases the literal meaning of the Chinese character is irrelevant to its use as a classifier, which is never the case for individuator nouns. The meaning of the word "bucket" in reference to a quantity of something is very closely related to its meaning in reference to an object: it is from the use of buckets as containers that "bucket" derives its use as a measuring/individuating device. This is not the case for 本, for example, which means book or origin when used a noun, and is additionally used to count long things. Those two uses are — at least in contemporary language use — completely unrelated.

[8] In such cases, numeral classifiers do not actually classify, however, which could be an argument for the claim that so called numeral classifier languages have both numeral classifiers and individuators, which happen to make use of the same grammar, but which are used for count nouns and mass nouns, respectively. This claim would attribute a count noun *vs.* mass noun distinction to Japanese, albeit not the exact same distinction as in English, and therefore, would slightly change the argument in this section of this paper by directly refuting (7), but would not alter its conclusions.

as a mass individuation device does not imply grammatical identity to another, superficially similar mass individuation device in another language.

If numeral classifiers are not individuators, does that mean that Japanese and similar languages (in this respect) have no mass nouns, and therefore, only count nouns? If count nouns are defined as being (directly) countable, then the answer to this question seems to be 'yes'. Mass nouns are uncountable — what is counted in an individuator construction is the individuator noun, which becomes the head noun in the noun phrase. Count nouns, on the other hand, can be counted directly, and adding a numeral, therefore, does not change the head noun in the noun phrase. The latter is also true for all nouns in Japanese: adding a numeral does not change the head noun. Unlike individuator nouns, numeral classifiers do not become head nouns (and thus do not take case affixes), and partially for that reason they are more plausibly interpreted as not being nouns at all, but as affixes of class agreement.

Substituting the thesis that the other's language has count nouns only for observation (7) that it has mass nouns only results in the hypothetical Count Noun Thesis, which — to my knowledge — has been held by no one. The short version of the thus revised argument (see section 4 for the Mass Noun version) would be the following: (a) count nouns refer to discrete objects and mass nouns to stuffs; (b) the other's language has only count nouns and thus no mass nouns; therefore (c) the other's folk-ontology is an ontology of discrete objects only (rather than of discrete objects and stuffs). An adherent to a folk-ontology lacking mass stuffs would, however, be committed to the belief that stuffs are inherently divided into discrete "chunks", but such a belief cannot be attributed to the others of the Mass Noun Thesis or its Count Noun variant. The fact that the choice of classifier, and therefore the size of chunks, is more or less free in case of stuffs means that there are no inherent discrete chunks. Therefore, the Count Noun Thesis is false, but it is false for the same reason as the Mass Noun Thesis.

Both the Count Noun Thesis and the Mass Noun Thesis attribute single-category folk-ontologies to the other: only discrete objects in case of the former; only mass stuffs in case of the latter. (This, of course, presupposes the strong distinction between object and mass stuff ontologies. See section 4.) Either attribution is false. Rather, the distinction between discrete objects and mass stuffs is most likely universal and independent of language (Imai & Gentner, 1997; see also section 4). But if that is the case, then there must be another error in the arguments for the two Theses. The most obvious candidate for error is the invalid generalization (3) that all words that refer to discrete objects are count nouns. Invalidity does not entail falsehood, however, and (3) could be interpreted as a definition rather than an empirical claim. If it is, then it would compete with the definition of count nouns a being countable; that is, there would effectively be two definitions of "count noun", one grammatical and one ontological. In that case, the argument would be based on a fallacy of equivocation as (3) is the

ontological definition and (7) depends on the definitions of count nouns and mass nouns as being countable and uncountable, and thus on the grammatical definition. In other words, different parts of the argument make use of different senses of "count noun".

Furthermore, this equivocation cannot be removed. Discarding either definition or combining them into a single definition ('count nouns refer to discrete objects and are countable') leads to elimination of either (3) or (7), in which case the argument never reaches its conclusions (9) and (10). The only apparent alternative is showing equivalence of the two definitions, but that is impossible. According to the ontological definition, a noun is a count noun if and only if there is some discrete object in extra-linguistic reality (regardless of how that is conceived) that that noun refers to (or denotes, *etc.*). According to the grammatical definition, a noun is a count noun if and only if there is a grammatical rule in the language it is part of specifying that it can be directly counted. The *definientia* of these two definitions are about completely different kinds of things. There is no sound argument that would make these two definitions equivalent. Even if they would be co-extensional, they would not be equivalent. However, they don't seem to be co-extensional even. Equivalence of the two *definientia* would entail that all and only nouns that refer to discrete objects are countable, which is contradicted by Japanese if the above analysis of numeral classifiers is right, but also by many Nilo-Saharan languages in which oil, sand, and water are countable (Dimmendaal, 2000).

Consequently, (3) cannot be reasonably interpreted as a definition, which means that it must be an empirical claim. The claim that all words that refer to discrete objects are count nouns — by definition of count nouns as countable — is then equivalent to: (3'') all nouns that refer to discrete objects are countable. (3') may very well be true, but isn't very helpful if it is not sufficiently clear what "countable" means. (3) is used to infer (8) that the other's language does not have words that refer to discrete objects from observation (7) or (7') that that there are no countable nouns in the other's language (from (7), by definition of count nouns as countable). Plausible interpretations of "countable" and its negation make (7') implausible, however, as is illustrated by the above analysis of numeral classifiers in Japanese.

Thus far, being uncountable, the defining feature of mass nouns, has been interpreted as meaning not being countable directly but requiring an individuator, but a possible alternative conception is lacking a plural. Many linguists belief that number marking, of which plural marking is an example, is related to numeral classifiers (and thus to individuators) such that a language either has a well-developed system of number marking or a numeral classifier system (*e.g.* Sanches & Slobin, 1973; Chierchia, 1998). However, *The Universals Archive* lists a number of exceptions to this supposed rule,[9] and even if there would

[9] Retrived from http://typo.uni-konstanz.de/archive/ Entry #533. See also #1349.

be no known exceptions today, there is no reason to assume that the less than 5% of present and historical human languages that we hypothetically have access to is a representative sample of all possible linguistic variation (Brons, 2014a). Furthermore, whether lacking plurals in itself can be the defining feature of mass nouns is doubtful. Would that imply that "sheep" is a mass noun? (This question may sound more facetious than it is intended, as will become clear in the following.)

Languages deal with number in a variety of ways. In some, such as Japanese, all nouns are number neutral (and perhaps, so is "sheep" in English); others mark different numbers by means of affixes, but such number marking can take many different forms. Singular/plural is the best known, but singular/dual/plural and singular/plural/collective also occur (in Sanskrit and Maasai, respectively, for example). More "exotic" than these are the number marking systems of Imonda and Udege. The former has an unmarked >2-plural and a marked singular=dual (Seiler, 1985). Hence, one and two are grouped together and contrasted to larger-than-two. Udege also has the common marked/unmarked contrast, but unmarked means that the number is specified and marked that it is unspecified. When a numeral or other quantifier is used or the number is obviously one, then the noun is unmarked; otherwise, that is, when the noun is not obviously singular and no numeral or other quantifier is used, the noun is marked (Nikolaeva & Tolskaya, 2001). Hence, neither Imonda nor Udege has singulars and plurals in a strict sense,[10] but their number marking systems do not suggest that all Imonda or Udege nouns are mass nouns either. The reason that (some) number neutral languages do suggest a mass noun interpretation, on the other hand, is not their lack of plurals, but their numeral classifiers. Lacking the latter, counting in those languages would be like counting "sheep", but it looks more like counting "cattle". That appearance — so I hope to have shown above — is deceptive, however; despite appearance to the contrary, it is more like counting "sheep" than like counting "cattle" (but like counting male and female sheep with gender-agreeing affixes on numerals similar to the inflection for gender of some numerals in Icelandic or Polish).

Regardless of whether (3) is a definition or an empirical claim, it is based on observation (2) that all words that refer to discrete objects in the interpreter/in-group's language are count nouns. This is typical of sophisticated othering (see section 2). Otherness is constructed through an interpretation of the other in terms derived from, and applicable to the interpreting self. The conclusions of the argument depend on a distinction of count nouns and mass nouns as typically found in the interpreter's language. Grammatical and ontological aspects of this distinction are conflated because they are inseparable in the interpreter's

[10] Irina Nikolaeva and Maria Tolskaya (2001) call the unmarked form 'singular' and the marked form 'plural', but that is reflective more of the conceptual dominance of the singular/plural paradigm than of Udege grammar.

language. But it is only by seeing the other too much in her own terms that the interpreter/self constructs the other's otherness. Number neutrality plus numeral classifiers — seen through the lens of the interpreter's own language — means mass nouns plus individuators, but a closer look would teach her that number neutrality is more like counting "sheep", and numeral classifiers are just that: classifiers, not individuators. The question that remains to be answered, is: What prevented this closer look?

6. NEEDING THE OTHER

Othering is often connected to psychological mechanisms of separating self or in-group from the (or some) other or out-group. In a psychological study of othering, Alex Gillespie wrote that there is much evidence for "a widespread tendency to differentiate in-group from out-group and Self from Other in such a way as to bolster and protect Self" (Gillespie, 2007: 580). People have a tendency to create positive self-concepts and positive concepts of the in-groups they belong to in contrast to more negative images of others and out-groups. This process is driven by a psychological need of self-affirmation (*e.g.*, Tajfel & Turner, 1979; Hogg & Abrams, 1990; Sherman & Cohen, 2006; see also Gillespie, 2007; Brons, 2014b). However, while the self-affirmatory construction of a superior self/in-group *versus* an inferior other/out-group may be the most common (and best known) motivation for othering, it is not necessarily the only one. Othering creates a radical separation between self/in-group and other/out-group, a boundary that makes the other/out-group clearly, significantly, and essentially other. Such a boundary may serve a psychological need of self-affirmation, but there are other reasons why an interpreter/self might want or "need" a radically alien other. (The existence of different needs or motivations for othering was recognized in the formal approach of section 2. See also Brons, 2014b.)

By attributing a radically different folk-ontology to the other, the Mass Noun Thesis constructs an essential boundary between self/in-group and other/out-group, which makes it a case of othering, but neither Quine, nor Hansen or Lucy can be plausibly accused of being driven by a need to distinguish a superior self/in-group from an inferior other/out-group.[11] Rather, in these three examples of the Mass Noun Thesis, there is a theoretical need for a radically alien other; that is, the radically alien other serves as "evidence" for some theoretical point.

Quine (1968) used the example of Japanese numerals as an illustration of the indeterminacy of translation, in pointing out that there are or may be cases in

[11] A variant of the Mass Noun Thesis that comes very close to the superiority/inferiority-constructing kind of othering is Gennaro Chierchia's (1998). At least, Chierchia leaves that impression by comparing Chinese to early child grammar, by ranking languages with Chinese at the lowest and Germanic/Slavic at the highest level, and by his concluding statement that the latter are closer to 'virtual perfection'.

which based on all available evidence no choice can be made between different alternative translations of the same language fragment. *Go-tou-no ushi* 五頭の牛 may be 'five cows' or 'five heads of cattle', attributing either an object ontology or a mass stuff ontology to speakers of Japanese. The Japanese philosopher Iida responded:

> When I read this passage a long time ago, my first reaction was that of disbelief. Of course, Professor Quine is not suggesting that we should construe a Japanese noun *ushi* as a mass term; he is only pointing out a possibility of so construing (Iida, 1998: 113).

It is indeed merely that possibility of so construing that Quine needed. To illustrate his theory of the indeterminacy of translation, Quine needed the theoretical possibility of a language that cuts up the world in a radically different way: he needed the theoretical possibility of a radically alien other.

Hansen's (1983) version of the Mass Noun Thesis should be located in the broader context of his argument that "contrastive analysis must replace comparative analysis in comparative philosophy" (Hansen, 1972: 169) because of "the fundamentally contrasting nature of Chinese intellectual activity" (Hansen, 1985: 494). In Hansen's opinion, the ancient Chinese way of thinking is so different that this precludes any kind of meaningful comparison — contrastive analysis is all that is possible. The Mass Noun Thesis is one of his arguments in constructing the ancient Chinese as radically alien (see also Roetz, 1993).

Lucy's version of the Mass Noun Thesis for Yucatec Maya (Lucy, 1992b) was published simultaneously with his reformulation and defense of the Sapir-Whorf Thesis (Lucy, 1992a), the idea that the languages we speak strongly influence or even determine the way we think (and our folk-ontologies are part of the way we think). Ever since, Lucy has been one of the main defenders of that thesis, and the Mass Noun Thesis is his strongest "evidence".

In these three cases of the Mass Noun Thesis, what motivates othering is a need to (empirically) support a theory in which the author heavily invested intellectually. All three needed the other to be radically alien to proof or support a theoretical point. It is for this reason that the Mass Noun Thesis is based on a very strong distinction between an object ontology and a mass stuff ontology, and by implication, between the self/in-group's and the other/out-group's folk-ontology (see section 4): only such a strong distinction makes the other sufficiently other.

Although the need to support a theory is a different need from the psychological need for self-affirmation (and the related self-superiority *vs.* other-inferiority),[12] it doesn't significantly differ in its effects: in either case, the other

[12] On the other hand, successfully supporting one's own theory seems very self-affirming, which suggests that the need to support one's own theory is not completely unrelated to the need for self-affirmation.

is made to be essentially different from the self/in-group. Regardless of whether the other is constructed as radically alien or as inferior, an essential boundary is created, but this is a false and artificial boundary, a boundary that separates and excludes where sufficient ground for separation or exclusion is lacking. Nevertheless, sophisticated othering — the kind of othering the Mass Noun Thesis is an example of — should not be seen as a wholly negative phenomenon. About early ethnography, Vidich and Lyman wrote that "the author's ethnographic report is a reversed mirror image of his own ethnocultural ideal", and that because of that, "early ethnographies reveal as much about the West as about their objects of study" (Vidich & Lyman, 1994: 26). What distinguishes sophisticated from crude othering is that the former depends on a perception of the other/out-group through a lens colored by beliefs about the self/in-group (see section 2). Othering in case of the Mass Noun Thesis depends on an interpretation of the other/out-group's language(s) in terms that are applicable only to the self/in-group's language but that were unconsciously assumed to be universal (see section 5). The exposition of othering reveals that the attributed otherness is a 'reversed mirror image' of the interpreting self, and thus shifts the attention from the other/out-group to the interpreter/self/in-group, and this — ideally — corrects both the interpretation of the other/out-group and of the self/in-group. In this way, through the confrontation with the other, the interpreter also comes to better understand herself. To speak with Lao zi (老子), "he who understands other people has knowledge; he who understands himself is seeing clearly",[13] but the latter turns out to be a prerequisite for the former.

BIBLIOGRAPHY

Aikhenvald, A. (2000). *Classifiers: a typology of noun categorization devices*. Oxford: Oxford University Press.

Brons, L. L. (2014a). Language death and diversity: philosophical and linguistic implications. *The Science of Mind*, *52*, 243–260.

Brons, L. L. (2014b), Othering, an analysis. *Transcience. A Journal of Global Studies*, *5*(2), forthcoming.

Cheng Chung-Ying (Ed.). (2007). *Gongsun Long and contemporary philosophy*. Special issue of the *Journal of Chinese Philosophy*, *34*(4), 473–560.

Chierchia, G. (1998). Reference to kinds across languages. *Natural Language Semantics*, *6*, 339–405.

Dimmendaal, G. J. (2000). Number marking and noun categorization in Nilo-Saharan languages. *Anthropological Linguistics*, *42*(2), 214–261.

Gillespie, A. (2007). Collapsing self/other positions: identification through differentiation. *British Journal of Social Psychology*, *46*, 579–595.

[13] *Dao De Jing* (道德經), §33: 知人者智, 自知者明 (Trans. L.B.).

Hansen, C. D. (1972). Freedom and responsibility in Confucian ethics. *Philosophy East and West*, *22*(2), 169–186.

Hansen, C. D. (1983). *Language and logic in ancient China*. Ann Arbor: The University of Michigan Press.

Hansen, C. D. (1985). Chinese language, Chinese philosophy, and 'truth'. *Journal of Asian Studies*, *44*(3), 491–519.

Hogg, M. A. & Abrams, D. (1990). Social motivation, self-esteem and social identity. In: D. Abrams & M. A. Hogg (Eds.), *Social identity theory: constructive and critical advances* (pp. 28–47). New York: Harvester Wheatsheaf.

Iida, T. (1998). Professor Quine on Japanese classifiers. *Annals of the Japan Association for Philosophy of Science*, *9*, 111–118.

Imai, M. & Gentner, D. (1997). A cross-linguistic study of early word meaning: universal ontology and linguistic influence. *Cognition*, *62*, 169–200.

Imai, M. & Mazuka, R. (2006). Language-relative construal of individuation constrained by universal ontology: revisiting language universals and linguistic relativity. *Cognitive Science*, *31*, 385–413.

Imai, M. & Saalbach, H. (2010). Categories in mind and categories in language: do classifier categories influence conceptual structures? In: B. Malt & P. Wolff (Eds.), *Words and the mind: how words capture human experience* (pp. 138–164). Oxford: Oxford University Press.

Lao Zi (老子). *Dao De Jing* (道德經) (Chinese Text Project: http://ctext.org). Trans. L. Brons.

Lucy, J. A. (1992a). *Language diversity and thought: a reformulation of the linguistic relativity hypothesis*. Cambridge: Cambridge University Press.

Lucy, J. A. (1992b). *Grammatical categories and cognition: a case study of the linguistic relativity hypothesis*. Cambridge: Cambridge University Press.

MacQuarrie, C. (2010). Othering. In: A. J. Mills, G. Durepos, & E. Wiebe, *Encyclopedia of case study research* (pp. 635–639). Thousand Oaks: Sage.

Matthews, P. H. (2007). *The concise Oxford dictionary of linguistics* (2nd ed.). Oxford: Oxford University Press.

Mazuka, R. & Friedman, R. S. (2000). Linguistic relativity in Japanese and English: is language the primary determinant in object classification?. *Journal of East Asian Linguistics*, *9*, 353–377.

Mou Bo (1999). The structure of the Chinese language and ontological insights: a collective-noun hypothesis. *Philosophy East and West*, *49*(1), 45–62.

Nikolaeva, I. & Tolskaya, M. (2001). *A grammar of Udihe*. New York: Mouton de Gruyter.

Pew Research Center (2014). *Worldwide, many see belief in God as essential to morality*. Retrived from www.pewresearch.org.

Quine, W. V. O. (1960). *Word and object*. Cambridge: The Technology Press.

Quine, W. V. O. (1968). Ontological relativity. *The Journal of Philosophy*, *65*(7), 185–212. (Reprinted in *Ontological relativity and other essays*, New York: Columbia University Press, 1969.)

Roetz, H. (1993). Validity in Chou thought: on Chad Hansen and the pragmatic turn in sinology. In: H. Lenk & G. Paul (Eds.), *Epistemological issues in classical Chinese philosophy* (pp. 69–112). Albany: Suny Press.

Said, E. (1978). *Orientalism*. New York: Pantheon Books.
Sanches, M. & Slobin, L. (1973). Numeral classifiers and plural marking: an implicational universal. *Working Papers on Language Universals*, *11*, 1–22.
Seiler, W. (1985). *Imonda, a Papuan language*. Canberra: Department of Linguistics, Research School of Pacific Studies, Australian National University.
Sherman, D. K. & Cohen, G. L. (2006). The psychology of self-defense: self-affirmation theory. *Advances in Experimental Social Psychology*, *38*, 183–242.
Tajfel, H. & Turner, J. C. (1979). An integrative theory of intergroup conflict. In: W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Monterey: Brooks-Cole.
Vidich, A. J. & Lyman, S. M. (1994). Qualitative methods: their history in sociology and anthropology. In: N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 23–59). Thousand Oaks: Sage.
Yoshida, H. & Smith, L. B. (2003). Shifting ontological boundaries: how Japanese- and English-speaking children generalize names for animals and artifacts. *Developmental Science*, *6*(1), 1–34.