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TWO LEVELS OF THE MASS-COUNT DISTINCTIONS AND NOUN CLASSIFICATIONS IN ENGLISH AND JAPANESE

ABSTRACT

Why are items such as furniture, cutlery, and jewellery considered mass nouns, even though we can readily count the number of pieces of furniture, knives and spoons, and jewels? Many English learners have thought of this question at least once. The purpose of this paper is to contribute to a study of nominal architecture in languages. To achieve this long-term goal, this paper aims to formally answer the above-mentioned question.

It is well-documented but has not been widely analyzed why and how furniture is somewhat countable but somewhat mass. We propose two levels of the mass-count distinction: conceptual and syntactic, to capture the discrepancy between the behaviours of furniture and the mass-count distinction.

Furthermore, we present detailed classifications at the conceptual levels, drawing from impressionistic tests and linguistic tests that incorporate counting and measuring. A close scrutiny reveals that a simple dichotomy (e.g., countable, uncountable) cannot capture the mass-count distinction at the conceptual level. Instead, this paper proposes four-way distinctions at the conceptual level: countable, uncountable, flexible, and ambiguous.

Moreover, this paper examines cross-linguistic variations of the classifications in terms of the conceptual mass-count distinction. Whereas English has four groups of nouns, Japanese has only three groups, including uncountable, flexible, and ambiguous. Literature has examined the syntactic mass-count distinction in Japanese, but it has not focused

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INGLIZCHA VA YAPONCHADAGI OTLARNING IKKI BOSQICHLI O‘LCHOV-HISOB AJRATMALARI VA TASNIFI

ANNOTATSIYA

Nega mebel, oshxona anjomlari (masalan, pichoq-tig‘, qoshiq) va zargarlik buyumlari kabi birliklar sanab chiqilishi mumkin bo‘lsa-da, ular ingliz tilida o‘lchov otlari (mass nouns) sifatida qaraladi? Ingliz tilini o‘rganuvchilarning aksariyati bu savol haqida kamida bir marta o‘ylagan. Ushbu maqola tilda otlarning tuzilishi (nominal architecture) bo‘yicha olib boriladigan tadqiqotlarga hissa qo‘shishni maqsad qilgan. Uzoq muddatli bu maqsad sari birinchi qadam sifatida mazkur maqola yuqorida keltirilgan savolga rasman javob berishga intiladi.

Adabiyotlarda mebel otining qanday qilib bir tomondan sanaladigan, boshqa tomondan esa o‘lchov sifatida qabul qilinishi haqida ma’lumotlar mavjud bo‘lsa-da, bu hodisa chuqur tahlil qilinmagan. Mazkur maqolada biz o‘lchov va hisob otlari farqlanishining ikki darajasi – konseptual va sintaktik bosqichlarini taklif etamiz. Bu ikki daraja ot so‘z turkumiga tegishli mebel so‘ziga xos xususiyatlaridagi tafovutlarni aniqlashga yordam beradi.

Bundan tashqari, maqolada konseptual darajadagi batafsil tasniflar beriladi. Bu tasniflar impressionistik testlar hamda o‘lchash va sanashni o‘z ichiga olgan lingvistik testlar asosida ishlab chiqilgan. So‘nggi tahlillar shuni ko‘rsatadiki, oddiy ikkiyoqlama tasnif (masalan, sanaladigan va sanalmaydigan otlar) konseptual bosqichdagi murakkablikni to‘liq aks ettira olmaydi. Shu sababli, maqola to‘rttalik tasnifni taklif etadi: sanaladigan, sanalmaydigan, moslashuvchan va noaniq otlar.

Shuningdek, maqolada o‘lchov-hisob ajrat-

on the conceptual mass-count distinction and its classification in Japanese. This paper fills that gap. Especially, this paper offers novel evidence to show that count-y nouns in Japanese, including human nouns, can be uncountable contextually.

Key words: mass-count distinction (MCD), conceptual MCD, syntactic MCD, furniture-type nouns, object mass noun, ambiguity, flexibility, syntax, Japanese, English.

masining konseptual darajasiga oid tasniflarning tillararo tafovutlari ham o‘rganiladi. Ingliz tilida otlar to‘rtta guruhga ajratilsa, yapon tilida ular faqat uchta guruhda (sanalmaydigan, moslashuvchan va noaniq) mavjud. Adabiyotlarda yapon tilidagi sintaktik o‘lchov-hisob ajratmasi o‘rganilgan bo‘lsa-da, konseptual ajratma va tasnifga yetarlicha e’tibor qaratilmagan. Ushbu maqola aynan shu bo‘shliqni to‘ldiradi. Xususan, maqola yapon tilidagi “hisobli” otlar, jumladan, insonlarga oid otlar, kontekstga qarab sanalmaydigan bo‘lishi mumkinligini ko‘rsatuvchi yangi dalillarni taqdim etadi.

Kalit so‘zlar: o‘lchov-hisob ajratmasi (O‘HA), konseptual O‘HA, sintaktik O‘HA, mebel turidagi otlar, obyekt-o‘lchov otlar, noaniqlik, moslashuvchanlik, sintaksis, yapon tili, ingliz tili.

INTRODUCTION

This paper is a revised version of a chapter in my doctoral dissertation [Kitaoka, 2024], and part of the ongoing research project that examines the functions and structures of nominal domains, especially, general number (number neutral bare nouns), plurality, classifiers, and the mass-count distinction, in languages with generalized classifier systems (Japanese, Mandarin), comparing them to non-classifier languages with overt plural morphology (e.g., English).

The question to be answered in this paper to achieve this long-term goal is, probably, what most English learners have asked at least once: Why are *furniture, cutlery, mail, kitchenware, jewellry*, etc. incompatible with plural marking, as in **furnitures, *cutlerys/*cutleries, *mails, *kitchenwares, *jewellrys/*jewellries*? (The asterisk “*” attached to the beginning of the phrases indicates that the phrases are not grammatically well-structured or severely unnatural.) The behaviours of the *furniture*-type nouns are a total mystery, especially for learners whose mother language(s) does/do not have an overt syntactic singular-plural distinction, e.g., Japanese, a typical classifier language.

The answer to this question lies in the view that there are two levels of mass-count distinctions: conceptual and syntactic [Chierchia, 1998; Borer, 2005]. It might sound straightforward that *furniture* is conceptually countable while it is syntactically mass. This paper, however, delves into the categorization of nouns more in-depth, and proposes four-way distinctions of nouns at the conceptual levels: countable, uncountable, ambiguous, and flexible. Furthermore, cross-linguistic comparisons between the mass-count distinction at the conceptual level in English and that in Japanese, are presented. Namely, while English has all the four types of nouns, Japanese has a four-way distinction: uncountable, flexible, and ambiguous.

Past literature has examined the syntactic mass-count distinction in Japanese, but it has not focused on the conceptual mass-count distinction and its classification in

Japanese. This paper fills that gap. This paper provides an alternative analysis to the conceptual mass-count distinction in the past literature, and offers a cross-linguistic comparative study of the classification in the conceptual mass-count distinction. Especially, this paper offers novel evidence to show that count-y nouns in Japanese, including human nouns, can be uncountable contextually. The analyses presented in this paper offer implications for the mass-count distinctions (including both the conceptual and syntactic ones) in other languages, including both classifier languages and non-classifier languages, although the present paper focuses on English and Japanese.

METHODS

This paper offers descriptive and theoretical analyses of the mass-count distinction in English and Japanese. In the descriptive side, the convention of management of data in the field of Generative grammar is respected [Chomsky, 1957, 1965, 1993, 1995; Matthewson, 2004]: i.e., native speakers' grammaticality judgment, and referencing past literature, in which the example sentences should have undergone native speakers' judgment. The English data were elicited from the past literature, but the grammaticality of some of these phrases and sentences was also checked by another native speaker when those expressions were normally not used in daily life. The Japanese data were primarily the authors, but the grammaticality of them was checked by another native speaker(s) in order to ensure the reliability. The descriptive part also serves for literature review that introduces past theoretical analyses of the mass-count distinction. In the theoretical side, the past analyses of the mass-count distinction [e.g., Chierchia, 1998; Borer, 2005] are tested with the data derived in the descriptive part.

This paper is organized as follows. Section 3 describes the behaviours of furniture-type nouns and the necessity of two levels of mass-count distinctions [Greenberg, 1972; Allan, 1977]. Section 4 introduces tests to examine the mass-count distinctions at the conceptual levels. The first test discriminates countable nouns from uncountable nouns [Barner & Snedeker, 2005; Barner & McKeown, 2005; Barner & Khanjian, 2009; Bale & Barner, 2009; Inagaki & Barner, 2009]. However, the second test leads us to propose the four-way distinction, adding ambiguous nouns, nouns whose status of countability at the conceptual level is unclear [Grimm & Levin, 2012; Rothstein, 2016]. Theoretical implications of these results for the mass-count distinction are also provided in this section. Section 5 concludes the paper and provides future research questions.

Some notes on the descriptions and terminology are in order. As noted above, an asterisk "*" is added to a phrase or a sentence when it is ungrammatical or severely unnatural.

In the relevant literature, the non-syntactic mass-count distinction is also called lexical distinction [e.g., Rothstein, 2010 and subsequent works], cognitive distinction [e.g., Chierchia, 2010 and subsequent works; Wisniewski, 2010; Kuo & Yu, 2012], semantic distinction [e.g., Sudo, 2014], ontological distinction [e.g., Borer, 2005; Li, 2013; Sudo, 2016; Chierchia, 2021], or conceptual distinction [e.g., Chierchia, 2021],

etc. To avoid confusion, the term *conceptual mass-count distinction* is used for the non-syntactic distinction in this paper.

The term *mass-count distinction* is often not used for the non-grammaticized mass-count distinction [e.g., Chierchia, 1998; Borer, 2005; Li, 2013; Zhang, 2018; de Vries & Tsoulas, 2021], where the term is saved only for the syntactic one. In this paper, the term *mass-count distinction* is used for both the syntactic level and the conceptual level [Bosveld-de Smet, 1997; Deprez, 2005; Paul et al., 2021].

Furniture-type nouns are also called object mass nouns [e.g., Chierchia, 1998], count mass nouns [e.g., Doetjes, 1997], fake mass nouns [e.g., Chierchia, 2021], atomic mass nouns [e.g., de Oliveira & Rothstein, 2011], naturally atomic mass nouns [e.g., Rothstein, 2010], or individuated mass nouns [e.g., Landman, 2011], etc. For the sake of simplicity and clarity, the term *furniture-type nouns* is used as a hypernym for *furniture, cutlery, mail, kitchenware, jewellry*, etc., which show distinct behaviours between the conceptual level and the syntactic level.

The mass-count distinction and *furniture*-type nouns

This section describes the behaviours of *furniture*-type nouns and, in doing so, presents the necessity of assuming two levels of the mass-count distinction.

Syntactic mass-count distinction

Furniture-type nouns are surely mass syntactically, patterning with typical mass nouns, e.g., *water*. Syntactic tests show the status of *furniture*-type nouns clearly. *Furniture*, as well as *water*, cannot be pluralized, as in **furnitures* and **waters* (see Section 4 for some discussions on mass-to-count coercion). *Furniture*, as well as *water*, cannot be modified by numerals as in **two furniture(s)* and **two water(s)*. Other furniture type nouns also behave in the same way, as in **cutleries, *jewellries, *mails, *two culeries/cutlery, *two jewellries/jewelry, *two mails,* etc. These tests with plural marking and numerals show that *furniture*-type nouns and typical mass nouns (e.g., *water*) are all alike in that these are all syntactically mass, no matter what types of images the nouns provoke.

According to these criteria, nouns in Japanese seem all mass syntactically. First, the Japanese language lacks a genuine plural of the English type. There is a morpheme, *-tati*, in Japanese that is often called a plural marker. However, it is well-known that *-tati* is more restricted in its distributions (generally, only human nouns are compatible with *-tati*) and has more functions and meanings (associativity, specificity, collectivity, affection/attachment) than the plural marker in English. Therefore, *-tati* is excluded from the discussion in this paper.

Second, the vast majority of nouns in Japanese (with a small set of exceptions) cannot be modified by numerals directly, as in **gakusei san* ("three students" in Japanese). These two tests also show that nouns in Japanese are all mass syntactically, and this is also true of count-y nouns (nouns likely to be count or countable at first look; e.g., human nouns, animals, books, etc.).

Countability of furniture-type nouns

However, differences at the conceptual level are observed: *furniture*-type nouns

in English and count-y nouns in Japanese on the one hand, and typical mass nouns in English and Japanese on the other, wherein *furniture*-type nouns in English and count-y nouns in Japanese pattern with typical count nouns in English (e.g., human or animal nouns). This subsection provides the countability of furniture-type nouns in English and countable nouns in Japanese, all similar to countable nouns in English: counting, conceivable minimal parts, homogeneity, synonyms, and the counterparts in other languages. Based on these, a preliminary classification of the conceptual mass-count distinction is presented (although it is revised in the next section).

Counting. The number of pieces of furniture (but not that of water) can be easily counted, as in *I have a lot of furniture in my room, e.g., two tables, seven chairs, three shelves, and one king bed*. A *lot of furniture, lots of furniture,* and *much furniture* provoke an image of many pieces of furniture. Similarly, no doubt, Japanese people count any count-y objects, including humans, dogs, books, pieces of furniture, etc., while water cannot be counted without containers both in English and Japanese.

Minimal parts. The conceivable minimal parts can be identified in furniture, while those of water cannot [Allan, 1977]. Namely, if we remove some parts of a piece of furniture little by little, we will sooner or later reach the point where we cannot call it furniture. Count-y nouns in Japanese also provide conceivable minimal parts. On the other hand, the minimal part of water, whether we say it in English or Japanese, is not identifiable unless we refer to atoms (the microscopic ones discussed in such a field as chemistry or biology [Chierchia, 2010]).

Homogeneity. *Water* is (but *furniture* is not) homogeneous. J.Greenberg's description shows this point clearly: "If I cut a piece of meat in two, I have two pieces of meat, but if I cut a dog in two, I still have only one dog, a dead one" [Greenberg, 1972; 13]. If we cut a piece of furniture (a desk, table, chair, sofa, etc.) into two, we get two parts of one desk, table, chair, sofa, etc. This is also true of count-y nouns in Japanese. Humans, animals, books, or any other countable nouns, can be divided, but we cannot get two individuals by cutting them.

Synonym. For *furniture*-nouns in English, their synonyms are often count. For instance, while a *furniture*-type noun *jewellery* is mass syntactically, its synonyms jewel or gem are all count, as in *jewels, two jewels, gems*, and *two gems*. While mail is mass syntactically, the *letter* is count, as in *letters* and *two letters*.

Cross-linguistic variation. Unless an image brought by a word is different in one language from another, these criteria of the mass-count distinction (i.e., countability, minimal parts, homogeneity) are mostly straightforward. Therefore, the classification based on these criteria does not vary much among speakers in a language or even among languages [Chierchia, 2010], except for *furniture*-type nouns. The counterpart of *furniture*-type nouns in other languages is often a count noun, as in *un meuble/ des meubles* ("a furniture/furnitures" in French), while typical mass nouns are cross-linguistically mass, as in **un eau*/**des eaus* ("a water/waters" in French). Needless to say, the English counterparts of count-y nouns in Japanese are mostly count syntactically (except *furniture*-type nouns).

Classification (Version 1). Thus, *furniture*-type nouns in English and count-y

nouns in Japanese show distinct behaviours at the syntactic level and at the conceptual level. Syntactically, *furniture*-type nouns in English and count-y nouns in Japanese are mass like *water* or *mizu* ("water" in Japanese), while those are countable conceptually like *dogs* in English. This discrepancy is straightforward if we assume two levels of mass-count distinctions: the syntactic mass-count distinction and the conceptual mass-count distinction. Human or animal nouns in English are syntactically count and conceptually countable. Water in English and Japanese is syntactically mass and conceptually uncountable. *Furniture*-type nouns, as well as count-y nouns in Japanese, are something in the middle. The mass-count distinctions based on the criteria so far are summarized in Table 1 (See Table 1).

Table 1. *Conceptual and syntactic mass-count distinctions in English and Japanese (to be revised)*

	English		**Japanese**	
	Conceptual	Syntactic	Conceptual	Syntactic
student, dog	Countable	Count	Countable	Mass
furniture	Countable	Mass	Countable	Mass
water, wine	Uncountable	Mass	Uncountable	Mass

The two levels of the mass-count distinction (countable, uncountable) and classification as in Table 1 are not a new idea. It has been widely assumed that languages that lack an overt syntactic plural marker still show the mass-count distinction at non-syntactic levels [Chierchia, 1998; Borer, 2005].

However, the tests so far are somewhat intuitive and impressionistic, and hence can be judged without language. Therefore, more linguistic and empirical tests are employed in the next section to examine the classifications in Table 1, using methods that involve counting and/or measuring. The nouns are tested with comparatives: *Who has more {books, furniture, water, etc.}?* or *A has more X than B* [Barner & McKeown, 2005; Barner & Snedeker, 2005; Bale & Barner, 2009; Barner & Khanjian, 2009; Inagaki & Barner, 2009; Grimm & Levin, 2012; Rothstein, 2016]. If the comparison with *more X* is made by the number of X, X is conceptually countable in this context. If the comparison with *more X* is made by the volume of X, X is conceptually uncountable in this context.

The further scrutiny reveals more subtle and obscure behaviours of *furniture*-type nouns in English and count-y nouns in Japanese, which leads us to revise the classification in Table 1.

RESULTS AND DISCUSSION

This section first presents the results of tests with comparatives, *more X*, for nouns in English and Japanese, in particular, *furniture*-type nouns in English and count-y nouns in Japanese (See The comparative test). Then, based on the test results, the revised classification with four-way distinctions of nouns is to be presented.

The comparative test

In this test, nouns are compared with a question: *Who has more X?* or a sentence *A has more X than B* for a certain context [Barner & Snedeker, 2005; Bale & Barner,

2009]. (The contexts and prompts below are created based on the descriptions and discussions in these past studies.) In this section, although only English data are shown, the results were replicated with the Japanese data [Inagaki & Barner, 2009] (The same results are replicated by Y.Sudo [Sudo, 2014, 2016], who tested the conceptual countability in Japanese using *most*. The same results are also replicated in Mandarin Chinese by P.Cheung [Cheung et al., 2012], another typical classifier wherein count-y nouns are all mass syntactically).

Context 1: Esme has three small cups, while Seymour has one giant cup.

Prompt 1: Who has more cups than Seymour?

The participants in A.C. Bale and D.Barner [Bale & Barner, 2009] mostly answered with Esme, i.e., the comparison is done by the number of cups. These results indicate that cups are conceptually countable in this context.

Context 2: Esme has one big portion of toothpaste, while Seymour has three small portions of toothpaste.

Prompt 2: Esme has more toothpaste than Seymore.

The participants in A.C. Bale and D.Barner [Bale & Barner, 2009] mostly answered with Yes, i.e., the comparison is made by the volume of the toothpaste. These results indicate that toothpaste is conceptually uncountable in this context.

Context 3: Esme has two small tables and three chairs, while Seymour has one king-sized bed.

Prompt 3: Esme has more furniture than Seymour.

The comparison was made by the number of pieces of furniture rather than the total volume of it. Namely, *furniture* patterns with cups, which indicates that *furniture* is conceptually countable, even though it is syntactically mass.

Flexibility and ambiguity in English

So far, the comparative test replicates the results in Table 1. However, things are not that simple, when we consider more types of nouns [Barner & Snedeker, 2005; Bale & Barner, 2009] and more various contexts [Grimm & Levin, 2012; Rothstein, 2016].

Context 4: Esme has five short strings of ropes, while Seymour has a coil of rope.

Prompt 4: Who has more rope?

Prompt 5: Who has more ropes?

For Prompt 4, the comparison is done by the volume, i.e., the answer is Seymour. For Prompt 5, the comparison is done by the number of ropes, i.e., the answer is Esme. These results show that *rope* is flexible. It can be either conceptually countable or uncountable depending on the context. As it is inevitable in English to overtly indicate the number property, the syntactic context blurs conceptual countability of nouns. This type of noun includes *rope, spinach, rock, chicken, fish*, etc., and forms the third group of nouns, flexible nouns, besides countable and uncountable nouns. It is noteworthy that the flexibility of *rope, spinach* and *rock* are different from *chicken* and *fish*. The former group does not change their states whether it is countable or uncountable. For instance, *rope* can be countable when its individuals are identified, while it can

be uncountable when a coil or bundle is perceived. On the other hand, *chicken* and *fish* alter their states. When *fish* is countable, individual fish (perhaps living ones) are identified. When it is uncountable, it is perceived as meat.

S.Grimm and B.Levin [Grimm & Levin, 2012] and S.Rothstein [Rothstein, 2016] challenge these classifications (countable, uncountable, flexible), in particular, the status of *furniture*-type nouns in English. In the sentence, *John has more furniture than Bill, so he will need the larger moving truck* [Rothstein, 2016; 4], the comparison is made by the total volume of furniture, irrespective of the number of pieces of furniture. This indicates that *furniture* in this context is uncountable. In this sentence, the size of the trucks in comparison to the total volume of the furniture is taken into consideration: e.g., the size of a truck is spacious enough to load all the furniture. This context leads us to focus more on the volume rather than the amount of furniture.

Such ambiguity is not observed with typical countable nouns, but seems to be unique to *furniture*-type nouns. In the sentence, *John has more cups than Bill, so he will need the larger moving truck*, the comparison is still made by the number of cups, which indicates that *cup* is still countable in this context. Namely, *furniture*-type nouns in English are ambiguous (i.e., these can be either countable or uncountable contextually), which form the fourth group of nouns, ambiguous nouns.

Flexibility and ambiguity in Japanese

Flexibility is observed with a similar group of nouns in Japanese, e.g., *himo* 'rope/string' [Inagaki & Barner, 2009], in a similar way to the English counterpart. Flexibility is also observed with *sakana* 'fish' in Japanese, which can be used either for a living individual (countable) or for fish meat (uncountable).

At first glance, ambiguous nouns do not exist in Japanese since Japanese does not have *furniture*-type nouns [Erbach et al., 2021].

However, fascinatingly, the introduction of ambiguous nouns leads us to delve into nouns in Japanese further. Count-y nouns in Japanese also show such ambiguity, as in (1) [Kitaoka, 2024; 35] (In the translations, the ambiguity of the noun is indicated with the capitalized words).

(1) *Kono hondana-ni ano hondana yori hon-ga aru*. [Japanese]
this bookshelf-on that bookshelf than book-nom there.be
'There is/are more books on this bookshelf than on that bookshelf.'

The sentence in (1) is true, as expected, when there are 100 books on this bookshelf and 50 books on that shelf (i.e., compared by the number of the books on each shelf). In this reading, *hon* 'book' is countable. Crucially, this sentence is also true when there are 20 thick books on this shelf and 25 very thin books on that shelf (i.e., compared by the volume or total pages of the books). Differing from the past studies [Inagaki & Barner, 2009; Sudo, 2014, 2016], *hon* 'book' can be compared by volume, by creating a context, as in (1), where the volume (thickness, the number of pages) is focused on more than the number of the copies is.

Surprisingly, a similar reading is possible, if not totally natural, even with human nouns, as in (2) [Kitaoka, 2024; 36].

(2) Context: The speaker and her/his colleagues are at an outdoor concert, where

a number of long benches are installed for spectators. They are looking for a bench, where there still is space left enough for all of them to sit.

Kono nagaisu-ni ano nagaisu yori hito-ga iru. [Japanese]
this long.chair-on that long.chair than person-nom there.be
Dakara, ano nagaisu-ni suwar-oo. [Japanese]
so that long.chair-on sit-let's
'There is/are more PERSON on this bench than on that bench. So, let's sit down on that bench.'

The sentence in (2) is true when there are 20 people on this chair, and 15 on that chair (compared by the number of people on each chair). Interestingly, it is also true when there are 10 giant sumo wrestlers on this chair, while 15 small children on that chair (compared by the total amount of space (perhaps even including spaces in-between) that each of the bodies occupies). A similar reading is not available in the English counterpart.

These results indicate that, unlike count-y nouns in English (which are mostly count except *furniture*-type nouns), count-y nouns in Japanese are ambiguous between countable and uncountable, in a similar way to *furniture*-type nouns in English. With this, Table 1 should be revised as Table 2 (See Table 2).

Table 2. *Conceptual and syntactic mass-count distinctions in English and Japanese*

	English		**Japanese**	
	Conceptual	Syntactic	Conceptual	Syntactic
student, dog	Countable	Count	Ambiguous	Mass
furniture	Ambiguous	Mass	Ambiguous	Mass
fish, rope	Flexible	Count/Mass	Flexible	Mass
water, wine	Uncountable	Mass	Uncountable	Mass

As shown in Table 2, Japanese does not have purely countable nouns. It is crucial (although it is not the main point of this paper) that Japanese still shows the mass-count distinction at the conceptual level, as the existence of ambiguous nouns and flexible nouns implies the existence of countable nouns.

It is also noteworthy that the flexibility in English and Japanese is not the same. *Fish, rope*, etc. in English are flexible between countable and uncountable nouns. On the other hand, *sakana* 'fish', *himo* 'rope/string', etc. are flexible between uncountable and ambiguous nouns, the latter of which are further ambiguous between countable and uncountable nouns. For instance, *sakana* 'fish' can be uncountable when it is considered as meat. It is countable but compared by number in the context where the number of fish is focused, e.g., how many fish two fishers caught. It is countable but compared by volume in the context where the total volume of fish is the focus, e.g., how much space is left in two water tanks.

Theoretical implications

Moreover, the results of the tests and Table 2 offer theoretical implications for an analysis of the mass-count distinction and coercion [Pelletier, 1975; Bunt, 1985], and further for the syntax of nominal structures. Water or other uncountable nouns can

be frequently coerced into count nouns in syntax through Universal Packager, as in *Two waters, please!* (said in a restaurant), an operation called mass-to-count coercion. In this example, *water* with plural marking is used a count noun, since the context clearly enables us to capture the container (serving portion) of water.

Uncountable nouns can also be coerced into count nouns through so-called Universal Sorter, as in *This restaurant serves only two wines*. In this example, *wine* with plural marking is used as a count noun, as the context focuses on the number of (sub)kinds of wine.

On the other hand, countable nouns can be coerced to mass nouns in syntax through so called Universal Grinder, as in *There is dog all over the wall*. In this example, *dog* (without plural marking) is used as a mass noun as the context creates an image of meat-like substance (typically mass) of count-y objects.

Interestingly, both *furniture*-type nouns as well as count-y nouns in Japanese tend to resist these operations. For instance, even when the context focuses on (sub) kinds of furniture (via Universal Sorter), *furniture* cannot be pluralized, as in **This store sells only two furnitures, namely tables and chairs*. It is well-known that count-y nouns in Japanese resist Universal Grinder. It is noteworthy that count-y nouns in other classifier languages (e.g., Mandarin Chinese, Korean) also resist Universal Grinder [Cheng et al., 2008].

The interplays among the two levels of mass-count distinctions and types of nouns would provide us with insights into how nominal architecture and the interface of the two levels of mass-count distinctions work. It is often assumed [Borer, 2005] that plural marking treats all nouns alike, and theoretically, any nouns can be count in syntax as far as contexts allow it. The behaviours of furniture-type nouns in English and count-nouns in Japanese cast doubt on this assumption, and call for an alternative.

CONCLUSION

It has been shown that the somewhat intuitive classification of the conceptual mass-count distinction can be fine-tuned by the methods that involve counting and measuring. Scrutiny considering more nouns and more contexts led us to re-assess the classification. An alternative classification was presented as in Table 2, which includes flexible and ambiguous nouns.

The analysis presented here provides supporting evidence for the similarities between *furniture*-type nouns in English and count nouns in Japanese. Both are conceptually ambiguous, but syntactically mass. The idea that *furniture*-type nouns in English and count-nouns in Japanese pattern with each other, has been identified informally, but, in my shallow knowledge, it has not been formalized as shown in Table 2. Also, while the mass-count distinction at the conceptual level has been widely assumed in past literature, its detailed classification (like the one in Table 2) has not been clarified.

Moreover, as mentioned above, the present study also provides further tasks regarding derivation of nominal domains, especially, how syntactic mass-count distinction is manifested in syntax, and how two levels of the mass-count distinctions

are interrelated in derivation.

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