



Conceptual Countability beyond Furniture-type Nouns: Grammatical Visibility in English and Japanese

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ABSTRACT

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This paper re-examines conceptual countability through a comparison of English and Japanese quantity interpretation. Previous analyses have focused particularly on English furniture-type nouns, which denote identifiable objects but permit comparison by either cardinality or aggregate physical properties. Preliminary Japanese observations suggest that a similar possibility may extend beyond this exceptional lexical class. In contexts that explicitly contrast number with combined thickness, volume, or weight, the Japanese nouns *hon* 'book' and *sakana* 'fish' permit aggregate interpretations while retaining stable lexical meanings and identifiable atomic individuals. A corresponding interpretation with *hito* 'person' is much less natural, suggesting that the accessibility of aggregate comparison may vary gradually across noun classes even when conceptual countability is maintained. To account for this pattern, the paper proposes the Grammatical Visibility Hypothesis: grammatical constructions may differentially foreground conceptually available dimensions of comparison, thereby shaping their accessibility, salience, and preference without determining conceptual possibility. Because Japanese number-neutral bare nouns encode cardinality less overtly than English plural count constructions, they provide a comparative basis for reconsidering whether the apparent restriction of conceptual ambiguity to English furniture-type nouns reflects conceptual structure alone or partly the grammatical visibility of cardinality.

KEYWORDS

conceptual countability, ambiguity, visibility, semantics, English, Japanese

1. Puzzles and Proposals^{1,2}

Number-marking languages such as English exhibit obligatory number-marking (e.g., *a book/books*) together with a grammatical distinction between count and mass nouns (e.g., *a few books* vs. *a little wine*). Classifier languages such as Japanese allow number-neutral bare nouns (general number; Corbett 2000) and require classifiers (CLs) in numeral modification regardless of whether the noun denotes a human, an animal, an artefact, or a substance (e.g., *hon san-satsu* ‘book three-CL’) (Aikhenvald 2000). Thus, the two languages differ substantially in how number and the mass–count distinction are grammatically realized.

This grammatical contrast, however, does not always correspond to the conceptual properties of nominal denotations. English furniture-type nouns such as *furniture*, *mail*, *cutlery*, and *jewellery* illustrate this mismatch: *furniture* behaves grammatically as a mass noun, since it cannot normally be pluralized (**furnitures*) or directly modified by numerals (**three furnitures*). Conceptually, however, it denotes discrete, identifiable entities such as chairs, desks, beds, and tables. It is grammatically mass, but it is not conceptually comparable to substance nouns such as *water* or *mud*. Furniture-type nouns reveal that grammatical countability and conceptual countability need not coincide (Borer 2005, Chierchia 1998a, Rothstein 2010).

This mismatch motivates a distinction between two levels of the mass–count distinction (Bale and Barner 2009, Borer 2005, Chierchia 1998a, Inagaki and Barner 2009, Li 2013). The first level is the grammatical mass–count distinction, which concerns how countability is realized morphosyntactically. The second level is the conceptual mass–count distinction, which concerns the conceptual properties of nominal denotations independently of their grammatical realization. At the conceptual level, entities may be represented as atomic individuals or as non-atomic substances and, in some cases, may permit comparison along more than one dimension.^{3,4} Unlike the grammatical distinction, these conceptual properties are not necessarily reflected in morphosyntactic structure.

A related phenomenon is found in flexible nouns. Such nouns participate in both mass and count constructions, with a corresponding shift in lexical interpretation or conceptualization, as illustrated by *chicken*, *rock*, and *rope*

¹ This paper forms part of a broader research program on the nominal architecture of Japanese that developed from the author’s undergraduate, master’s, and doctoral research. Some of the descriptive observations examined here were introduced in earlier work, particularly Kitaoka (2024, 2025), while related aspects of noun categorization are developed in Kitaoka (forthcoming). The present study revisits and extends these observations through more tightly controlled comparisons with more controlled examples and develops a distinct analysis centred on conceptual countability and grammatical visibility.

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² This paper was edited with the assistance of ChatGPT (GPT-5.5 Sol; OpenAI), which was used exclusively for language editing, improving clarity, and organizing the structure of the manuscript. All arguments, interpretations, analyses, and final content are the sole responsibility of the author.

³ I follow the terminology adopted in Kitaoka (2024). As stated there, I use the term *conceptual mass–count distinction* for the non-grammatical dimension of the mass–count distinction. The same general notion has also been described in the literature as a *lexical* distinction (e.g., Rothstein 2010 and subsequent works), *cognitive* distinction (e.g., Chierchia 2010 and subsequent works, Kuo and Yu 2012, Wisniewski 2010), *semantic* distinction (e.g., Sudo 2016a), or *ontological* distinction (e.g., Borer 2005, Chierchia 2021, Li 2013, Sudo 2016b).

⁴ Following Kitaoka (2024), I use *mass–count distinction* as an umbrella term covering both the grammatical and conceptual dimensions. Some studies reserve the term for the grammatical distinction alone (e.g., Borer 2005, Chierchia 1998b, de Vries and Tsoulas 2021, Li 2013, Zhang 2018), while others employ it more broadly (e.g., Bosveld de Smet 1997, Deprez 2005, Paul et al. 2021). See Joosten (2003) for a critical overview of the relevant terminology.

(Bale and Barner 2009). A more restricted phenomenon has been identified by Grimm and Levin (2012) and Rothstein (2016). Unlike canonical flexible nouns, the relevant nouns maintain a single lexical meaning while permitting both cardinal and aggregate construals. Following these analyses, I refer to them as conceptually ambiguous nouns. A prototypical English example is shown in (1).

(1) *John has more furniture than Bill, so he will need the larger moving truck.* (Rothstein 2016:4)

If conceptual mass–count distinctions largely reflect general aspects of human cognition rather than language-specific grammatical systems (Chierchia 2010), comparable conceptual properties may be expected to be available across languages, although their lexical and grammatical realization may differ. This raises the possibility that conceptual ambiguity is not restricted to English furniture-type nouns but may be available more broadly across languages and noun classes. Under this view, the ambiguity observed with English *furniture* is not necessarily an exceptional property of this lexical class, but one manifestation of a broader conceptual capacity to construe the same individuals according to different dimensions of comparison.

The present study extends the discussion initiated in Kitaoka (2024), which applied the distinction between grammatical and conceptual mass–count distinctions to Japanese. The present study explores a different implication of that distinction. Specifically, it examines whether conceptual ambiguity may extend beyond English furniture-type nouns to a broader range of nouns across languages. This constitutes the paper’s first proposal. The preliminary observations presented below suggest that ordinary object nouns and human nouns, traditionally analyzed as conceptually countable, may also permit more than one dimension of comparison.

To illustrate the issue from the outset, consider the examples of Japanese count-*y* nouns, that is, nouns expected to denote discrete individuals and to favour cardinal comparison, as in (2) and (3)⁵:

(2) Context: Three very thick dictionaries, containing approximately 2,500 pages in total, are placed on Table A. Fifteen books of approximately 100 pages each, containing approximately 1,500 pages in total, are placed on Table B. The books have approximately comparable height and width, but the dictionaries are substantially thicker.

Koko-ni-wa asoko yori hon-ga aru-ga, asoko-no hoo-ga kazu-ga ooi.
here-at-_{TOP} there than book-_{NOM} exist-but there-_{GEN} side-_{NOM} number-_{NOM} many
‘There is more BOOK here than there, but there are more individual books there.’

(3) Context: One large open area contains three sumo wrestlers, while another contains six small children. The combined bodily volume and weight of the three wrestlers are substantially greater than those of the six children.

Koko-ni-wa asoko yori hito-ga iru-ga, asoko-no hoo-ga kazu-ga ooi.
here-at-_{TOP} there than person-_{NOM} exist-but there-_{GEN} side-_{NOM} number-_{NOM} many
‘There are more PERSON here than there, but there are more individuals there.’

In these examples, the comparison need not be based exclusively on cardinality. In (2), *hon* ‘book’ may receive an aggregate interpretation based on the combined physical extent of the books. Example (3) raises the possibility of a corresponding aggregate interpretation of *hito* ‘person’, based on the combined bodily volume or weight of

⁵ In the examples in this paper, the ambiguity of the nouns is indicated with the capitalized words.

the individuals, although this interpretation is considerably less natural and requires further careful elicitation. The examples are introduced here only to illustrate the interpretive issue; the judgements, differences in naturalness, and possible alternative analyses are examined more closely in Section 3.

The second proposal of the present paper concerns the grammatical visibility of conceptual mass–count properties. Assuming that these properties are broadly grounded in language-independent cognition (Chierchia 2010), the paper hypothesizes that grammatical constructions affect not their availability, but the extent to which particular properties become accessible and salient in interpretation.

Before proceeding to the descriptive and theoretical analyses, a brief note on the methodology and scope of the present study is in order. The Japanese examples were evaluated on the basis of the author's judgements together with informal elicitation from three additional native speakers of Japanese, yielding four Japanese speakers in total. The English examples discussed later were informally checked with two native speakers of English. The Japanese elicitation was contextualized so as to place cardinality in explicit competition with an alternative aggregate dimension, such as combined volume or weight. Speakers were asked whether the intended interpretation was available in the context provided, whether the target sentence could be accepted as true under that interpretation, and how natural the resulting reading was. Where necessary, follow-up questions and explicit cardinality contrasts were used to clarify the basis of the judgement. The resulting judgements were sufficiently consistent to establish the interpretive contrasts relevant to the present analysis and to provide an empirical basis for examining the distinction between conceptual availability and grammatical visibility developed below. The speakers were not selected or controlled for regional, generational, or other sociolinguistic variables; larger-scale controlled elicitation will therefore be useful for determining the broader distribution and relative strength of these interpretations across speakers and constructions.

The discussion is restricted to cases in which the same basic lexical meaning and underlying conceptualization are maintained across different interpretations. Mass-to-count and count-to-mass coercion are therefore excluded.⁶ The analysis focuses instead on whether a noun may be interpreted according to different dimensions of comparison, including cardinal, aggregate, and relative-spatial construals.

The remainder of the paper is organized as follows. Section 2 reviews the diagnostics for conceptual classification and the traditional boundaries of conceptual ambiguity. Section 3 presents preliminary observations from Japanese object and human nouns concerning the availability of cardinal, aggregate, and relative-spatial interpretations. Section 4 discusses the broader implications of these observations and develops the grammatical-visibility hypothesis. Section 5 concludes the paper.

2. Theoretical Background and Terminology

2.1 Two Levels and the Universality of the Conceptual Mass–Count Distinction

The mass–count distinction has traditionally been discussed primarily as a grammatical phenomenon (Allan 1977, Chierchia 1998a, Greenberg 1972). In number-marking languages such as English, nouns are classified according to their morphosyntactic behaviour. Count nouns typically permit plural morphology, combine directly with numerals, and occur with count-sensitive determiners or modifiers such as *many*, *few*, *each*, and *every*. Thus,

⁶ Here, coercion refers to cases in which a conceptually uncountable noun is used in count syntax, as in *Give me two beers!* at a bar, or a conceptually countable noun is used in mass syntax, as in *There is dog all over the wall* (Bunt 1985, Pelletier 1975).

nouns such as *book*, *house*, and *student* occur in expressions such as *three books*, *many houses*, and *every student*. By contrast, prototypical mass nouns such as *water*, *mud*, and *wine* generally resist plural marking and direct numeral modification, occurring instead with mass-sensitive expressions such as *much* and *little*. From this perspective, grammatical countability is identified through the morphosyntactic behaviour of nouns in individual languages.

This grammatical approach successfully captures many aspects of nominal behaviour in English and other number-marking languages. It also provides a straightforward set of diagnostics for distinguishing count nouns from mass nouns. However, grammatical behaviour does not always correspond to how speakers conceptualize the entities denoted by nouns. The relationship between grammatical behaviour and conceptual representation therefore cannot be inferred from grammatical diagnostics alone.

English furniture-type nouns such as *furniture*, *cutlery*, *mail*, and *jewellery* provide the best-known example (Chierchia 1998a, Gillon 2015). Grammatically, these nouns pattern with ordinary mass nouns; *furniture*, for example, normally resists plural morphology (**furnitures*), cannot be directly modified by numerals (**three furnitures*), and combines naturally with mass-sensitive expressions such as *much* rather than count-sensitive expressions such as *many*. Judging solely from their grammatical behaviour, these nouns would be classified together with prototypical substance nouns such as *water* and *mud*.

Conceptually, however, *furniture* differs from prototypical substances such as *water*. Speakers do not normally conceptualize *furniture* as a homogeneous substance (Greenberg 1972). Rather, its denotation includes identifiable individual objects such as chairs, tables, desks, and beds. These entities possess identifiable boundaries and stable identities, and individual items of furniture can be readily distinguished from one another (Allan 1977). In other words, although *furniture* behaves grammatically as a mass noun, it is conceptually much closer to ordinary object nouns than to prototypical substances.

This mismatch between grammatical behaviour and conceptual interpretation shows that grammatical countability cannot be equated with conceptual countability. Rather, *furniture* exhibits grammatical properties associated with mass nouns but conceptual properties normally associated with count nouns.

To account for this discrepancy, researchers have distinguished two levels of the mass–count distinction (e.g., Doetjes 1997, Pelletier 2012, Wiltschko 2012; see also Chierchia 1998a, Borer 2005). The first is the grammatical mass–count distinction, which concerns how languages encode countability morphosyntactically through devices such as plural marking, direct numeral modification, classifier constructions, and count-sensitive expressions. Because grammatical systems differ considerably across languages, the grammatical realization of countability is language-specific. English, for example, obligatorily distinguishes singular and plural forms of count nouns, whereas Japanese generally employs classifiers in numeral constructions and allows number-neutral bare nouns, or general number (Corbett 2000).

The second level is the conceptual mass–count distinction, which concerns the conceptual properties of nominal denotations independently of their grammatical realization. At this level, the relevant question is not whether a noun permits plural morphology or combines directly with numerals, but how speakers conceptualize the entities it denotes. The entities may, for example, be conceptualized as discrete individuals with identifiable boundaries or as undifferentiated substance lacking natural units. Unlike grammatical countability, which varies across languages with their morphosyntactic systems, conceptual countability is assumed here to reflect broadly shared aspects of human cognition or perception (Chierchia 2010).

Importantly, these two levels are distinct but not entirely independent. In many cases, they coincide: ordinary English count nouns such as *book*, *dog*, and *house* are both grammatically and conceptually countable, whereas prototypical substance nouns such as *water* are both grammatically and conceptually uncountable. Their frequent

correspondence can therefore obscure the distinction between them. Nouns such as *furniture*, however, show that the correspondence is not complete and that grammatical and conceptual countability must therefore be analyzed separately.

Distinguishing grammatical from conceptual mass–count properties provides a basis for comparing languages whose grammatical systems encode countability differently. In classifier languages such as Japanese, where nouns lack obligatory plural morphology and numeral modification requires classifiers regardless of the noun’s semantic type, grammatical diagnostics developed for English cannot straightforwardly determine conceptual countability (Aikhenvald 2000, Kitaoka 2024). The present paper therefore adopts this two-level distinction as a common analytical framework for comparing English and Japanese.

Before addressing that question, however, it is necessary to review how conceptual countability has been investigated without relying directly on grammatical diagnostics. The next subsection therefore examines the principal diagnostics that have been developed to identify conceptual mass–count properties.

2.2 Diagnostics of Conceptual Countability

Because grammatical behaviour does not always correspond directly to conceptual representation, conceptual countability must be investigated without relying solely on grammatical diagnostics. Several diagnostics have been developed to identify the conceptual properties associated with countability, including the availability of conceivable minimal parts, divisibility or homogeneity, and quantity judgements that place cardinality in competition with another dimension of comparison (Allan 1977, Bale and Barner 2009, Barner and Snedeker 2005, Greenberg 1972, Kitaoka 2024). These diagnostics need not yield identical results, and no single test should be assumed to provide a complete classification on its own.

A basic conceptual contrast concerns whether the denotation provides readily identifiable units for counting. Entities denoted by nouns such as *chair*, *dog*, *book*, and *person* are ordinarily conceptualized as identifiable individuals that can be counted. By contrast, substances such as *water*, *mud*, and *sand* are normally evaluated by amount or extent rather than by the number of naturally identifiable individuals. Although languages differ in how this distinction is grammatically encoded, the conceptual distinction between entities with identifiable individual units and substances lacking such units is assumed here to be broadly shared across languages (Chierchia 2010).

A closely related diagnostic concerns the existence of conceivable minimal parts (Allan 1977). Ordinary object nouns denote entities for which conceivable minimal individuals can be identified. A chair, for example, constitutes a complete individual object; if progressively smaller pieces are removed, a point is eventually reached at which the remainder can no longer be identified as a chair. Water, by contrast, lacks such naturally identifiable minimal units. An arbitrary portion of water is still ordinarily identified as water, and no conceptually privileged smallest portion is available independently of scientific notions such as molecules or atoms. The availability of conceivable minimal individuals has therefore been used as one diagnostic of conceptual countability.

Another frequently discussed diagnostic concerns divisibility or homogeneity (Greenberg 1972). Dividing an ordinary object into smaller pieces does not create additional individuals of the same kind. Cutting a chair into two pieces still yields one broken chair rather than two chairs. By contrast, dividing water simply produces two smaller quantities of water. Prototypical substance nouns therefore exhibit a form of homogeneity generally absent from ordinary object nouns. This diagnostic thus provides another way of distinguishing conceptualized individuals from substances without relying directly on grammatical morphology.

Related diagnostics concern stable identity, clear spatial boundaries, and individuation (Kitaoka 2024). Human beings, animals, books, and chairs occupy bounded regions in space and retain their identity despite ordinary

changes in location. Prototypical substance nouns, by contrast, generally lack inherently determined spatial boundaries and stable individual units. Although these diagnostics are formulated in different ways, they converge in treating conceptually countable entities as identifiable individuals and prototypical substances as lacking comparable inherent units.

Importantly, these diagnostics are intended to investigate conceptual countability without relying directly on grammatical diagnostics. They probe how speakers interpret the entities denoted by nouns rather than whether those nouns permit particular morphosyntactic constructions. They should therefore be treated as complementary measures of different conceptual properties rather than as interchangeable tests yielding a single categorical classification.

English furniture-type nouns provide an important test case for these diagnostics because their grammatical and conceptual classifications do not coincide. Although *furniture* behaves grammatically as a mass noun, it satisfies the principal conceptual diagnostics associated with countability. Individual items of furniture can be identified as distinct entities with conceivable minimal individuals, stable identities, and clear spatial boundaries. Under these diagnostics, *furniture* therefore patterns conceptually with ordinary object nouns rather than with prototypical substance nouns such as *water* or *mud* (Allan 1977, Chierchia 1998a, Bale and Barner 2009, Rothstein 2010).

This conclusion is also supported by cross-linguistic comparison. While English treats *furniture* as grammatically mass, many other languages use count nouns for corresponding object-denoting expressions. French, for example, distinguishes *un meuble* ‘a piece of furniture’ and *des meubles* ‘pieces of furniture’, and comparable count constructions are found in other languages. Such observations show that the grammatical classification of corresponding nominal concepts may vary across languages and are compatible with the assumption that their conceptual properties are comparatively stable (Chierchia 2010).

Taken together, these diagnostics identify a set of conceptual properties associated with a noun’s denotation. They indicate whether the denotation supplies identifiable individuals, exhibits homogeneity, or lacks inherent minimal units, but they need not yield a single categorical result in every case. This is particularly important for nouns such as *furniture*, which satisfy several diagnostics of conceptual countability while also permitting non-cardinal interpretations. The next subsection therefore turns to quantity judgements, which examine the dimension along which nominal quantities are compared.

2.3 Quantity Judgements and Conceptual Ambiguity

One influential development in the investigation of conceptual countability has been the introduction of quantity-judgement tasks (Bale and Barner 2009, Barner and McKeown 2005, Barner and Snedeker 2005, Inagaki and Barner 2009). Rather than asking whether a noun permits plural morphology or combines directly with numerals, these studies investigate the dimension along which speakers compare the quantities denoted by that noun. Because the grammatical form of the noun is held constant within the relevant comparison, quantity judgements provide a means of investigating conceptual interpretation without relying directly on contrasts in grammatical morphology.

The basic logic of the methodology is straightforward. Participants are presented with situations in which different dimensions of comparison compete with one another. For example, one individual may possess a small number of very large objects, whereas another possesses a larger number of much smaller objects. Participants are then asked questions such as *Who has more X?* or *Does John have more X than Bill?* If speakers base their judgements primarily on the number of individuals, the response reflects a cardinal dimension of comparison and has conventionally been taken as evidence of conceptual countability. If, on the other hand, judgements are based

primarily on properties such as volume, the response reflects a non-cardinal dimension of comparison and has conventionally been taken as evidence of conceptual uncountability. As discussed below, however, the availability of a non-cardinal response does not necessarily entail that the noun is exclusively conceptually uncountable.

Unlike grammatical diagnostics based on contrasts in plural marking, numeral modification, or determiner selection, quantity judgements do not require the noun to alternate between different morphosyntactic forms. Within a given comparison, the form of the noun remains constant while the contextual basis for evaluating quantity varies. Quantity-judgement tasks therefore provide evidence about the dimension of comparison available in a given context. Rather than asking how countability is expressed through contrasting grammatical forms, these tasks ask which dimension speakers use to evaluate quantity when the relevant nominal form is held constant.

The methodology has also been valuable for cross-linguistic research. Because quantity-judgement tasks can be adapted without requiring the same grammatical diagnostics in each language, comparable experiments can be conducted across languages with markedly different nominal systems. Quantity-judgement studies have accordingly been carried out in English, Japanese, Mandarin Chinese, and other languages (Bale and Barner 2009, Barner and Snedeker 2005, Cheung, Li, and Barner 2012, Inagaki and Barner 2009). Despite differences in plural marking, classifier systems, and nominal morphology, these studies report broadly comparable contrasts between nouns that favour cardinal comparison and those that favour non-cardinal comparison. These findings have been interpreted as support for the view that conceptual mass–count properties are not reducible to the grammatical systems of individual languages.

Quantity-judgement studies have also contributed to the analysis of furniture-type nouns.⁷ Earlier analyses had already observed that nouns such as *furniture* satisfy several traditional diagnostics of conceptual countability despite exhibiting grammatical mass behaviour. Quantity-judgement experiments provided further support for this analysis by showing that speakers often compare *furniture* according to the number of individual items rather than exclusively according to volume or amount (Bale and Barner 2009, Barner and Snedeker 2005). These findings supported the view that *furniture* is conceptually distinct from prototypical substance nouns despite its grammatical classification as a mass noun.

More recent work, however, has shown that conceptual countability alone does not fully characterize the behaviour of furniture-type nouns. Grimm and Levin (2012) and Rothstein (2016) observe that nouns such as *furniture* permit more than one dimension of comparison. In particular, they permit both cardinal and aggregate interpretations while maintaining the same basic lexical meaning. Consider the example in (1), repeated here as (4).

(4) *John has more furniture than Bill, so he will need the larger moving truck.*

This sentence permits at least two interpretations. Under one interpretation, *more furniture* refers to a greater number of individual furniture items. Under another, it refers to the aggregate physical extent of the furniture to be transported. Crucially, these interpretations arise without any change in the lexical meaning of *furniture*. The noun continues to denote the same class of entities; what changes is the dimension of comparison made relevant by the context.

⁷ Following Kitaoka (2024), I use the descriptive label *furniture-type nouns* for this class. The same class has been referred to elsewhere as *object mass nouns* (e.g., Chierchia 1998b), *count mass nouns* (e.g., Doetjes 1997), *fake mass nouns* (e.g., Chierchia 2021), *atomic mass nouns* (e.g., de Oliveira and Rothstein 2011), *naturally atomic mass nouns* (e.g., Rothstein 2010), and *individuated mass nouns* (e.g., Landman 2011). The term *furniture-type nouns* is retained here for terminological consistency.

This observation has an important consequence for the conceptual classification of nouns. Standard conceptual classifications generally associate conceptually countable nouns with cardinal comparison and conceptually uncountable nouns with non-cardinal comparison. The behaviour of furniture-type nouns suggests that this contrast does not capture the full range of the available patterns. A single lexical item may permit both cardinal and aggregate construals without a change in its basic lexical meaning or underlying conceptualization. In this limited sense, the noun may be regarded as conceptually ambiguous.

Following Grimm and Levin (2012) and Rothstein (2016), the present paper uses the descriptive label *conceptually ambiguous nouns* for nouns that permit both cardinal and aggregate construals while maintaining the same basic lexical meaning and underlying conceptualization. This notion of ambiguity differs from ordinary lexical ambiguity. The alternative construals do not arise because the noun has multiple unrelated meanings or because contextual coercion produces a different lexical interpretation. Rather, they reflect different dimensions of comparison applied to a single lexical denotation. Speakers may compare the denotation in terms of discrete individuals or evaluate the entities collectively along a physical dimension while continuing to refer to the same entities.

In the current literature, English furniture-type nouns have generally been treated as the clearest examples of this conceptually ambiguous class (Grimm and Levin 2012, Rothstein 2016). Ordinary object nouns and human nouns, by contrast, are usually treated as conceptually countable and are therefore expected to favour cardinal interpretations. This expectation has received relatively little direct examination because discussions of conceptual ambiguity have focused primarily on furniture-type nouns.

The present paper reconsiders this assumption. Importantly, the analyses developed in the following sections do not propose a new diagnostic for conceptual ambiguity. Rather, they draw on the conceptual framework and comparison-based diagnostics developed in the previous literature. The contribution of the present study lies in applying these established diagnostics to lexical classes generally treated as conceptually countable. If object nouns and human nouns permit more than one dimension of comparison while maintaining the same basic lexical meaning and underlying conceptualization, quantity-judgement patterns associated primarily with furniture-type nouns may extend more broadly than previously recognized. Section 2.4 considers the implications of this possibility for the conventional conceptual classification.

2.4 Conceptual Classification, Predictions, and Remaining Questions

The preceding discussion provides the following background. First, grammatical countability and conceptual countability constitute distinct, though related, levels of analysis. Second, conceptual countability has been investigated through several diagnostics, including conceivable minimal individuals, homogeneity, stable identity, spatial boundedness, and quantity judgements. Third, these diagnostics do not necessarily target identical properties or yield a single categorical classification. In particular, furniture-type nouns satisfy several traditional diagnostics of conceptual countability while permitting both cardinal and aggregate dimensions of comparison (Allan 1977, Bale and Barner 2009, Barner and Snedeker 2005, Greenberg 1972, Grimm and Levin 2012, Rothstein 2016).

The patterns discussed in the literature may be summarized in terms of four broad descriptive categories. The first consists of conceptually countable nouns, which normally favour cardinal comparison based on discrete individuals. Ordinary object nouns such as *book*, *chair*, and *dog*, together with human nouns such as *student* and *teacher*, are generally treated as members of this category. The second comprises conceptually uncountable nouns, including prototypical substance nouns such as *water*, *mud*, and *sand*, which normally favour comparison by

continuous quantity, such as volume, weight, or extent, rather than by cardinality. A third category includes flexible nouns, whose count and mass uses involve related but distinct lexical interpretations or conceptualizations, as illustrated by *chicken* and *rock* (Bale and Barner 2009). Finally, furniture-type nouns have been analyzed as conceptually ambiguous because they permit both cardinal and aggregate construals while maintaining the same basic lexical meaning and underlying conceptualization (Grimm and Levin 2012, Rothstein 2016).

Furniture-type nouns have often been treated as a relatively restricted or exceptional category of object-mass nouns (e.g., Erbach et al. 2021). The four descriptive categories outlined above should not, however, be understood as an exhaustive partition of nouns into mutually exclusive conceptual classes. Rather, the categories summarize the dominant patterns identified by the diagnostics reviewed above. In particular, the label *conceptually countable* indicates that a noun normally denotes identifiable individuals and favours cardinal comparison; it does not by itself entail that only cardinal comparison is available. Likewise, the availability of a non-cardinal construal need not require that the noun be reclassified as conceptually uncountable. Section 4.1 returns to the question of whether conceptual countability is better represented in terms of fixed noun classes or in terms of sets of conceptual properties and available construals.

This expectation is understandable in light of the English data on which much of the discussion has been based. In English, overt count constructions, including singular–plural contrasts and direct numeral modification, strongly favour cardinal interpretation. Furniture-type nouns have therefore received particular attention because their grammatical mass behaviour makes the contrast between cardinal and aggregate comparison especially apparent.

The possibility remains, however, that the apparent restriction of conceptual ambiguity to furniture-type nouns partly reflects the grammatical constructions through which conceptual countability has primarily been investigated. If conceptual mass–count properties are broadly grounded in general cognition (Chierchia 2010), nouns typically classified as conceptually countable may also permit aggregate construals under appropriate contextual and grammatical conditions. This possibility does not entail that cardinal comparison ceases to be their typical interpretation.

Japanese provides a particularly informative context in which to examine this possibility. Unlike English, Japanese lacks obligatory singular–plural marking on nouns, and bare nouns are generally number-neutral (Corbett 2000). Numeral modification is instead expressed through classifier constructions (Aikhenvald 2000). Japanese number-neutral bare-noun constructions therefore do not overtly specify singular or plural number and may place fewer grammatical restrictions on the dimension of comparison than English count constructions. This makes them a useful comparative domain for investigating the availability of aggregate construals.

The present paper examines whether Japanese nouns typically classified as conceptually countable—particularly object nouns and human nouns—also permit aggregate comparison while maintaining the same basic lexical meaning and underlying conceptualization. It also considers relative-spatial comparison as a distinct interpretive possibility, although such comparison is not treated independently as evidence of conceptual ambiguity. The issue is therefore not whether these nouns cease to be conceptually countable, but whether the range of interpretations available to them is broader than the conventional classification suggests.

2.5 Terminology

The discussion that follows distinguishes three types of comparison. First, cardinal comparison evaluates a plurality of entities according to the number of individual members it contains. Under this interpretation, the entities are compared as discrete individuals. Thus, a group containing ten fish exceeds a group containing five fish in cardinality, regardless of differences in the size or weight of the individual fish.

Second, aggregate comparison evaluates atomic entities according to their combined physical magnitude rather than their cardinality. The relevant dimension may be total volume, mass, weight, area, or linear extent, depending on the entities and the context. For example, five large fish may exceed ten small fish in combined physical magnitude even though they are fewer in number. In the present paper, the availability of aggregate comparison is treated as evidence for an aggregate construal, in which otherwise identifiable individuals are evaluated collectively along a physical dimension. The term *aggregate* is used as a general label, while the specific dimension is identified whenever possible.

Third, relative-spatial comparison evaluates entities in relation to an external spatial frame, such as a bench, container, enclosure, or available area. This includes comparisons based on how much space the entities occupy, how densely they are arranged, or how much space remains available. For example, one bench may be described as having more people on it in a context where the intended comparison concerns how little seating space remains, even if that bench contains fewer individuals. Unlike aggregate comparison, relative-spatial comparison does not evaluate the overall physical extent of the entities themselves. As an anonymous reviewer points out, the judgement instead depends on how the entities are arranged relative to the surrounding space, with the relevant interpretation supplied by the spatial and pragmatic context, while the entities continue to be represented as distinct individuals.

The distinction between atomicity and the basis of comparison must therefore be maintained. Atomic and non-atomic describe how referents are conceptually organized, whereas cardinal and non-cardinal describe the dimension selected for comparison.⁸ The two contrasts are related but not equivalent. Individually identifiable entities may remain atomic while being compared collectively according to their total weight, volume, area, or spatial extent. Aggregate comparison therefore supports an aggregate construal, but does not independently demonstrate the absence of atomic structure.

The three comparison types and their implications for atomicity are summarized in Table 1.

Table 1. Three Types of Comparison and Their Implications for Atomicity

Comparison type	Basis of comparison	Implications for atomicity
Cardinal comparison	Number of individual entities	Presupposes or foregrounds identifiable atomic individuals
Aggregate comparison	Combined physical magnitude of the entities themselves	Supports collective evaluation of atomic entities; does not necessarily eliminate atomic structure
Relative-spatial comparison	Relation between the entities and an external spatial frame	Does not independently establish a non-atomic or aggregate construal

The distinction is necessary because aggregate and relative-spatial comparisons may yield similar surface judgements while differing in their theoretical implications. Only aggregate comparison is treated here as evidence for an aggregate construal, and neither comparison type independently demonstrates the loss of atomic structure.

Conceptual ambiguity must also be distinguished from grammatical number neutrality. General number permits a nominal to remain unspecified between singular and plural interpretations (Corbett 2000), but this concerns the number of referents and does not independently establish variation in the dimension of comparison. Conceptual

⁸ As an anonymous reviewer suggests, the contrast among dimensions of comparison may also be approached from a cognitive-linguistic perspective. For instance, the availability of alternative construals might be characterized in terms of differences in profiling, attentional focus, or active-zone selection: a cardinal construal foregrounds individuated members, whereas an aggregate construal foregrounds their combined physical extent (Langacker 1987, 1991, 2008). A full cognitive-linguistic analysis lies outside the author's area of specialization and the scope of the present study. Nevertheless, these notions may provide a useful framework for further analysis of the alternative conceptual organizations described here.

ambiguity, as the term is used here, requires a stronger pattern: the same noun, with a stable basic lexical meaning and underlying conceptualization, must permit both cardinal and aggregate comparison (Grimm and Levin 2012, Rothstein 2016).

As an anonymous reviewer points out, the availability of multiple construals does not necessarily entail communicative ambiguity or speaker–hearer conflict.⁹ Context may guide interlocutors towards the same salient dimension of comparison even when alternative construals remain conceptually available. The present analysis therefore concerns the availability of cardinal and aggregate construals and the extent to which grammatical structure makes them accessible, rather than how interlocutors negotiate their interpretations in actual discourse. In the working analysis adopted here, alternative dimensions of comparison are associated with a stable lexical meaning, grammatical construction may affect their relative accessibility, and context favours the interpretation relevant to a particular utterance.

These distinctions guide the analysis of the Japanese observations in Section 3. Number neutrality alone is not treated as evidence of conceptual ambiguity, and relative-spatial comparison is not treated as sufficient evidence for an aggregate construal. The contextual conditions supporting each interpretation must therefore be specified carefully.

3. Preliminary Observations on Japanese Object and Human Nouns¹⁰

The preceding section distinguished cardinal, aggregate, and relative-spatial comparison and clarified their implications for conceptual countability. Within the conventional conceptual classification, object nouns and human nouns are typically treated as conceptually countable because their referents possess identifiable minimal individuals, stable identity, and clear individuation. Furniture-type nouns, by contrast, have received particular attention because they permit both cardinal and aggregate comparison while maintaining the same basic lexical meaning and underlying conceptualization. The present section examines whether comparable interpretive possibilities are also available for Japanese object and human nouns.

If Japanese object and human nouns permit both cardinal and aggregate comparison while maintaining the same basic lexical meaning and underlying conceptualization, this would provide preliminary grounds for extending the discussion of conceptual ambiguity beyond furniture-type nouns. It would also raise the possibility that the existing classification describes dominant interpretive tendencies without fully capturing the range of construals available to individual nouns.

Importantly, the observations presented below do not introduce a new diagnostic of conceptual ambiguity. Rather, they apply the conceptual criteria and comparison-based methodology reviewed in Section 2 to Japanese object and human nouns. The Japanese data are relevant to English linguistics because they may reveal interpretive possibilities that are less readily observable when attention is restricted to English count constructions. In particular, the absence of obligatory singular–plural marking on Japanese bare nouns may provide a useful comparative perspective on whether the apparent restriction of conceptual ambiguity to English furniture-type nouns reflects a

⁹ Speakers and hearers may select different dimensions of comparison, remain unaware of the divergence, or negotiate a shared interpretation in subsequent discourse. These possibilities raise separate questions for pragmatics and discourse analysis and are left for future research, once the relevant conceptual and morphosyntactic properties have been more clearly established.

¹⁰ The discussion in this section draws substantially on Kitaoka (2024). The examples, however, develop and substantially revise observations first reported there, with the relevant contexts and contrasts reformulated for the present analysis.

general lexical tendency or is partly reinforced by English grammatical structure. If conceptual mass–count properties are broadly grounded in general cognition, such cross-linguistic comparison may help separate conceptual tendencies from effects associated with particular grammatical constructions (Chierchia 2010). Relative-spatial interpretations are also considered, but they are not treated independently as evidence of an aggregate construal.

Across the Japanese judgements, the intended aggregate interpretation was readily understood and accepted in context for *hon*, somewhat less readily for *sakana*, and only under stronger contextual support for *hito*, with a corresponding decrease in judged naturalness. The English aggregate readings discussed in Section 4 were understood but not accepted as true on the intended living-animal interpretation.

3.1 Object Nouns

Object nouns provide a direct point of comparison with English furniture-type nouns. Like chairs, tables, or beds, objects such as books possess clear physical boundaries, stable identities, and readily identifiable minimal individuals. Consequently, they satisfy the principal diagnostics of conceptual countability reviewed in Section 2 (Allan 1977, Greenberg 1972, Kitaoka 2024). Under the conventional conceptual classification, nouns such as *hon* ‘book’ are therefore expected to favour quantity comparison primarily according to cardinality.

Recall the example in (2), repeated here as (5).

- (5) Context: Three very thick dictionaries, containing approximately 2,500 pages in total, are placed on Table A. Fifteen books of approximately 100 pages each, containing approximately 1,500 pages in total, are placed on Table B. The books have approximately comparable height and width, but the dictionaries are substantially thicker.

Koko-ni-wa asoko yori hon-ga aru-ga, asoko-no hoo-ga kazu-ga ooi.
 here-at-TOP there than book-NOM exist-but there-GEN side-NOM number-NOM many
 ‘There is more BOOK here than there, but there are more individual books there.’

In the context described above, the first clause may be judged true even though Table A contains fewer individual books than Table B. The continuation explicitly states that the number of books is greater at the other location, thereby excluding a cardinal interpretation of the first clause. The relevant comparison is instead based on a physical property of the books themselves: the three dictionaries have a greater combined thickness and page volume than the fifteen thinner books. This interpretation therefore provides preliminary evidence for aggregate comparison rather than comparison by cardinality. Because the entities remain identifiable individual books throughout, however, the aggregate construal does not by itself imply the loss of atomic structure.

Crucially, this interpretation does not involve any change in the lexical meaning of *hon*. Throughout the comparison, the noun continues to denote books. The interpretation is therefore fundamentally different from familiar cases of count-to-mass coercion, in which a count noun receives a substance interpretation (e.g., *There is dog all over the road*; Pelletier 1975). Nor does the sentence involve lexical ambiguity between two unrelated meanings of *hon* in the sense of homonymy discussed in standard ambiguity research (Cruse 1986, Zwicky and Sadock 1975). Rather, the same lexical denotation is evaluated along two different dimensions of comparison. Under one construal, quantity is determined by the number of individual books; under the other, it is determined by their combined physical extent. The books remain identifiable atomic individuals under both construals; the aggregate interpretation does not independently imply the loss of atomic structure.

A comparable pattern is also available with an animal noun such as *sakana* ‘fish,’ as shown in (6).

(6) Context: Pond A contains three very large fish whose combined weight exceeds that of fifteen much smaller fish in Pond B.

(?) *Koko-ni-wa asoko yori sakana-ga iru-ga, asoko-no hoo-ga kazu-ga ooi.*
 here-at-TOP there than fish-NOM exist-but there-GEN side-NOM number-NOM many
 ‘There are more FISH here than there, but there are more individual fish there.’

In this context, the first clause can be understood in terms of the combined bodily weight or volume of the fish, while the continuation explicitly assigns greater cardinality to the other pond. The example therefore provides a second preliminary case of aggregate comparison involving identifiable atomic individuals. Crucially, *sakana* retains its living-animal interpretation throughout; the aggregate construal does not involve the mass interpretation in which the noun denotes fish as food or meat. The informants nevertheless consistently reported that the aggregate interpretation was somewhat less readily available with *sakana* ‘fish’ than with *hon* ‘book’.

This semantic behaviour is comparable to that observed for English furniture-type nouns. In both cases, speakers compare collections of discrete objects while attending either to the number of individual members or to a physical property of the entities evaluated collectively. The aggregate interpretation therefore reflects a different dimension of comparison applied to the same lexical denotation rather than a change in lexical meaning.

Importantly, this observation is unexpected under the conventional conceptual classification. Unlike *furniture*, *book* has not generally been regarded as conceptually ambiguous. The informants’ judgements provide preliminary support for an interpretation of (5) in which *hon* permits both cardinal and aggregate comparison while maintaining the same basic lexical meaning and underlying conceptualization, a pattern comparable to that identified for furniture-type nouns by Grimm and Levin (2012) and Rothstein (2016). This does not require the books to lose their atomic structure; rather, the same identifiable individuals are evaluated along different dimensions of comparison.

3.2 Human Nouns

Human nouns provide a particularly informative case. Human beings may be regarded as prototypical members of the conceptually countable category: they possess discrete physical boundaries, persistent identities, and readily identifiable individual units. If human nouns nevertheless permit aggregate comparison while maintaining the same basic lexical meaning and underlying conceptualization, this would provide further preliminary grounds for questioning whether conceptual ambiguity is restricted to exceptional lexical classes.

To examine this possibility, consider the controlled contrast in (3), repeated here as (7).

(7) Context: One large open area contains three sumo wrestlers, while another contains six small children. The combined bodily volume and weight of the three wrestlers are substantially greater than those of the six children.

? *Koko-ni-wa asoko yori hito-ga iru-ga, asoko-no hoo-ga kazu-ga ooi*
 here-at-TOP there than person-NOM exist-but there-GEN side-NOM number-NOM many
 ‘There are more PERSON here than there, but there are more individuals there.’

The continuation in (7) explicitly assigns greater cardinality to the location containing the children. If the first clause is nevertheless accepted as true of the location containing the sumo wrestlers, its interpretation cannot be based on the number of individuals. It may instead involve aggregate comparison based on the combined bodily volume or weight of the people themselves. The informants accepted this interpretation only when the contrast was made explicit, but they consistently judged the aggregate interpretation to be much less natural with *hito* ‘person’ than with *hon* ‘book’ or *sakana* ‘fish’. As in the preceding examples, the people remain identifiable atomic individuals; the aggregate interpretation does not independently imply a non-atomic conceptualization.

As in the previous examples, the lexical meaning of *hito* remains stable. The noun continues to denote human beings under both interpretations. There is no lexical ambiguity, metonymic shift, or coercion into a different semantic category. Rather, quantity is evaluated along two different dimensions while the lexical denotation remains unchanged. Under the cardinal interpretation, the comparison is based on the number of individuals; under the aggregate interpretation, it is based on their combined bodily volume or weight. The latter interpretation therefore concerns a physical property of the people themselves, rather than their relation to an external spatial frame.

A useful contrast is provided by a context in which spatial occupancy is made highly salient but the relevant aggregate property of the individuals is held constant (Kitaoka forthcoming). Consider (8):

- (8) Context: Four people are seated on Bench A in a posture that leaves virtually no room for another passenger, whereas six people are seated closely together on Bench B, leaving space for two more passengers. Assume further that the individuals on the two benches are comparable in body size.

* <i>Benti-A-ni</i>	<i>Benti-B-yori</i>	<i>hito-ga</i>	<i>iru-ga,</i>	<i>Benti-B-no</i>	<i>hoo-ga</i>
bench-A-at	bench-B-than	person-NOM	exist-but	bench-B-of	side-NOM
<i>kazu-ga</i>	<i>ooi.</i>				
number-NOM	many				

(Intended) ‘Bench A has more people than Bench B, but Bench B has a greater number of people than A.’

Despite the greater degree of spatial occupancy on Bench A, none of the informants accepted the sentence on the intended non-cardinal interpretation. This contrast indicates that making occupied or remaining space salient is not by itself sufficient to support the interpretation found in (7). The tentative reading in (7) is therefore better analyzed in terms of an aggregate property of the individuals themselves, such as their combined bodily volume, rather than simply in terms of their spatial arrangement within an external frame.

The theoretical significance of the *hito* example therefore lies primarily in its status as a boundary case. The aggregate interpretation is substantially less natural than with *hon* ‘book’ or *sakana* ‘fish’ and requires strong contextual support, but the contrast between (7) and the spatial-occupancy case in (8) suggests that its availability cannot be attributed simply to the salience of occupied or remaining space. Rather, the relevant reading appears to depend on an aggregate physical property of the individuals themselves. This pattern suggests that the accessibility of aggregate construals may vary across noun classes and contextual conditions and calls for further controlled investigation.

3.3 Shared Patterns and Differences

The examples discussed above reveal a notable parallel between Japanese nouns conventionally treated as conceptually countable and English furniture-type nouns. Despite belonging to lexical classes traditionally

regarded as conceptually countable, the Japanese object and human nouns examined here show at least some possibility of both cardinal and aggregate comparison while maintaining the same basic lexical meaning and underlying conceptualization.

First, the nouns clearly satisfy the traditional diagnostics for conceptual countability reviewed in Section 2. Books, fish, and people possess identifiable minimal individuals, stable identities, and clear physical boundaries. Nothing in the present discussion challenges their classification as conceptually countable.

Second, quantity comparison may not be restricted to cardinality. Under suitably explicit discourse conditions, the same nouns can receive interpretations based on aggregate properties such as combined physical volume, thickness, or weight. The relevant dimension of comparison may therefore shift while the lexical denotation remains unchanged. The naturalness of this interpretation, however, differs across the nouns examined: it is most readily available with *hon* ‘book’, less readily available with *sakana* ‘fish’, and much less natural with *hito* ‘person’.

Third, the alternative interpretations do not appear to arise through lexical ambiguity or semantic coercion. Unlike ordinary count-to-mass coercion, the nouns do not acquire substance readings. Rather, the same lexical denotation is evaluated along different dimensions of comparison. The entities remain identifiable atomic individuals under the aggregate construal; the interpretation therefore does not require a shift to a non-atomic conceptualization. Speakers may attend either to the number of the individuals or to a physical property of those individuals evaluated collectively without changing the basic meaning of the noun. The contrast with the bench context discussed in (8) further indicates that such non-cardinal interpretations are not licensed simply by making spatial occupancy salient; the relevant comparison must be distinguished from relative-spatial construals based on an external spatial frame.

Taken together, these observations show a partial but theoretically relevant similarity to the patterns identified for English furniture-type nouns by Grimm and Levin (2012) and Rothstein (2016). In both cases, nouns denoting identifiable individuals may permit comparison by cardinality or by an aggregate physical property while retaining a stable lexical meaning. The Japanese cases should not yet be treated as fully equivalent, however, since the aggregate interpretation varies substantially in naturalness and remains especially tentative with *hito* ‘person’. Nevertheless, the observations raise the possibility that the relevant flexibility is not confined to exceptional lexical items such as *furniture*, but may extend, to differing degrees, to ordinary object nouns and perhaps even human nouns.

3.4 Interim Generalization

The preliminary observations in this section suggest that the conventional conceptual classification may underestimate the range of nouns for which aggregate comparison is possible. The Japanese nouns examined here continue to satisfy the traditional diagnostics of conceptual countability, yet *hon* ‘book’ and *sakana* ‘fish’ permit aggregate interpretations under appropriately controlled contexts while retaining stable lexical meanings and identifiable atomic individuals. The corresponding interpretation with *hito* ‘person’ is considerably less natural and requires further elicitation and scrutiny. The present observations therefore raise the possibility that conceptual countability and conceptual ambiguity are not mutually exclusive properties.

This possibility does not require abandoning the distinction between conceptually countable and conceptually uncountable nouns. Rather, it suggests that the diagnostics of conceptual countability may not by themselves determine whether a noun can also support aggregate comparison. If confirmed through systematic investigation, the Japanese pattern would motivate reconsideration of the extent to which the flexibility associated with English furniture-type nouns is lexically restricted. Section 4 develops a possible explanation in terms of grammatical

visibility: grammatical structure may make particular dimensions of comparison more or less accessible without determining the underlying conceptual possibilities.

4. Discussion: Grammatical Visibility and Conceptual Interpretation

The Japanese observations have implications beyond the description of Japanese. Influential accounts of conceptual countability, quantity comparison, and furniture-type nouns have been developed largely through English data (Bale and Barner 2009, Barner and Snedeker 2005, Grimm and Levin 2012, Rothstein 2016). Japanese provides a grammatically different environment in which nouns that denote clearly identifiable individuals occur without obligatory singular–plural marking. The comparison therefore makes it possible to ask whether patterns attributed to the conceptual or lexical properties of English nouns may partly reflect the grammatical constructions in which those nouns normally appear. The present section develops this possibility cautiously. It does not claim that the Japanese observations establish a causal relationship between number marking and interpretation. Rather, it formulates the hypothesis that grammatical constructions may affect the accessibility and salience of conceptually available dimensions of comparison.

4.1 Rethinking Conceptual Classification

The discussion in Sections 2 and 3 suggests that two properties should be kept analytically distinct. The first is whether the entities denoted by a noun possess identifiable minimal individuals, stable identities, and physical boundaries. These properties have traditionally been used to diagnose conceptual countability (Allan 1977, Bale and Barner 2009, Barner and Snedeker 2005, Greenberg 1972). The second is whether the same noun, with a stable basic lexical meaning and underlying conceptualization, permits comparison by both cardinality and an aggregate physical property. Grimm and Levin (2012) and Rothstein (2016) show that these properties converge in English furniture-type nouns: *furniture* denotes identifiable objects, but quantity comparison may concern either their number or their combined physical extent.

This pattern does not require the distinction between conceptually countable and conceptually uncountable nouns to be abandoned. It instead suggests that the diagnostics of conceptual countability may not independently determine all possible dimensions of quantity comparison. A noun may denote atomic individuals and strongly favour cardinal comparison while still permitting an aggregate construal in a sufficiently supportive context. On this analysis, conceptual countability and conceptual ambiguity are not necessarily competing classifications. The former concerns the conceptual status of the entities denoted, whereas the latter, as defined in this paper, concerns the availability of more than one dimension of comparison while the noun's basic lexical meaning and underlying conceptualization remain stable.

The distinction also clarifies the position of flexible nouns. In examples such as count *chicken* denoting a living bird and mass *chicken* denoting meat, the grammatical alternation is associated with a change in lexical interpretation or conceptualization (Bale and Barner 2009, Chierchia 2010). By contrast, the aggregate reading considered here leaves the animal interpretation of *sakana* unchanged; it does not derive a food or substance reading. A flexible noun may therefore have one interpretation that participates in conceptual ambiguity and another that is conceptually uncountable. Flexibility and conceptual ambiguity are consequently related but distinct phenomena.

The resulting classification is therefore less categorical than a system in which every noun is assigned a single, exclusive conceptual mode of quantification. Nevertheless, the present observations do not show that every conceptually countable noun permits aggregate comparison, nor that the relevant interpretation is equally accessible across nouns. The contrast among *hon*, *sakana*, and *hito* instead suggests that availability and naturalness may vary considerably by lexical class. The immediate contribution is therefore limited but significant: conceptual ambiguity may be better understood in terms of gradient accessibility of alternative comparison dimensions than as a simple binary distinction between nouns that permit or exclude such interpretations.

4.2 Grammatical Visibility in English and Japanese

The question that follows is why aggregate interpretations have been discussed most prominently in relation to English furniture-type nouns rather than ordinary object or human nouns. The present paper proposes that part of the answer may lie in grammatical visibility. Grammatical visibility refers to the relative accessibility and salience of a conceptually available dimension of comparison in the interpretation of a particular nominal construction. A dimension is highly visible when the construction overtly encodes it or strongly privileges it as the default basis of comparison. It is weakly visible when the construction does not overtly encode it and its interpretation requires stronger contextual support. Visibility is thus a gradient property of a construction relative to a particular conceptual dimension; it is not an invariant property of a noun or an entire language.

(9) Grammatical Visibility Hypothesis

Grammatical constructions may differ in how strongly they privilege particular conceptually available dimensions of comparison. These differences may affect the accessibility, salience, and preference of an interpretation without determining whether that interpretation is conceptually possible.

The hypothesis in (9) distinguishes conceptual availability from interpretive preference. A dimension of comparison may be conceptually available without being the most salient, most natural, or most frequently selected interpretation of a particular expression. Conversely, a strong preference for one interpretation does not by itself show that alternative dimensions are absent from conceptual representation. The proposal therefore concerns the relationship between grammatical form and interpretive accessibility: grammatical structure may foreground one dimension without creating it and background another without rendering it conceptually impossible. The proposal is not intended as a general theory of grammatical organization, but as a construction-relative hypothesis concerning how linguistic form may affect the accessibility and salience of conceptually available dimensions.¹¹

¹¹ An anonymous reviewer points out that the present discussion may also be situated within a broader perspective on lexicalization. Languages differ in the extent to which particular conceptual distinctions are given independent lexical or morphosyntactic expression, and such differences may be understood in terms of whether a conceptual distinction is made more or less lexico-grammatically visible. This perspective is compatible with the present proposal, but addresses a broader question than the construction-relative notion of grammatical visibility developed here. The present study focuses specifically on how particular nominal and comparative constructions may foreground or background dimensions of quantity comparison, rather than on cross-linguistic patterns of lexicalization as such. A systematic investigation of the relationship between lexicalization, grammatical encoding, and the visibility of mass–count-related conceptual distinctions would therefore constitute an important direction for future research and would contribute to a deeper understanding of the mass–count distinction and nominal semantics. I am grateful to the anonymous reviewer for drawing attention to this broader perspective.

English count constructions provide a plausible environment in which cardinality is highly visible. Ordinary English count nouns participate in singular–plural contrasts, combine directly with numerals, and occur with count-sensitive expressions such as *many*, *few*, *each*, and *every*. These grammatical properties explicitly encode or presuppose individuation and number (Allan 1977, Borer 2005, Greenberg 1972, Rothstein 2010). In a plural expression such as *more books*, the plural morphology overtly presents the comparison as involving a plurality of books. It is therefore reasonable to hypothesize that cardinality will ordinarily be the most accessible dimension of comparison, particularly in the absence of a context that makes an alternative physical property relevant.

Furniture-type nouns occur in a different English grammatical environment. Although they denote identifiable objects, they pattern morphosyntactically as mass nouns: they normally resist plural marking and direct numeral modification and combine with mass-sensitive quantity expressions (Chierchia 1998b, Rothstein 2010, 2016, Landman 2011). Their grammatical form consequently does not overtly encode the number of individual objects. This does not prove that the absence of count morphology produces aggregate comparison. It does, however, help explain why the availability of both cardinal and aggregate dimensions is particularly noticeable with these nouns. Their conceptual atomicity contrasts visibly with their mass syntax, and the construction does not consistently select cardinality in the way that an ordinary plural count construction may do.

Japanese bare nouns provide a further contrast. Japanese does not require ordinary nouns to be marked as singular or plural, and bare nouns may be number-neutral, a pattern commonly described as general number (Corbett 2000, Kitaoka 2024). Numeral modification is normally mediated by classifiers rather than expressed through the direct combination of a numeral and a noun (Aikhenvald 2000, Kitaoka 2024, Li 2013). A bare noun such as *hon* therefore does not by itself overtly specify whether one book or multiple books are involved. In this limited structural sense, the bare-noun construction gives number and cardinality less overt grammatical expression than an English plural count construction.

The proposed consequence must be stated cautiously. The Japanese observations are compatible with the possibility that reduced overt specification of number leaves greater interpretive scope for contextually relevant aggregate dimensions. They do not demonstrate that Japanese speakers access conceptual representations “more directly,” that Japanese grammar imposes fewer constraints in general, or that aggregate interpretations are automatically available in Japanese. Indeed, the substantial differences in naturalness among *hon*, *sakana*, and *hito* show that lexical and contextual factors remain important. The claim is only that a number-neutral bare construction may make an aggregate interpretation comparatively easier to detect or sustain than a construction that overtly marks a plurality and thereby privileges cardinality.

The comparison should therefore be formulated at the level of particular constructions and conceptual dimensions rather than whole languages. Grammatical visibility is not a global property by which one language can simply be characterized as more or less visible than another; rather, a particular construction may make one dimension, such as cardinality, more salient while leaving another less overtly expressed. English mass constructions may leave cardinality weakly expressed, while English plural count constructions make it highly visible. Japanese bare nouns are number-neutral, whereas numeral-classifier constructions explicitly impose units of counting or measurement and should make the selected dimension correspondingly more salient. The relevant prediction is thus not that Japanese generally permits broader conceptualization, but that the accessibility of a particular dimension will vary according to how the construction grammatically packages number, individuation, and measurement.

A further qualification concerns the comparative constructions themselves. The preliminary observations suggest that the accessibility of cardinal and aggregate interpretations may depend not only on nominal number marking but also on the lexical and constructional material used to express comparison.

Consider first English counterparts of the Japanese examples:

- (10) Context: Pond A contains three very large fish whose combined bodily weight is greater than that of fifteen much smaller fish in Pond B.

There are more fish in Pond A than in Pond B, but there are more individual fish in Pond B.

- (11) Context: Ranch A contains four very large cattle whose combined bodily weight is greater than that of seven much smaller cattle in Ranch B.

There are more cattle in Ranch A than in Ranch B, but there are more individual cattle in Ranch B.

Two native speakers of English consulted informally uniformly did not accept the first clauses of (10) and (11) on an aggregate interpretation. For them, *more fish* and *more cattle* required comparison by cardinality when the nouns denoted living animals. A non-cardinal interpretation was available only under a substance or meat construal. This contrasts with the general compatibility of *more* with both count and mass expressions, as in *more books* and *more water*. The contrast therefore cannot be attributed simply to the lexical item *more* being restricted to cardinal comparison.

One possibility is that the English *more N* construction contributes an interpretive preference that cannot be attributed to the lexical meaning of *more* alone. Although *more* combines with both plural count nouns and mass nouns, as in *more books* and *more water*, the construction may select a comparison dimension partly in accordance with the grammatical properties of the nominal expression. With a plural count noun, *more N* may strongly privilege cardinality; with a mass noun, it may instead favour an aggregate measure such as volume or weight. This possibility is compatible with constructional approaches in which grammatical patterns are conventional form–meaning pairings and may contribute interpretive properties not fully predictable from their individual components (Goldberg 1995, 2006). The present observations do not establish that English *more N* has such a constructional meaning, but they indicate that the expression should not be treated as a semantically neutral diagnostic of all conceptually available dimensions of comparison.

A related contrast appears within Japanese. The examples in (5) through (7) express comparison through *yori* ‘than’ together with the existential predicates *aru* and *iru*, without an overt quantity adjective corresponding directly to English *more*. When an explicit quantity expression such as *ooku* or *takusan* ‘many/much; a large quantity’ is added, however, cardinality becomes more strongly preferred. For example, a sentence corresponding approximately to ‘There are more books on Shelf B than on Shelf A’, with *hon-ga ooku/takusan aru*, is more naturally interpreted in terms of the number of books than their combined physical extent. Thus, even expressions compatible with both count and mass nouns may introduce construction-specific preferences concerning the relevant dimension of comparison. More generally, this possibility is compatible with constructional approaches in which interpretive preferences may arise from the interaction between general grammatical patterns and the lexical and structural properties of particular constructions (Goldberg 1995, 2006).

These observations suggest that grammatical visibility may be determined not only by nominal morphology but by the comparative construction as a whole. English plural marking, Japanese number neutrality, the presence or absence of an overt quantity expression, and the lexical choice of comparative predicate may jointly influence which dimension of comparison is privileged. The Grammatical Visibility Hypothesis should therefore be formulated at the level of constructions rather than individual morphemes or entire languages.

4.3 Implications for English Nominal Semantics and Cross-Linguistic Comparison

The principal significance of the Japanese observations for English linguistics lies in their methodological implication. English data alone do not always allow lexical-conceptual properties to be separated from the effects of English count syntax. If ordinary object nouns normally occur in constructions that overtly encode singular or plural number, a strong cardinal interpretation may reflect both the noun's denotation and the construction in which it appears. Japanese bare nouns provide a comparative environment in which similarly atomic denotations are expressed without obligatory singular-plural marking. Their interpretation can therefore reveal possible dimensions of comparison that may be difficult to identify when English grammatical structure strongly privileges number.

This perspective invites a reassessment of what English furniture-type nouns establish. Previous work has shown that nouns such as *furniture* are conceptually atomic despite their mass syntax and that quantity comparison may involve either cardinality or aggregate extent (Bale and Barner 2009, Barner and Snedeker 2005, Grimm and Levin 2012, Rothstein 2016). The Japanese observations do not reduce the importance of this English pattern. Rather, they raise the possibility that furniture-type nouns are especially revealing instances of a capacity that may extend beyond that lexical class. Their special status may lie partly in the fact that English mass syntax does not overtly foreground cardinality, allowing multiple dimensions of comparison to become comparatively visible.

A corresponding implication concerns ordinary English count nouns. It would be unwarranted to infer directly from the Japanese judgements that English expressions such as *more books*, *more fish*, or *more people* possess equally available aggregate readings. English plural marking, lexical conventions, and construction-specific semantics may produce a much stronger cardinal preference. The Japanese cases instead challenge the stronger inference that an overwhelmingly preferred cardinal reading proves the conceptual impossibility of aggregate comparison. Availability, preference, salience, and naturalness must be investigated separately. A weak interpretation that requires explicit contextual support is not equivalent to a default reading, but neither is it necessarily absent from the conceptual possibilities associated with the noun.

This distinction is particularly important for human nouns. The aggregate interpretation of *hito* in Section 3 was much less natural than those of *hon* and *sakana*. The example therefore cannot support the conclusion that human nouns freely permit aggregate comparison. Its value lies instead in identifying a boundary case. If systematic elicitation confirms even limited aggregate comparison with human nouns, the result would suggest that the strong association between human-denoting nouns and cardinality is gradient rather than absolute. If the reading fails under controlled testing, that outcome would identify a principled restriction on the proposed extension. Either result would refine the analysis of the conceptual and grammatical factors governing quantity comparison.

The informal rejection of aggregate readings for *more fish* and *more cattle* also shows that the Japanese pattern cannot simply be transferred to English. At face value, these judgements may count against the strongest version of the proposal that the same aggregate interpretations remain readily available across languages. Alternatively, they may show that English *more* constructions strongly constrain the selected comparison dimension. Distinguishing these possibilities requires comparison across several English constructions rather than reliance on *more N* alone.

Cross-linguistic evidence thus contributes to English nominal semantics in two directions. First, it tests whether classifications developed from English identify genuinely general conceptual categories. Second, it can expose effects of English grammatical packaging that are difficult to observe from English alone. This role is consistent with previous quantity-judgement research comparing English with Japanese, Mandarin, and other classifier languages, which has used cross-linguistic contrasts to distinguish conceptual individuation from language-

specific morphosyntax (Bale and Barner 2009, Barner and Snedeker 2005, Cheung, Li, and Barner 2012, Inagaki and Barner 2009). The present paper extends that comparative logic from the distinction between individuals and substances to the dimensions along which identifiable individuals may be compared.

The broader prediction is that noun classes and constructions may form a gradient pattern. Aggregate comparison may be comparatively accessible with furniture-type nouns, available but context-dependent with some ordinary object or animal nouns, and highly marked or unavailable with some human nouns. Grammatical structure may shift these tendencies without eliminating lexical differences. The relevant contrast is therefore not simply whether conceptual ambiguity is present or absent, but how accessible and natural an alternative dimension of comparison is for a particular noun in a particular construction. Such a perspective also allows the Japanese observations to be integrated with English analyses without assuming identical judgements across the two languages.

4.4 Limitations of the Present Study

The argument developed here is constrained by the preliminary status of the data. The Japanese judgements are based on the author's observations and informal consultation with three additional native speakers. The materials were not administered as a controlled experiment, and the speakers were not sampled to represent regional, generational, or other sources of variation. The observations can therefore establish only that the relevant interpretations were identified by the consulted speakers under particular contextual conditions. They do not establish their prevalence in the wider speech community, their processing accessibility, or statistically reliable differences among nouns and constructions.

A second limitation concerns the strength of contextual support. The examples deliberately contrast cardinality with aggregate properties by specifying differences in number, thickness, volume, or weight and by adding a continuation that explicitly assigns greater cardinality to the other location. This design helps exclude a cardinal interpretation of the initial clause, but it may also encourage speakers to accommodate a contextually salient comparison scale. The current observations do not independently determine whether the resulting reading reflects a stable lexical-conceptual possibility, a constructionally available interpretation, or a highly supported pragmatic accommodation. The preservation of the noun's lexical meaning distinguishes these cases from straightforward coercion, but it does not by itself resolve the source or representational status of the aggregate interpretation.

A third limitation is that aggregate and relative-spatial comparison must be distinguished more rigorously. Aggregate comparison evaluates the entities collectively according to a physical property such as combined weight, volume, area, or linear extent. Relative-spatial comparison evaluates them in relation to an external spatial frame, such as the space remaining on a bench or the density of people within an area. The contrasting examples in (7) and (8) in Section 3.2 provide preliminary evidence that spatial occupancy alone is not sufficient to license the relevant non-cardinal interpretation. Nevertheless, more systematic manipulation of external spatial frames, density, occupied space, and aggregate physical properties will be necessary to establish the distinction under controlled conditions.

A fourth limitation concerns the grammatical visibility hypothesis itself. The present study does not directly compare Japanese bare nouns, Japanese numeral-classifier constructions, English overt plurals, English zero plurals, and English mass constructions under matched experimental conditions. It therefore does not show that reduced overt number marking increases the availability, preference, or naturalness of aggregate comparison. The Japanese observations motivate the hypothesis, and existing analyses provide an independently grounded account

of the grammatical differences between the languages, but the proposed connection between those grammatical differences and interpretation remains to be tested.

Finally, the paper does not establish that the relevant conceptual representations are identical across languages. The assumption that conceptual mass–count properties have a substantial language-independent basis is supported by previous cross-linguistic research (Chierchia 2010; Inagaki and Barner 2009; Cheung, Li, and Barner 2012), but this does not entail complete invariance in lexical meaning, conventional construal, or processing preference. Grammatical visibility should therefore be treated as one possible source of cross-linguistic difference alongside lexical, pragmatic, cultural, and task-related factors.

A further limitation concerns the diagnostic construction. The Japanese examples use *yorī* ‘than’ with existential predicates and no overt quantity adjective, whereas the English counterparts use *more*. The two sentence types are therefore not structurally matched. Moreover, adding *ooku* or *takusan* to the Japanese examples appears to increase the preference for cardinal comparison. The current cross-linguistic contrast may consequently reflect differences in comparative construction as well as differences in nominal number marking. No conclusion about English–Japanese differences can be drawn until these variables are independently controlled.

4.5 Implications for Future Research

The immediate priority is controlled elicitation of the Japanese interpretations. Quantity-judgement tasks should independently manipulate cardinality and aggregate properties such as weight, physical volume, thickness, area, and linear extent. Participants should be asked both to judge comparative sentences and to indicate the basis of their judgements. Graded ratings would help distinguish mere availability from naturalness and preference, while forced-choice tasks could test which dimension is selected when cardinality and aggregate quantity conflict. Object, animal, human, furniture-type, substance, and flexible nouns should be compared systematically.

Experimental materials should also separate aggregate from relative-spatial interpretation. The same entities could be presented either without a bounded external frame or within containers and spaces of varying size. If a non-cardinal reading persists when container capacity, remaining space, and density are controlled, this would provide stronger grounds for analysing it as aggregate comparison based on an inherent physical property of the entities. If it emerges only in spatial-decision contexts, an analysis in terms of relative-spatial comparison or pragmatic scale accommodation would be more appropriate.

A second line of research should compare Japanese constructions. Number-neutral bare nouns can be tested against nouns bearing plural markers and against numeral-classifier expressions. Because classifier constructions explicitly select units of counting or measurement, they provide a useful means of testing whether grammatical individuation increases the preference for cardinal comparison. Such comparisons would also connect the present semantic proposal with analyses of Japanese nominal architecture in which bare nouns, plurals, and classifier constructions differ in their realization of number and individuation (Kitaoka 2024; see also Aikhenvald 2000, Li 2013).

The central English experiment should use matched materials comparing overtly plural count nouns, zero-plural nouns, and relevant mass nouns. English nouns such as *fish*, *deer*, and *sheep* are particularly useful because their plural forms lack an overt plural suffix while continuing to denote conceptually countable individuals. If phonologically and morphologically overt plural marking contributes to the visibility of cardinality, aggregate interpretations might be more accessible with zero plurals than with ordinary overt plurals. This remains a prediction, not supporting evidence for the present paper, and it must be tested against lexical differences among the nouns.

Matched English-Japanese experiments would provide the strongest test of grammatical visibility. The same visual arrays and comparison dimensions could be paired with English plural count constructions, English mass constructions where available, Japanese bare nouns, and Japanese classifier constructions. Such a design would permit separate examination of at least four questions: whether an aggregate reading is available, how natural it is, how frequently it is selected, and how quickly it is processed. These measures should not be conflated, since a reading may be conceptually possible but not preferred, available only under supportive contexts, or associated with greater processing cost.

The visibility hypothesis would be strengthened if constructional differences systematically predicted these measures after lexical and contextual variables were controlled. It would need to be revised if aggregate interpretations depended only on particular nouns or discourse scenarios, with no reliable effect of number marking or classifier structure. Either outcome would be informative. The present study's principal contribution is therefore not to establish that grammar determines conceptual interpretation, but to identify a cross-linguistically motivated distinction between conceptual availability and grammatical visibility and to formulate an empirical program through which that distinction can be evaluated.

Future experiments must first establish which comparative expressions provide the least constructionally biased test of comparison dimensions in each language. English *more N*, Japanese *N-ga ooku aru*, Japanese *N-ga takusan aru*, and Japanese existential comparisons with *yor*i should not be assumed to be semantically equivalent. Initial norming studies should test the interpretations favoured by each construction with canonical count nouns, canonical mass nouns, furniture-type nouns, and flexible nouns. Only after these constructional preferences have been established should the same forms be used to compare object, animal, and human nouns.

A controlled study should cross at least three variables: noun class, grammatical number or individuation, and comparative construction. In English, *more N*, comparative measure phrases, and paraphrases such as *a greater amount of N* should be compared. In Japanese, bare existential comparisons should be tested against sentences containing *ooku*, *takusan*, numeral-classifier expressions, and explicit measure phrases. This would make it possible to determine whether a cardinal preference arises from the noun, the number morphology, the comparative expression, or their interaction.

5. Conclusion

This paper has reconsidered the relationship between conceptual countability and quantity comparison through preliminary observations from Japanese. The central proposal is that a noun's satisfaction of the traditional diagnostics of conceptual countability does not necessarily determine all the dimensions along which its referents may be compared. Japanese nouns such as *hon* 'book' and *sakana* 'fish' denote identifiable atomic individuals, yet the contexts examined here permit interpretations based on aggregate physical properties while the nouns retain the same basic lexical meaning and underlying conceptualization. The corresponding interpretation with *hito* 'person' was considerably less natural and remains especially tentative. The Japanese observations therefore raise the possibility that conceptual countability and conceptual ambiguity are not mutually exclusive and that the accessibility of alternative comparison dimensions may vary gradiently across lexical classes.

This possibility has direct relevance to English nominal semantics. Influential accounts of conceptual countability and furniture-type nouns have been developed primarily from English quantity judgements and English mass-count morphology (Bale and Barner 2009, Barner and Snedeker 2005, Grimm and Levin 2012, Rothstein 2016). Because ordinary English count nouns normally occur in constructions that overtly mark singular

or plural number, English data alone may not always distinguish the conceptual properties of the noun from the interpretive effects of count syntax. Japanese number-neutral bare nouns provide a comparative environment in which clearly individuated entities are expressed without obligatory singular–plural marking. The importance of the Japanese data thus lies not only in documenting a Japanese pattern, but also in revealing a possible limitation of classifications derived mainly from English: a strong cardinal preference in an English count construction need not, by itself, demonstrate the conceptual impossibility of aggregate comparison.

To capture this possibility, the paper has proposed the notion of grammatical visibility. Grammatical visibility is the relative accessibility and salience of a particular conceptual dimension in the interpretation of a given grammatical construction. English plural count constructions may strongly privilege cardinality, while English mass constructions and Japanese number-neutral bare-noun constructions may leave cardinality less overtly encoded. The preliminary contrasts involving English *more N* and Japanese expressions with *ooku* or *takusan* further suggest that interpretive preferences may arise from the interaction of nominal marking, quantity expressions, predicates, and comparative construction. The proposal therefore does not locate visibility in number morphology alone. It is a construction-relative hypothesis about how grammatical form may foreground one comparison dimension and background another without determining the full range of conceptual possibilities. On this view, grammar does not determine conceptual possibility, but may differentially foreground particular dimensions of comparison and thereby shape their accessibility and salience.

The present study does not empirically demonstrate this hypothesis. The Japanese judgements are preliminary, the contexts provide substantial support for the intended interpretations, and no matched comparison has yet been conducted among Japanese bare nouns, Japanese constructions containing *ooku* or *takusan*, English *more N* constructions, English overt plurals, English zero plurals, and English mass nouns. The informal rejection of aggregate readings for English *more fish* and *more cattle* may count against a strong cross-linguistic generalization, but it may alternatively reflect a construction-specific preference introduced by English *more N*. These possibilities cannot be distinguished until the relevant comparative constructions have been independently normed and tested. Controlled English–Japanese studies should therefore examine not only noun class and number marking, but also the quantity expression, predicate, and comparative construction used to elicit the judgement.

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Examples in: English

Applicable Languages: English and Japanese

Applicable Level: Tertiary