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SEEING IT IN MORE THAN ONE WAY – CAN THE CATEGORIES OF COUNT AND MASS NOUNS IN ENGLISH BE SEEN AS PROTOTYPE CATEGORIES?

This article advances a specific approach to the categories of count and mass nouns in English. The proposal is to treat them as prototype categories, that is, as revealing the prototype effects (e.g. Geeraerts 2006 [1989]). The article aims to check whether such an approach is viable, and what consequences it would have, e.g. which nouns would instantiate the prototypes, and which would be marginal for the categories. This is done through an analysis of 30 count and 30 mass nouns that are used in over 1,700 utterances produced by native speakers of English.

Keywords: category, corpus analysis, count and mass nouns, prototype effects, semantic extension

1. Approaches to the count and mass category in English

The relationship between the categories of count and mass nouns in English can be described in at least several different manners. Probably the most common one is the division into two separate categories – that of count and that of mass nouns (Palmer 1984: 196-197; Quirk et al. 1985: 245-247; Huddleston and Pullum 334-335, etc.). Unfortunately, the observation that typically follows such a division is that many nouns can belong to both of these categories, which seriously undermines the vision of the two categories as *separate*.

Other manners of seeing this dichotomy exist, too. Some scholars assume that there are not two categories but, in fact, much more, and they all form a certain continuum of count and mass subcategories. Adopting different methodologies, several such proposals have been formulated. Allan (1980), for instance, suggested 8 of them; Wierzbicka (1988: 499-560) – 14, and Goddard

(2010: 132-165), elaborating on Wierzbicka's proposal, proposed 18 such categories.

A reverse method of looking at this problem has also been formulated. Its conclusion is that it is pointless to talk about different categories because the count-mass distinction could and, perhaps, should be ignored altogether. What matters instead is all the syntactic elements: articles, determiners, or quantifiers, which determine the nouns' ultimate property. As Bunt (1979: 249) put it, "the count/mass distinction is not really a distinction among words, but a distinction among ways of using them" (cf. also Allan 1980; Jackendoff 1991; Koslicki 1999; Borer 2005, etc.).

However, while undoubtedly challenging and intriguing, from the practical perspective such approaches might only lead to more confusion in understanding the categories of count and mass nouns. Since I am deeply convinced that it is possible to talk about them in a consistent and, at the same time, a realistic way, the goal of the article is to check whether a still different manner of looking at them is possible – as prototype categories.

This study scrutinises 60 nouns, 30 of which are classified by reputable English dictionaries as possessing only count senses and 30 – as primarily[1] mass nouns. The analysis is based on 1,709 citational examples of utterances produced by native speakers of English, which include the 60 nouns. All these utterances illustrate a counter-intuitive phenomenon: that all these nouns, even monosemic and exclusively count or mass, possess in fact at least one incipient use with the reverse grammatical property.

2. The prototype model of categorisation

Research on prototypicality can be said to have started with Berlin and Kay's (1969) research on focal colours (Lewandowska-Tomaszczyk 2007: 145). The experiments that Eleanor Rosch (Heider 1971, 1972) conducted soon after that on speakers of Dani, a New Guinea language, confirmed Berlin and Kay's observations – focal colours had a special status in the colour spectrum. This, in fact, formed the basis for what she found in further research (e.g. Rosch 1973; Rosch and Mervis 1975; Rosch 1977, etc.) – that in perceiving categories there are certain asymmetries (later called prototype effects), e.g. "subjects judged certain members of the categories as being more representative of the category than other members" (Lakoff 1987: 40).

Altogether, four such prototype effects were determined (Geeraerts [1989] 2006: 146-147; cf. Lewandowska-Tomaszczyk 2007: 145-146; Taylor 1995: 40-80):

[1] Mass nouns are generally much more flexible than count nouns – relatively few of them only have mass senses, including those that are provided by grammar books as the best examples of mass nouns. Selecting nouns with only mass senses was not possible.

a) “prototypical categories cannot be defined by means of a single set of criterial (necessary and sufficient) attributes” – it is not possible to determine a definitional set of features shared by all members of a category;

b) “prototypical categories exhibit a family resemblance structure or, more generally, their semantic structure takes the form of a radial set of clustered and overlapping meanings” – as Lewandowska-Tomaszczyk (2007: 146) indicates, this effect is closely related to the previous one – it is its consequence. If we cannot define a category by means of necessary and sufficient conditions, this definition needs to take the form of a cluster of overlapping sets of attributes, each of which describes different or overlapping category elements.

c) “Prototypical categories exhibit degrees of category membership; not every member is equally representative for a category” – categories consist of elements that are better – more representative elements (more prototypical) or worse – less representative elements (peripheral/ marginal);

d) “Prototypical categories are blurred at the edges” – it is difficult, by default, to determine where one category ends and another begins. It is worth noting that, in a sense, this effect is a different formulation of the third effect, but while that effect is concerned with category elements, this one deals with categories.

Because graded membership seems a characteristic of prime importance and it is with it that the analysis begins, some further aspects of gradeability, only briefly characterised as the third prototype effect, need to be elaborated on:

– “prototypical members of cognitive categories have the largest number of attributes in common with other members of the category and the smallest number of attributes which also occur with members of neighbouring categories” (Ungerer and Schmidt 2006: 32),

– “a schematic representation of the conceptual core of a category. On this approach, we would say, not that a particular entity is the prototype, but that it *instantiates* the prototype” (Taylor 1995: 59),

– “membership in a prototype category is a matter of gradience” (Taylor 1995: 54),

– “entities are assigned membership in a category in virtue of their similarity to the prototype; the closer an entity to the prototype, the more central its status within the category” (Taylor 1995: 60).

Summing up this brief discussion of prototype effects, it must be noted that the prototype model of categorisation quickly found its way to cognitive linguistics analyses. As a result, today it is no longer controversial that human categorization reveals prototype effects. It is also less and less controversial that language is based on the same mechanisms as human cognitive abilities (actually, cognitive linguistics has made it one of its major claims). And what these two observations lead to is the claim that I want to check in the paper: that linguistic categories, the categories created by linguists in order to describe languages, also reveal prototype effects.

3. The methodological issues

Many details concerning this methodology of analysis have already been described elsewhere (e.g. Drożdż 2017, 2020a, 2022). Still, because the present study is based on a number of specific assumptions and consists of several stages, a brief note outlining the most important of these issues is due.

First of all, the 1,709 citational examples that serve as the basis for the present analysis were originally collected for the purposes of a monograph (Drożdż 2017). There, however, the issue of the prototype structure of the count and mass categories was omitted, hence the use of the same corpus for a different type of research. What also needs to be mentioned is that the theoretical foundations for it were provided by Cognitive Grammar (e.g. Langacker 1987, 1999, 2008, etc.), thus many references to this framework in the article.

As for the analysis, it consisted of several major stages. First, a selection of 60 nouns had to be made: 30 count nouns and 30 mass nouns. These nouns were to represent diversified ontological categories and all possible frequencies of occurrence in English. To meet such criteria, I referred to the 5,000 frequency list of English words offered by COCA, one of the largest English corpora. Out of 5,000 words, slightly over a half were nouns. Because I needed 30 nouns of each type, I divided the 2,546 nouns into 30 subgroups and, from each group, I tried to pick up one count and one mass noun. What is more, because the category of mass nouns consists of two major subcategories: substance nouns and aggregate nouns, keeping this distinction in mind while collecting the mass nouns, I selected 18 substance nouns and 12 aggregate ones.

At this stage, two comments are needed. First, because this was the first full-scale research of this kind, I decided to take into consideration only a specific subcategory of nouns – concrete ones (rather than abstract or nominalisations). The reasons were practical – nouns with concrete designations can be rather easily seen or imagined and, as a result, are easier to characterise. Also, concrete nouns are prototypical for the category of nouns – what we learn about them can be probably extended to other types of nouns, e.g. abstract. The reverse direction of analysis might be more problematic. The second comment concerns the fact that the study, for the sake of clarity, was based on nouns that can be considered prototypical for the category of English nouns, that is, those that form the plural form by means of the -s suffix (rather than plural-only nouns, zero plurals, uninflected plurals, etc.).

At the next stage, each of the selected nouns was checked from the perspective of the grammatical classification that it received in reputable English dictionaries. The point of this stage was to determine how experts – lexicographers classify the grammar of these nouns (which, at the same time, should also be the manner in which native speakers classify them). That is why I referred to those dictionaries that explicitly pointed to the nouns' grammar, and

omitted those that did not do so, e.g. OED[2]. The consulted dictionaries were: Oxford Dictionaries (henceforth OD – no longer available online – on 26 August 2022 the website was closed), Cambridge Dictionaries Online (CMD), Longman Dictionary of Contemporary English (LGD), Macmillan Dictionary (MMD – no longer available online – the website was closed on 30 June 2024), and Collins English Dictionary (CLD). As a result, preparing the present article I could only refer to three of them: CMD, LGD, and CLD.

This stage led to the observation that while all the count nouns were classified by the consulted dictionaries as only count, it was not possible to find 30 nouns that only had mass senses. In consequence, I had to choose nouns whose both the original sense, and the majority of the senses were mass.

The goal of the next stage was collecting a corpus of English native speakers' utterances in which the 60 nouns were used with the reverse grammatical property than the property indicated by the analysed dictionaries. In the case of count nouns, I sought mass uses, and in the case of mass nouns – count uses. Because such uses were virtually absent in standard corpora, e.g. BNC, I decided to seek them on the internet, putting the nouns into specific phrases that ensured the resultant hits provided adequate senses. For mass senses of count nouns, e.g. *book*, I searched for such phrases as "much book for", "much book that", "much book was", etc.[3], while for count senses of typically mass nouns, e.g. *water*, I searched for "waters", "a water", etc.

Paying scrupulous attention to the country of origin of each speaker (a native speaker of one of the 'inner circle' of World Englishes [e.g. Kachru 1988: 5; Wolf and Polzenhagen 2009: 2–4]), for each noun I intended to gather 30 utterances illustrating the desired uses of all the 60 nouns. However, finding so many examples for all the nouns turned out to be impossible – ultimately, I managed to collect 1,709 of them.

Before the analysis proper, three additional remarks are due. First of all, the discussion so far revolved around the notion *noun*. While it is undoubtedly a useful concept, it needs to be emphasised that the analysis focuses on nouns' *senses* (cf. e.g. Huddleston and Pullum 2002: 334-335), and it is ultimately senses that decide about the noun's classification as more or less peripheral member of the count or mass category.

This naturally evokes one of the issues of polysemy – the question when a contextual use of a word becomes its conventionalised sense. Unfortunately,

[2] Additionally, OED includes all kinds of linguistic information that is beyond the scope of an even competent native speaker, e.g. diachronic information, including archaic senses, specialist senses, etc. From the perspective of the goal of the discussed stage, referring to a dictionary like OED would be inadequate.

[3] The quantifier *much* was used to ensure the determination of a mass sense, while the preposition, relative pronoun, or verb were there to avoid contexts in which *book* could be used in a compound, e.g. "much book space".

there is no simple answer to this. On the one hand, sometimes it may take as long as 134 years and thousands of uses in books and the press for a novel word to find its way to the dictionary (e.g. *acid rain*). On the other hand, sometimes a single occurrence is enough (Drożdż 2020b).

There are two consequences of such a state. First, what we find in dictionaries is a highly incomplete vision of the lexicon and, along with the senses found in dictionaries, there are and there will always be numerous other senses, not recorded by lexicographers for various reasons, e.g. the type of sources where the senses must appear to be classified as established or the methodology of looking for them. Second, it is inadequate to assume a binary relationship between purely contextual, nonce uses of a word and established senses – a continuum of use seems a much more realistic solution. Actually, Langacker (2008: 38) suggests such a three-stage continuum, "leading from novel interpretations, through incipient senses, to established linguistic meanings".

This means that among the uses detected in the internet search we can find the following: established senses, incipient senses, and novel interpretations. From the operational perspective, the difference between them is not difficult to make: established senses are those that are listed in dictionaries – they are so frequent that they are accepted by lexicographers as actual lexical items of the English language. As for incipient senses and novel interpretations, my proposal to distinguish them on the basis of their frequency of occurrence, reflected in the structure of the utterances collected for each of the 60 nouns (cf. Drożdż 2020a). It turns out that among 30 utterances collected for the nouns there are certain recurrent regularities: there is always one use that clearly dominates (and constitutes 40-60% of the examples), one or two that are very frequent (between 20-40% of the utterances), and those with fewer occurrences (20% of the utterances and less) – there are usually from one to four such uses.

A case in point can be the structure of the noun *mud* (Drożdż 2020a: 18). The most frequent use, constituting 56.7% of the utterances, was "a kind of the substance". The second most frequent use, "a limited amount of the substance", constituted 23.3% of the contexts. The last two groups of uses, "the thing that has a property of the substance" and "the thing associated with the substance" constituted, respectively, 13.3% and 6.7% of the utterances. Therefore, basing on the fact that the established count senses of the mass nouns from section 4.1. that I later confirmed in the internet analysis appeared 5 or more times in my corpus, I propose to consider the uses with the frequency higher than 16.7% as incipient senses, and those with lower frequency – as novel interpretations. Actually, if a use is found five times or more, its frequency becomes too regular for an accidental, novel interpretation and should be treated as an incipient sense.

At the same time, to have the right picture of why many of the detected uses should be treated as incipient senses, it needs to be stressed that for the vast

majority of the nouns the number of the contexts shown by Google greatly exceeded 30. Actually, Google often shows numbers of hits ranging from a few hundred to 50,000 and more. As a consequence, it would be counter-intuitive to treat such frequent uses as nonce.

The last theoretical point that I wish to discuss concerns an application of the above claims and observations to the categories of count and mass nouns. To show it, I need to start with the contrary, classical model of categorisation (e.g. Taylor 1995: 21-38), which prevails in today's approaches to grammatical description, including the categories of count and mass nouns.

Typically, four major characteristics of such an approach to categorisation are enumerated:

– "categories are defined in terms of a conjunction of necessary and sufficient features";

– features of category elements are binary;

– categories possess clear-cut boundaries;

– "all members of a category have equal status" (Taylor 1995: 23-24).

All these properties can be found in the manner in which count and mass nouns are typically presented in dictionaries, for instance: noun senses are presented as equal in status – even if a noun has both count and mass senses, none of them can be said to be 'better' or 'worse' than another. This is even more clearly visible if we compare two senses of the same type, e.g. two count senses – can we claim that one of them is 'better' than the other? This equality can also be seen when we compare different nouns from the same category – two nouns with only count senses are equally good representatives of the count noun category, e.g. *tent* and *tie* (the former is monosemic, the latter is polysemic, with only count senses).

What flows from this property is, among others, the fact that the senses of such nouns clearly reveal binary features – a sense can only be count or mass. The next consequence of such a structure is clear-cut category boundaries. This applies both to the boundaries of nouns, which extend as far as their well-defined senses and, more generally, to the categories of countability and uncountability – in many cases it is not a problem to decide whether a noun is count or mass. Finally, as for the necessary and sufficient features of the categories, which enable people to distinguish between those elements that belong to the given category and those that do not, dictionaries often provide pictures of representative category members, e.g. as can be seen in the case of the entry *banana* (CMD, LGD, and CLD).

Introducing any modifications to this rationale, for instance adding to each noun several incipient senses with the reverse grammatical property, shatters the logic of the classical model of categorisation. If every noun, besides its established sense(s), has one or more incipient senses with the reverse grammatical property, this means that such senses cease being equal, for one

of them becomes prototypical, more closely associated with the noun, and the other – more marginal (e.g. the count sense of *tent*, "a shelter consisting of a sheet of cloth supported by poles and ropes (…)" (LGD) is more prototypical than such incipient mass senses as "the capacity of the tent", "a set of features of the tent", or "the warmth provided by the tent" – see section 4.2.1.2 for a detailed discussion).

Just like in the case of the classical model of categorisation, such a structure of noun senses has implications for the structure of the whole category. At this point, nouns that were supposed to be equal turn out to be no longer equal – they differ with the number of incipient senses and, as a result, are more or less prototypical for the given category. At the same time, nouns with both count and mass senses are no longer exceptions – they become a default part of the category – those that form the fuzzy boundary between the overlapping categories. What is more, this fuzziness becomes even more complex, because now every single noun has several additional (incipient) senses with the reverse grammatical property, which determines the position of the noun as more or less prototypical for the given category.

This also has implications for the features revealed by category elements, which are no longer binary; category boundaries, which become fuzzy rather than clear-cut; and necessary and sufficient conditions, which turn into degrees of similarity to the prototype. From this perspective, then, showing that each noun has at least one more incipient sense with the reverse property is the first step towards the prototype view. Actually, what remains to be done is showing the consequences of such a structure.

The preceding discussion allows me to formulate the research question, which is in fact already suggested in the title of the paper: do English count and mass nouns constitute prototype categories?

4. The analysis

4.1. Mass nouns and their properties

At the most abstract level of description, which concerns all mass nouns, we can characterise mass nouns as those that they designate unbounded entities, that is, entities where bounding is not evoked "as an onstage element to be attended to" (Langacker 2008: 133). This means that while entities designated by mass nouns *can* have boundaries, e.g. *sea* can have a count sense designating an "area of salty water mostly enclosed by land" (LGD), in the mass sense this boundary is simply not salient, it stays out of focus. An illustration of this point can be the sentence: "They stood side by side looking out to sea" (LGD), where the thing that the speaker attends to is the sea's unbounded expanse rather than the fact that this expanse is enclosed by land.

However, what concerns us here is not only uncountability. The following sections also aim to check whether what dictionaries classify as mass nouns are also used in *count* senses on the internet and what type of uses these are: established senses, incipient senses, or novel interpretations.

4.1.1. Graded membership in a category

The goal of the next sections is to decide about the following four issues: the prototype of the mass noun category, the nouns that are closest to the prototype of the other, count noun category, the nouns that can be found between the two poles, and their properties. In deciding about these issues, I start with the established, dictionary senses, and complement this information with the nouns' incipient senses and novel interpretations.

4.1.1.1. The prototype of mass nouns

It is rather uncontroversial that prototypical mass nouns are "the names of physical substances" (Langacker 2008: 129). However, two questions arise: Names of which substances should be prototypes? What properties should such prototypical nouns reveal?

Applying Ungerer and Schmidt's (2006: 32) postulates to the prototype of mass nouns, we could expect that a noun instantiating the prototype should only have mass senses (one or more) and, at the same time, no count senses (neither established, nor incipient, for contextual uses are unavoidable). Unfortunately, none of the analysed 18 substance nouns[4] revealed such a structure. Although among them there is one mass noun without any established count senses and two where the dictionaries disagree, *all* the scrutinised nouns have incipient count senses – one or more.

Let us then examine the three candidates, whose properties approximate the ideal prototype, that is, *mud*, *flour*, and *gasoline*. At the start, we should note that they are less common English nouns. Actually, in the list of 2,546 nouns prepared from the COCA 5,000 frequency list, *flour* is 1,727th, *mud* – 1,822nd, and *gasoline* – 2,083rd. By contrast, the noun that is often treated as a prime example of uncountable nouns, *water*, is 35th. What is more, the three nouns reveal different degrees of countability. While *mud* does not have established count senses in any of the consulted dictionaries, in the case of *flour* and *gasoline* the dictionaries disagree. Four of them note these two nouns are mass, and one contradicts. As for *flour*, CLD classifies it is a variable noun and, in the case of *gasoline* – MMD.

At the same time, the three nouns differ with the number of both count incipient senses and novel interpretations. *Mud*'s first three uses are incipient

[4] In the analysis, these were: *water*, *blood*, *plastic*, *salt*, *fat*, *sugar*, *cream*, *sand*, *butter*, *honey*, *tobacco*, *cotton*, *flesh*, *flour*, *mud*, *silk*, *gasoline*, and *timber*.

senses, and the last two – novel interpretations, *gasoline*'s first use is an incipient sense and the other two – novel interpretations, and *flour*'s only count use is an incipient sense. All of them are illustrated below.

mud:

– "a thing that has a property of mud" (23.3%) (cosmetic mud): "There is **a mud** for every occasion so if you're on a cheeky weekend with the girls and want to indulge without the calories you can choose a gorgeous chocolate scent or on a more romantic getaway – why not try the Strawberries and Cream!?" (http://www.bookaspa.com/blog/post/2015/05/26/What-is-a- Mud-Rasul-Treatment.aspx),

– "a kind of mud" (33,3%): "This paper describes laboratory and field assessments of a series of inhibitive water **muds** developed by BP" (https://www.onepetro.org/journal-paper/SPE-23077-PA),

– "a bounded amount of mud" (23.3%): "If there are 345,238 versions of me out there that means there are 345,238 versions of my grandma. She is ordinary, she isn't unique, but I would lie-down in **a mud** for that lady" (http://fuckpolarbears.com/post/92246516463/you-are-especially-ordinary),

– "a black person" (offensive) (13.3%): "Every time you hear about another shooting it's guaranteed the perpetrater is either **a mud** or a gook, people need to take their heads out of the sand and look at the facts") (https://www.stormfront.org/forum/t93955/),

– "something associated with mud" (mud terrain tyres) (6.7%): "have 35" BFG Krawlers, but these are Â£256.63 each, Maybe ask them about **muds**. KM or KM2" (http://forum.difflock. com/viewtopic.php?t=53288&view=next&-sid=65ca64b17fd7eda4788568ae8c7cdd59).

gasoline:

– "a kind of gasoline" (86.7%): "E15 is **a new gasoline** that is just beginning to be sold in Minnesota and other states" (http://mnfuels.com/e15locations.cfm).

– "a bounded amount of gasoline" (10%): "Ignition sources were either pieces of newspaper or **a gasoline**" (http://fire.nist.gov/bfrlpubs/fire96/PDF/f96156.pdf),

– "an object for which the substance is an integral part" (a car) (3.3%): "DuraMax, Cummins, Power Stroke diesel's? Sure they are strong powerful engines. Cant afford to use them. 8 to 10 miles per gallon. Maybe 12 if you drive down hill a lot. Insurance nearly twice the cost of **a gasoline** in the same class[5]" (http://nature.gardenweb.com/discussions/2234464/dodge-or-chevy-2500).

flour:

– "a kind of flour" (100%): "Choosing **a flour** for your favorite recipe can be confusing" (http://www.livestrong.com/article/421010-what-is-the-difference-between-baking-flour-plain-flour/).

[5] In the analysis, the original spelling was preserved.

Concluding this section, a certain paradox needs to be noted: it is difficult to decide unambiguously which noun is closer to the prototype of mass senses. On the one hand, *mud* has no established count senses. On the other hand, it appears a really flexible noun, easily adopting count interpretations. Actually, three of its count uses are so frequent that they should be classified as incipient senses rather than just accidental, novel interpretations (in the collected corpus of 30 count uses of *mud*, these senses constitute, respectively, 33.3%, 23.3%, and 23.3% of the corpus). Because there are as many as three of them, this casts doubt on the status of this noun as the best representative of the mass nouns category.

By contrast, although the status of the noun *flour* as an exclusively mass noun is questioned by one dictionary, four other dictionaries classify it a purely mass. What is more, it only has one incipient sense, "a kind of flour", and no novel interpretations were registered, which makes it better suited to match the expectations concerning the prototype of mass nouns.

The third noun, *gasoline*, lies between the previous two. Its mass status is also questioned by one dictionary, and it is a bit more flexible than *flour* – it has two novel interpretations and one, clearly dominating, incipient sense: "a kind of gasoline".

4.1.1.2. The most marginal mass nouns

In line with Ungerer and Schmidt's (2006: 32) and Taylor's (1995: 60) observations, the further from the prototype an element is, the fewer attributes of the given category it should have. At the same time, the number of attributes representative of the other category should grow. In other words, the most peripheral mass nouns should have a large number of/ more count senses, and relatively few/ fewer – mass ones.

The analysis shows that among 18 substance nouns two of them have as many as five count senses: *silk* and *water*. However, despite the overall similarity, there are also significant differences between them, which are examined below.

Silk's dictionary senses are as follows:

– "a Queen's (or King's) Counsel" (OD),
– "a cover worn over a riding hat made from a silk-like fabric" (OD),
– "the silky styles of the female maize flower" (OD),
– "the bright coloured shirt worn by a jockey" (MMD),
– "clothes and accessories worn for sports and leisure" (MMD).

At the same time, the web search confirmed three of them ("a Queen's (or King's) Counsel", "the bright coloured shirt worn by a jockey", and "a silk cover on the riding cap"), though the second and third of them were formulated in the analysis at a higher level of schematicity than in the dictionaries as, respectively, "a thing made of silk" and "a thing for which silk is a salient component". Due to

such a schematic formulation, each of these senses was able to accommodate other subsenses, for instance names of other items made of silk:

– "a silk scarf": "Whitchurch Silk Mill has been commissioned to design and weave **a silk** suitable for giftware to promote and raise money for the Air Ambulance" (http://www.hiow-airambulance.org.uk/latest-news/whitchurch-silk-mill-designs-a-silk-for-hiow-air-ambulance/),

– "a silk band": "Level 1 is recommended for students who have some familiarity with silks or other aerial apparatuses" (https://www.circusacademy.com/silks-levels).

And one more item, for which silk was a salient component:

– "a teething toy": "Baby's first **silks**! These "teething" toys are made of a maple wood ring with a 21" playsilk securely knotted on to it" (http://sarahssilks.com/silk-and-wood-teethers).

Apart from these, the analysis showed two further, quite regular incipient senses:

– "a bounded amount of silk": "Sandra's blouse is a perfect canvas for **a silk** in a print or a solid, would work in a crepe du chine, georgette or a washed taffeta" (http://www.marcytilton.com/index.php?cid=2415),

– "a kind of silk fabric": "Specialising in pure **silks**, exclusive embroideries and French lace, we are the first choice for brides, dressmakers and designers looking for something exciting and original" (http://www.hansson-silks.co.uk/).

Taking all this into consideration, as well as the fact that *silk* only has one mass sense: "a delicate, soft type of cloth made from a thread produced by silkworms, or the thread itself" (CMD), *silk* seems a really good candidate for the most peripheral mass noun, despite its primary mass sense.

The other noun, *water*, with five established count senses, is equally complex:

– "the water of a particular sea, river, or lake" (OD),

– "the surface of a lake or the sea" (MMD),

– "an area of water that belongs to a particular place, state, country, etc." (MMD),

– "the amniotic fluid surrounding a fetus in the womb, especially as discharged in a flow shortly before birth" (OD),

– "a situation that is difficult, dangerous, or unfamiliar" (LGM)

As for the internet search, it confirmed two of these senses: "the water of a particular sea, river, or lake" and "a situation that is difficult, dangerous, or unfamiliar" and pointed to two further incipient senses: "a kind of water" and "a limited amount of water", the latter of which has two further subsenses:

– "a kind of water": "Fishing **a deep water** for Tincas? Some great advice here from Mr Bowler!" (http://drennantackle.com/thelatest/2015/05/tench-on-the-waggler/),

– "a bounded amount of water": "Wtf, I hope that cat gets her water every day, this is strange. she act like she didnt have **a water** for days!?" (https://www.youtube.com/watch?v=+PE0S cjTo6-Y),

– "a bottle of water": "Runners taking **a water** at the refreshment point in the city" (https://pl.fotolia.com/id/81912858).

Concluding, in contrast to *silk*, *water* is a highly polysemous noun – CLD enumerates 16 senses of it, and only three of them are count, and LGD provides 12 noun senses of it, four of which are count. In other words, despite a similar number of established and incipient count senses, *silk* is undoubtedly a more peripheral member of the mass category than *water*.

4.1.1.3. The fuzzy boundary

The third group of nouns – those that can be found between prototypical and most peripheral nouns/ prototypes of the other category – is extensive, as between the two extremes there are nouns that have all the possible numbers of both established and incipient count senses. To see their transitional status, it is enough to scrutinise the number of their dictionary senses. Nouns such as *snow* or *cream* have four of them, *flesh* or *rain* – three, *butter* and *sugar* – two, *blood* and *cotton* – just one. This, paired with the incipient senses determined in the analysis creates a whole range of intermediate cases between the two poles of the mass category.

The exemplary noun examined here is *butter* – a substance noun of a medium frequency, with two incipient senses. Its established mass senses are: "a solid yellow food made from milk or cream that you spread on bread or use in cooking" (LGD) and "a soft substance, usually containing a lot of fat, that is made from nuts or seeds and used as a food or in products for the skin and hair" (CMD), that is, they point to two different types of substance. Interestingly, although these substances are relatively similar in consistency, the former of them is classified as exclusively mass, while the other one – as both count and mass.

The internet search confirmed the count status of the cosmetic sense – it was one of *butter*'s incipient senses. However, it also indicated one more, strongly represented incipient count sense – "a kind of butter":

– "It is **a butter** for spreading on your bread, melting on your fish or meat or your vegetables" (http://www.makemoneywithfood.com/improper-butter-ireland/).

What this section illustrates is the transitional status of a noun like *butter* – it has one established purely mass sense, one established variable sense, and one incipient count sense. A noun could hardly be more in the centre of the two categories.

4.2. Count nouns and their properties

Conceptually, what characterises all count nouns is the fact that they designate a thing "construed as being bounded within the immediate scope in the domain of instantiation" (Langacker 2008: 133). However, a quest for the prototype of count nouns assumes looking for their best representative, and it is safe to assume that "typical for count nouns are the names of physical objects" (ibid.: 129), as in "We sat on a park bench" (LGD). In this case, what is put in focus is the whole, bounded object, which renders it countable.

However, the present study is concerned with another dimension of count nouns – the fact that they can also have mass senses, possibly based on count designations but with a specific uncountable dimension in focus, as in "You'll have to stand – there's not enough bench for another big person" (Langacker 2008: 143). The facet that is put onstage is an effect of zooming in on the bench and on one of its mass dimensions – the extent of the surface of the bench seat.

Discussing count nouns, we need to note that their status is different than that of mass nouns. One of their peculiarities is that all the consulted dictionaries classify them unambiguously as only count. In other words, officially mass senses of these nouns do not exist. This has a direct influence on the resultant analysis – it has to rely on the web search and the uses found there to determine if the given nouns are closer to the prototype or to the periphery of the count noun category.

We should also point to quite different criteria in deciding whether a noun is a suitable candidate for the prototype. First, such a noun has to refer to something that is ontologically a physical object, and not for instance a den, well, or tunnel, which are in fact holes in the ground rather than objects. Second, it has to be an object rather than a person or place, because names of specific people or places are proper nouns, which only secondarily share the characteristics of common nouns (Quirk et al. 1985: 288-290). Another issue is the level of schematicity at which the noun functions. A prototypical noun should represent the basic level category, that is, it should be neither too general (a hyperonym), nor too specific (meronym or hyponym). Adopting such criteria, out of the 30 nouns that are scrutinised in the present analysis, only 16 can be considered as candidates for the prototype: *book*, *star*, *bag*, *photograph*, *tie*, *jacket*, *belt*, *clock*, *telescope*, *oven*, *tent*, *shower*, *guitar*, *barn*, *jar*, and *dam* (the others are: *door*, *page*, *stage*, *client*, *guest*, *classroom*, *branch*, *roof*, *tunnel*, *elbow*, *belly*, *chin*, *sleeve*, and *bulb*).

4.2.1. Graded membership in a category

What determines the status of the given noun in the category is its degree of similarity to the prototype, that is, both the number of attributes that it shares as well as those that it does *not* share with the prototype of the category. In the present case, the number of established count senses that the nouns can possibly have is less relevant, for the collected nouns are in two thirds

monosemic, and the vast majority of the polysemic ones only have two senses (actually, only two of them, *guest* and *belly*, have three senses). Rather, what matters most in distinguishing more and less countable nouns is the number of their incipient mass senses. Theoretically, it might be expected that the nouns instantiating the prototype should not have them at all, and the further from the prototype the noun is, the more mass senses a noun should have.

I want to conclude this section with one more assumption: what determines the status of a noun in this category is not the total number of its mass uses, but the number of its incipient senses, and it is them that I focus on in the remaining part of analysis.

4.2.1.1. The prototype of count nouns

An interesting point to notice at the start is that the research shows two nouns with just one mass incipient sense, that is, nouns that almost ideally instantiate the prototype: *guest* and *client*. What is more, they have the same type of mass sense – "a number of people":

– "We are instructed to talk less with the clients to achieve a higher efficiency in serving as **much client** as possible" (http://www.alongside.me/2007/what-is-business-5/),

– "I watched some of that fashionista/Sophia's videos and I can't believe (actually, I can) how **much guest** is copying her!!!" (http://www.gurugossiper.com/viewtopic.php?t=16077&p= 138%201234).

However, because *client* and *guest* are hyponyms and names of specific types of people rather than objects, they are not considered as candidates for the prototype. At the same time, the research shows that there are three other nouns that only have one incipient sense and one or more novel interpretations, which makes them suitable candidates for the status of prototype instantiations: *guitar*, *clock*, and *star*:

guitar:

– "the quality of the guitar": "A cheap, poorly made guitar is no fun to play. Nor is too **much guitar** for your abilities" (https://www.guitartricks.com/forum/showthread.php?t=370 83).

clock:

– "the time measured by the clock": "There is an awful lot of clicking involved in this deck, which can either take too **much clock** for a tournament setting, or result in a misclick along the way" (http://www.mtgoacademy.com/unlocking-the-vault-19-oath-primer/).

star:

– "a number of stars": "You don't find **much star** and or astrological lore in Norse myth and literature" (http://galacticchannelings.of-the-light.com/community/archive/index.php/%20 thread-441.html).

Although these senses are quite diversified, just because each of the nouns has only one incipient sense, all three can be posited as equally good candidates instantiating the prototype of the count noun category.

4.2.1.2. The most marginal nouns

As for the most marginal nouns, four candidates with the largest number of mass uses can be posited: *belt* (6 uses), *telescope* (5 uses), *tent* (5 uses), and *photograph* (3 uses). However, out of the determined uses each of the nouns has three incipient senses, which turns out to be the largest number in the analysis. Let us then take a closer look at an exemplary noun and see its semantic structure.

The utterances quoted below, illustrating the incipient senses of *tent*, come from forums and blogs dedicated to backpacking and travelling, and highlight the dimensions that seem to be most salient for tent users:

– "the capacity of the tent": "It's just way too **much tent** for just me and my wife and pups. It's an 8-man with two 'rooms'" (http://backcountrypost.com/threads/for-sale-kelty-ridgeway-highlander-8-100.2971/),

– "the set of features of the tent": "The tent is pretty heavy, and takes up a good amount of space in the back of a truck. While I am able to set it up by myself, it is easier to set up with two people. I have used it for shorter 1-2 night trips with me and one or two kids, but it is really too **much tent** for that" (http://teamkendrickoutdoors.blogspot.com/2012/06/cabelas-bighorn-ii-tent-review.html),

– "the warmth provided by the tent": "Too **much tent** for such inviting conditions, this thing is ready for harsh weather and has been good to me under a wide variety of conditions" (http://www.adventure16.com/blog.asp?item-id=57&submit=getrecord&recordid=52).

I would also like to mention one novel interpretation illustrating a tent dimension that appeared as many as four times in the corpus, that is, it approaches the limit established for incipient senses. Actually, it is not excluded that in a larger corpus, of e.g. 50 utterances, it would also gain the status of an incipient sense. This dimension is:

– "the size of the tent": "It can be the condo in the woods. I agree it can be too **much tent** for most backpackers but it can also become a home away from home" (http://www.mbstores.com/revnorfacve2.html).

To conclude the section, I would like to show the difference between an incipient sense and a novel interpretation – the latter one has a tendency to refer to a rather rare and unusual dimension of the object:

– "the weight of the tent": "Too **much tent** for me! I thought I wanted a four season tent. I was wrong. This tent is expedition quality! Ruggedly made and solid, but I returned it because it was just too heavy" (http://www.backcountry.com/the-north-face-bastion-tent-4-person-4-season).

As can be seen, the name of this group of nouns is not unfounded. On the one hand, the noun *tent* is monosemic, that is, it only has one count sense. On the other hand, it has three, almost four incipient mass senses, which makes it is really difficult to decide unambiguously about the status of both this, as well as any other nouns of this type.

4.2.1.3. The fuzzy boundary

The last subcategory that we need to discuss is also diversified. Although the number of the incipient senses that it requires is limited to just two, there is a variable that decides about the noun's ultimate classification as closer to the prototype of count nouns or to the prototype of mass nouns – the number of the noun's *count* senses (a bit disregarded before). If a noun only has one such sense, two mass incipient senses push the noun towards the mass category. If it has three count senses, despite two incipient mass senses it remains on the count side. Finally, a noun can also have two count senses – as many as mass – then it stays exactly in the middle.

To illustrate this subcategory most adequately, I will deal with a noun that has two count senses – *elbow*. First, however, a brief characterisation is due: it is a meronym that has such count senses as: a specific part of the body – "the joint between the forearm and the upper arm" (OD), and a piece of piping – "a thing resembling an elbow, in particular a piece of piping bent through an angle" (OD). The mass extended senses that is has are:

– "elbow force": "Here is a clip of a video that sort of shows it, but it does seem to have too **much elbow** in the hit" (http://www.skatelogforum.com/forums/showthread.php?t=3336),

– "the surface of the elbow": "those mirrors do show too **much elbow** and sleeve and not enough roadway-to-the-rear" (http://www.motorcyclespecs.co.za/model/kawasaki/kawasaki_gpz750f %2084.htm).

The two contexts show that these senses are used by people with quite specific interests: basketball specialists, who talk about inappropriately performed hits and motorcycle riders, who are disturbed by the fact of seeing too much of their elbow rather than the road behind them. Besides them, however, I would also like to mention a rare situation – a mass use (a novel interpretation) that is not an extended sense of the basic count sense, but of its extended count sense – that concerned with plumbing. Its extended mass sense is:

– "a number of elbows in plumbing": "Do I use the outlet pipes with unsuitable diameters? Is there too **much elbow** in the plumbing?" (http://www.qldaf.com/forums/aquarium-projects-diy-journals-11/i-would-need-some-plumbing-help-help-other-issue-s-118562/).

To conclude this part of analysis, a recurrent situation from this analysis needs to be pointed out – an inherent complexity of the nouns forming both the count and mass categories, and the subcategories forming them.

5. Observations and conclusions

I want to begin with the remark that the present analysis is *not* supposed to provide a perfect picture of the count and mass categories, with unambiguously indicated prototypes, the most peripheral members, and clearly presented hierarchy of nouns between the two extremes. At the present stage of knowledge, such precise calculations are impossible, because too few nouns have been analysed in such a way so far. Rather, my goal is to propose a certain model of looking at the two categories (hence the title – seeing it in more than one way). I want to present a specific method of approaching such complex categories, the issues to be considered while thinking about them in this manner, problems to be encountered, and potential solutions.

Still, despite these reservations, I think that the most immediate observation flowing from the analysis is that, indeed, the categories of count and mass nouns reveal the properties of the prototype category. Actually, taking into consideration the linguistic facts discussed in the article, it can be argued that this is the most adequate way of looking at them. Let us consider the arguments for such a stance.

First, as the analysis shows, it is inevitable to talk about gradeability of nouns in the count and mass noun categories – the fact is that nouns possess a different number of count and mass senses, thus revealing the properties of both categories. What may come as an unexpected outcome is that even the nouns that are posited as prototypical for each category possess at least one incipient sense with the reverse grammatical property. This, on the one hand, undermines the received knowledge formulated by e.g. Carter and McCarthy (2006: 335): "many nouns have both count and non-count uses[6]". On the other hand, it is perfectly consonant with Langacker's (2008: 142) claim that "in one way or another, probably every noun can be used in either manner".

At this juncture, I would like to mention a practical conclusion that can be drawn from these considerations. If we want to be true to grammar and want to talk about the best representatives of the mass category, we should either provide rather uncontroversial nouns that (almost) exclusively possess mass senses, e.g. *flour*, *gasoline*/ *petrol*, or *mud*, or use nouns that possess several count senses, such as

[6] Or, more specifically, if we treat 'many' literally, this statement is perfectly true. However, from a more general linguistic perspective, 'many' suggests that the number of such nouns is limited, while this this statement probably is true for all nouns.

water, *butter*, or *plastic*. Or, in the latter case, for the sake of reliability it is good to make it clear that the mass sense that we mean is just prototypical for the noun, and that we realise that such a noun also has count senses.

What also flows from this analysis is the observation that the categories of count and mass nouns have fuzzy boundaries – it is impossible to indicate unambiguously where one category ends and the other begins (especially that, as has been mentioned, what is often taken as prototypical nouns possess senses with the reverse grammatical property). Rather, it is more adequate to talk about a continuum of nouns with an increasing number of senses of one type and decreasing number of senses of the other type. In such a case, establishing a boundary between the two categories is a matter of an arbitrary decision.

This is related to the third prototype effect: the defining criteria of count and mass nouns, which cannot be formulated in terms of necessary and sufficient conditions. Typically, the criteria are formulated as simply as this: "count nouns denote entities that can be counted, while non-count nouns denote entities that cannot be counted" (Huddleston and Pullum 2002: 334). Such a characterisation, however, requires a comment, because it presupposes a specific, theoretically objective vision of the world – a world where entities can or cannot be counted, which misses two important points.

First, as Ungerer and Schmid (2006: 7) note, we live in a world where words only seemingly, by the mere fact of naming some aspect of reality, make it stand out from the rest of the world. As a matter of fact, however, our world is largely continuous, and words only imprecisely indicate what they refer to:

> It may be fairly clear that one's kneecap belongs to one's knee and that the trunk of a tree includes the section which grows out of the ground. Yet at which point does one's knee end and where does one's thigh start? Where does a trunk turn into a treetop and where does a branch turn into a twig? Similar problems arise with landscape names, and words denoting weather phenomena. Who can tell at which particular spot a valley is no longer a valley but a slope or a mountain? Who can reliably identify the point where drizzle turns into rain, rain into snow, where mist or fog begins or ends?

In such reality, talking about entities that can or cannot be counted becomes really problematic.

The second issue that Huddleston and Pullum's (2002: 334) remark misses is that countability and uncountability is not about objective reality. Rather, it is about a *conception* of reality, what *speakers* want to refer to. And this, to a certain extent, is independent of reality's objective nature (cf. Langacker 2008: 131). As the examples in the analysis show, the majority of the nouns acquired their incipient senses not because the speakers wanted to point to objectively existing boundaries or noticed the lack of them, but because they wanted to point to a mass dimension of a certain countable object or a count conception of

something that is normally classified as mass. As a result, it is not possible to define the types of nouns that form the count and mass categories.

Concluding, I want to discuss the last of the prototype effects – the family resemblance structure that the elements of the category form. This means that the properties of the subsequent elements can be represented as follows: "AB, BC, CD, DE. That is, each item has at least one, and probably several, elements in common with one or more items, but no, or few, elements are common to all items" (Rosch and Mervis 1975: 574–575).

This, in a sense, stems from the analysis. There are no common defining characteristics for nouns designating substances that are as different as e.g. *mud*, *flesh*, *butter*, *cotton*, and *gasoline*. Rather, similarity can be sought among such combinations of nouns as *water* and *rain*, *rain* and *snow*, *rain* and *mud*, *cream* and *butter*, etc. Naturally, we can try to combine the nouns into other groups, e.g. those that designate objects associated with the substance, objects made of the substance, limited amounts of the substance, etc., but this does not change the ultimate observation – no defining characteristics are shared by all the nouns.

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