Names, Light Nouns, and Countability

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It is a standard assumption that proper names for entities of different types have the very same semantics, denoting well-individuated entities and thus classify as count nouns. It has moreover become a standard view in philosophy of language that names are rigid designators standing for the same entities in different circumstances in virtue of the causal-historical change to which they belong on a given use. A view that is less standard, argued for by philosophers such as Geach (1957) and Dummett (1973), is that names involve a sortal, as a requirement for a speaker to be able to use them to refer to an entity. This paper presents syntactic evidence from German for the presence of sortals in names, and argues that different types of names may involve sortals of different kinds and in different ways.

One manifestation of that is a surprising division into mass and count among names in German. Names for places as well as what I will call 'productive names' for times, numbers, and expression types in German show diagnostics for mass rather than count (diagnostics not available in English). Making use of Kayne's (2005, 2010) silent noun theory, the paper will argue that this is due to the silent presence of mass light nouns in such names, in particular THING, PLACE, and TIME. THING, PLACE, and TIME also behave as mass nouns when they are overt or silent parts of light quantificational or pronominal NPs in German or English, for example *everything* or its German counterpart *alles*. By contrast, the light noun PERSON classifies as count, being a silent part of names for people and an overt or silent part of light quantificational or pronominal NPs such as *everybody* (or German *jeder*) and *many*. The classification of German names as count when they contain the silent noun HOUSE further supports a mass-count distinction among light nouns.

Names for people and places as well as productive names for times, numbers, and expression types are to be distinguished as *type 1 names* (as I will call them) from *type 2 names* such as *the Hudson River* or *the Parthenon*. Type 2 names, which in German include names for mountains, lakes, temples, and famous stones, do not involve a light noun. Rather, they come with a more specific overt or silent sortal and the definite determiner and as a consequence classify as count.

In addition to arguing for the involvement of light nouns in names, the paper will shed new light on light quantifiers such as *something* and *everything*, which play a significant role in philosophically relevant contexts.

The paper will first establish a range of generalizations about light nouns as part of quantificational and pronominal NPs in English and German. It will then present the empirical generalizations about German type 1 names that are indicative of a mass-count distinction among light nouns and, more briefly, discuss the role of sortals in type 2 names. An appendix will critically review a potential alternative explanation of the mass behavior of the relevant German names, namely the predicativist theory of names, on which names as common nouns could divide into mass and count.

1. Light nouns and light quantifiers

This section will present a range of syntactic and semantic generalizations about light nouns, regarding their characteristic syntactic properties, the ability of the light noun THING to stand for absolutely everything, mass or count, and the selection of different light nouns by different quantifiers or determiners in English and German.

Light nouns form a special class of nouns in that they belong to the functional rather than the lexical part of grammar. Light NPs have other special syntactic properties. In particular, they can stay silent in the absence of an antecedent, unlike full nouns (Kayne 2005). Moreover, NPs headed by light nouns, *light NPs (DPs),* tend to display different syntactic movement behavior, often having to move to a higher position (SPEC) position, when full NPs can stay in place (Collins 2005, Kayne 2005). Finally, light nouns do not display the syntactic features of full nouns; in particular they lack gender features (see below) and show a peculiar behavior with respect to number. Yet, as we will see, they display the mass-count distinction.[1] Semantically, the functional status of light nouns means their range and content should not vary across languages, but rather is part of a universal inventory, being constitutive of the core of grammar.

Light nouns play a particular role in certain types of quantificational NPs (and pronouns that can anaphorically relate to them). In English, these include *everybody, everything, someplace,* and *sometime.* Here *-body, -thing, -place* and *–time* are light nouns, overt versions

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[1] On one view, the mass-count distinction consists in a distinction in functional projection, the presence of absence of a classifier (Borer 2005). This view would be untenable if light nouns display a mass-count distinction, yet are unable to participate in functional projections (Colllins 2005). On the more standard view, nouns are specified as mass or count in the lexicon.

of the light nouns PERSON, THING, PLACE, and TIME (Kayne 2005). Light nouns may stay silent. In English, 'bare' occurrences of *little, much*, and *a lot* when they are used non-anaphorically, contain silent THING. *Everybody, everything, someplace, sometime*, *little*, and *much* can thus be called *light quantifiers*. There are also quantifiers that select PERSON rather than THING, for example bare occurrences of *many* and *few*, on a non-anaphoric use (e.g. *Many believe in god*, meaning 'many people believe in god', but ?? *Many happened*, meaning 'many things happened'). Moreover, there appear to be quantifiers that do not permit light nouns as restrictions, for example *a little bit* (?? *John said only a little bit,* ok *John said only little*). Quantifiers thus may (or may not) select particular overt or silent light nouns. In some languages, light nouns never appear overtly in light quantifiers. This is the case in German (*jeder* 'everybody', *alles* 'everything', *irgendwo* 'someplace', *irgendwann* 'sometime').

Light nouns may come with homophonic full nouns, but they need not share the meaning of the latter or even they syntactic features. Thus, the light noun *-body*, an instance of the light noun PERSON, contrasts with the full noun *body*. The difference between light nouns and homophonic full nouns is particularly striking with the nouns *–thing* (the overt version of the light noun THING) and *thing*. The light noun *–thing* permits only postnominal adjectival modifiers, but not so the full noun *thing*:[2]

(1) a. something nice

    b. some nice thing

There are a range of semantic differences between the full noun *thing* and the light noun *–thing*. *Thing* is a count noun, which applies to an entity by way of contextually given individuation conditions (which is why it is often called a 'dummy sortal', Griffith 1977). *Thing* applies only to inanimate enduring objects, in fact usually material objects. The light noun *-thing* applies to individuals as well as stuff, and thus, seems to act both as a count noun as well as a mass noun:

(2) a. John ate something, an apple.

    b. John ate something, brown rice.

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[2] It has been argued that *–thing* in (1a) has moved to a higher syntactic position, leaving a prenominal adjective in place (Kishimoto 2000). See, however, Larson/Marusič (2004) for arguments for the adjective being in postnominal position.

    c. John drank something, lemonade.

(3) a. Mary bought something nice, bath salt / chocolate / an art book.

    b. Mary bought a nice thing, an art book / * bath salt / * chocolate.

Furthermore, it applies to abstract objects of all sorts and not just material entities:

(4) a. John admired something about the stone, its color.

    b. John admires something particularly, namely courage and integrity.

(5) a. John added two to eight, so he added something to eight.

    b. 'Rouge' means something, namely 'red'.

The light quantifier *something* can even range over pluralities, thus acting as a genuine plural quantifier, which means a (syntactically) singular quantifier ranging over pluralities (as many):[3]

(6) a. John ate something, the ten cookies.

    b. I brought you something, a cup, a plate and a fork.

In fact, *-thing*-quantifiers can be used so as to range over absolutely everything and are typically used in statements of absolute generality (Rayo/Uzquiano 2007):

(7) a. Are there quantifiers ranging over absolutely everything?

    b. Nihilists doubt the existence of everything there is.

    c. The world is everything there is. (Wittgenstein)

In certain contexts –*thing* is restricted to inanimate objects *(?? John saw something, namely Mary*), but that can be explained as a blocking effect, given the availability of the more specific *somebody* in the very same sentential context. The light noun THING thus is the most general noun, applying to anything whatsoever.

    There are certain argument positions in which only light NPs, not full NPs may appear. Some of them are of considerable interest philosophically, in particular the complement

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[3] The existence of plural quantifiers in natural language has been put in question by some philosophers (Linnebo SEP, online).

position of certain attitude verbs (*say, think*, *claim*) and that of copula verbs and intensional transitive verbs:[4]

(8) a. John said something nice / * some nice thing.

    b. Mary thought / assumed something / * some thing.

    c. John became something admirable, a hero / * some admirable thing.

    d. John is looking for something, an assistant / * for some thing, an assistant.

For that reasons such quantifiers have been considered non-nominal quantifiers (Rosefeldt 2008). While that label is obviously incorrect syntactically, the syntactic category distinction between light NPs and full NPs is yet to be explored for the semantics of nonreferential complements.

    It has been proposed that light nouns come with no syntactic features or functional projections (Collins 2004). This certainly holds for gender features. Light nouns lack the lack of gender features of full nouns, as can be seen in the absence of gender agreement of the apparent feminine light noun with the adjective in French (*quelque chose de bon* / * *de bonne*) and Italian (*qualcosa du buono* / * *di buona*), as well as in the obligatory neuter gender of adjectives modifying PERSON light NPs in German (*niemand interessantes* / * *interessanter* / * *interessante* 'noone interesting (neut) / interesting (masc) / interesting (fem)'). Given that light nouns are not marked for gender, a modifying adjective needs to take neuter (which is unmarked) gender.

    Light quantifiers ranging over locations have the syntactic peculiarity of not requiring or even allowing a spatial preposition in particular cases:

(9) John worked (*at) someplace.

In the literature, this is generally accounted for by having *someplace* move to SPEC(P), allowing the P to stay empty (Collins 2005, Kayne 2005, Terzi 2010a, b). This means that *where, when*, *somewhere, every* etc. are PPs, not NPs.

    There are pronouns corresponding to light quantifiers, namely *that, what, who, where, when. That* and *what* are pronominal counterparts of *something*, which means they are able to

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[4] See Moltmann (2013) for a discussion and semantic analysis of light quantifiers as 'special' or 'nominalizing' quantifiers with the various sorts of intensional predicates with which they may occur.

in principle stand for anything whatsoever. This is most obvious in the use of *what* in questions, which allow as answer the mentioning of anything whatsoever, as long as permitted by the presuppositions of the predicate:

(10) What did John see? He saw Mary.

That, *what, who, where* are best not considered light pronouns, though. Thus, Kayne (2010, chap. 5) has argued that *where* is in fact a determiner combining with the silent noun PLACE or THING, so that (11a) is in fact (11b):

(11) a. John went where Mary went.

     b. John went where-PLACE Mary went.

Similarly, *there* will be *there*-PLACE and *what* and *that what*-THING and *that*-THING, respectively.

    In German, the counterpart of *where*, *wo* is more obviously able to combine with THING: in relative clauses modifying THING-NPs, *wo* rather than *was* (as a relative pronoun, see below) appears with prepositions (in fact, postpositions then) (Noonan 2017):

(12) a. alles / nichts, wovon / womit / worüber / * von was / * mit was / * über was

     'everything / something where of / where with / where over'

   b. etwas / das, wovon / * was von / * von was / ?? von dem

     'everything / nothing / something / that what of / of what of which

Similarly, *da* appears as counterpart of *das* 'that' with pepositions (*davon* 'of that', *darüber* 'about that', *damit* 'with that'). *Where* and *wo/da* thus are determiners able to combine with both light nouns PLACE and THING.

    As was mentioned already, in contrast to English, German light quantifiers do not involve an overt light noun. *Alles, etwas, nichts* are THING-quantifiers, and thus their actual structure will be [*alles* THING], [*etwas* THING], and [*nichts* THING]); *jeder, niemand, jemand* are PERSON-quantifiers. *Alles* as a THING-quantifier is as potentially unrestricted as English *everything*. Light nouns, in their overt or silent versions, thus are selected by particular quantifiers or pronouns.

2. W-pronouns in German

German light quantifiers and pronouns show a peculiarity that is particularly important in the context of this paper. This is a choice among two sorts of relative pronouns, which, we will see, reflects the mass-count distinction in a particular way.

German has two sorts of relative pronouns:

[1] *w-pronouns*, which consist of the neuter pronouns *was* and *wo*

[2] *d- pronouns*, which consist of the gender-marked pronouns *der* (masc), *die* (fem), and *das* (neut).

Light quantifiers and pronouns such as *alles* 'everything', *das* 'that', *nichts* 'nothing', *etwas* 'something', *viel* 'much', *das meiste* 'most', irgendwo 'somewhere' select w-pronouns:[5]

(13) a. alles / etwas / das, was / wovon / ?? das / ?? von dem

'everything / nothing / much / that, which / of which / which / of which'

b. nichts, was / wovon / ??? das / ??? von dem

'nothing what / of which / which / of which'

c. das meiste, was / worüber / ??? das / ??? über das

'most, which / about which / which / about which'

d. irgendwo, wo / * in dem

'somewhere, where / in which'

Not all light NPs select w-pronouns, though. Those with the light noun PERSON, in particular, don't:

(14) a. jeder / niemand / jemand, der / * was

'everybody / nobody, who / what'

b. jeder, von dem / * wovon / * von was

'everyone, of whom / where of / of what'

This might indicate that w-pronouns are selected by all and only NPs not marked as [+human]. But this is not the right generalization. Rather, what is at stake is the mass-count distinction. This becomes apparent when looking at the selection of relative pronouns by full

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[5] For some speakers, not the range of speakers this paper focuses on, *alles, das*, and *etwas* permit *das* as well.

NPs. One generalization is that full NPs select *w*-pronouns only if they are neuter in gender and mass rather than count:

(15) a. jedes / ein / kein Objekt (count, neut.)), das / * was

'every / some / no object that'

b. etwas / alles Wasser (mass, neut.), was / ?? das mit Rosenöl vermischt ist,

'some / all water that is mixed with rose oil

c. etwas / keine Kreme (mass, fem.), die / * was Öl enthält

'some / no cream that contains oil'

d. etwas / wenig Sand (mass, masc.), der / * was aus den Bahamas stammt

'some / little sand that come from the Bahamas'

Another generalization is that full NPs that are mass and neuter select *w*-pronouns only if they are not definite:[6]

(16) a. Ich hatte etwas / alles Geld (mass, neut), was / ?? das ich noch hatte, ausgegeben.

'I had spent some / all a little money (neut), what I had.'

b. Ich hatte das Geld, das / ?? was ich noch hatte, ausgegeben.

'I had spent the money that I still had.'

The generalization about the selection of w-pronouns and d-pronouns by full NPs is then as follows:

(17) <u>Conditions on relative pronoun selection in German</u>

Masculine and feminine NPs, all count NPs, and definite neuter mass NPs select d-pronouns; other PPs select w-pronouns.

Before turning of what (17) means for light nouns, let us quickly address the question of how to make sense of (17). The complexity of the conditions on relative pronoun selection in (17)

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[6] NPs such as *all das Wasser* 'all that water' permit both w-pronouns and d-pronouns, with the former obviously being selected by *all* and the latter by *das*:

(i) all das Wasser, was / das er trinkt

'all that water that he drinks'

seems to be due to a polysemy of d-pronouns in German displaying three kinds of feature combinations:

(18) a. [[+masc/fem] [- count]]

b. [+count]

c. [[+neut] [-count] [+sum]]

(18a, b) are obvious. d-pronouns with the feature combinations in (18a, b), have simply the meaning of variables. (18c) requires an elaboration. Given (18c), the neuter, mass d-pronoun *das* has a meaning involving a sum operator. That is, *das* , given (18c), has the meaning of definite determiners that apply to plurals or mass nouns. A definite plural or mass NP *the* N' denotes the sum of everything in the context falling under N' (Sharvy 1980). For example, *the water in the container* stands for the sum of water quantities in the container. The proposal behind (18c) is that if the relative pronoun *das* has the meaning of a sum operator, then it is compatible only with a definite determiner of the entire NP, which has that very same meaning as a sum operator. Assuming the head noun to be interpreted inside the relative clause (copying theory of relative clauses), we get the interpretation of the relative clause in (19c) for (19a), with the structure in (19b):

(19) a. das Wasser, das Hans getrunken hat

'the water that John has drunk'

b. das Wasser [[das [Wasser]] Hans e getrunken hat]

c. sum x [water(x) & drink(John, x)]

(19c) will also be the interpretation of the entire NP, since both the definite determiner and the head noun can be considered mere copies of elements inside the relative clause, not requiring an interpretation themselves

Now let us return to light NPs. As formulated, (17) applies to light NPs as well. Light NPs are not gender-marked; hence they will select d-pronouns in case they are count and w-pronouns in case they are mass. That means that the light nouns THING and PLACE will side with mass nouns. For the light noun THING this may seem puzzling. However, a closer look at its semantic behavior indicates that THING does classify as a mass rather than count. There are independent arguments, moreover, for PLACE to classify as a mass noun.

First of all, we have seen that there are both mass and apparent count uses of THING. Though the light noun –*thing* contrasts with the full noun *thing*, which only has a count use, there are apparent count use of –*thing* as well. –*thing* in fact comes with a plural, as in *several things*. *Several things* can appear in context in which only light NPs can appear, such as the object position of a verb of saying:

(20) a. He said something nice.

    b. ??? He said some nice thing.

    c. He said several nice things.

Syntactically, though, the plural *things* behaves like the full noun *thing*, with the adjective preceding the noun. German, which lacks an overt version of the light noun THING, forms a plural of THING using the plural of the full noun *Ding*, but with the light-noun meaning of THING:

(21) a. Er hat etwas / * ein Ding gesagt.

    'He said something / a thing.'

    b. Er hat mehrere Dinge gesagt.

    'He said several things.'

Like the English plural *things*, 'Dinge' as in (21b) syntactically remains a full noun, selecting d- pronouns.[7]

    THING-quantifiers in German also appear to have singular count uses, as is apparent with cardinal or ordinal numerals in *eines* 'one', *das eine* 'the one thing', and *das erste* 'the first':

(22) a. Hans hat eines vergessen, dass er ein Visum braucht.

    'John forgot one thing, that he needs a visa.'

    b. Das eine, was Hans vergessen hat ist, dass er ein Visum braucht.

    'The one thing that John forgot is that he needs a visa.'

    c. das erste, was Maria gesagt hat'

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[7] Other languages do not seem to display a syntactic difference between singular and plural of THING. For example, the French light noun *chose* and the Italian noun *cosa* have count uses and a plural from the same paradigm (*plusieurs choses* 'several things', *molte cose* 'many tings'). This indicates that light nouns do not as such lack number, but that only silent THING does so.

'the first thing Mary said'

Thus, THING, in English and in German, appears to have both mass and count versions and a plural borrowed from the full noun homophone.

There is something special, however, about the count use of THING, and that is that THING, on that use, does not need to pick up on any inherent countability of an entity, unlike the singular full count nouns *thing* and *Ding*. Rather, THING, on a count use, may impose countability on things that are not as such countable, e.g. the referents of mass or plural NPs. This is illustrated in the examples below, which also give the contrast to the full noun *Ding*:[8]

(23) a. Hans hat eines / ??? ein Ding nicht gegessen, die Bohnen (plur) / den Reis (mass).
   'John failed to eat one thing, the beans / the rice.'
   b. Das eine / ??? Das eine Ding, was Hans nicht mag, sind Bohnen (plur) / Reis (mass).
   'The one thing John does not like is beans / rice.'

On such a count use, the light noun THING can even count a plurality of two entities as one, unlike the full noun *Ding*:

(24) a. Das eine / einzige / ??? eine Ding / ??? einzige Ding, was Maria vergessen hat, waren
    die zwei Taschen.
   'The one / only thing that Mary forgot were the two bags.'
   b. Ich habe Maria an das eine / das einzige / ??? eine Ding / ??? einzige Ding erinnert, das
    sie vergessen hatte, die beiden Taschen im Schrank.
   'I reminded Mary of the one thing / the only thing she forgot, the two bags in the
    closet.'

THING contrasts in that respect with the light singular count noun PERSON, which cannot be used to refer to a plurality of people, as the impossibility of the collective predicate below makes clear:

(25) ??? Everyone / Someone met in the room.

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[8] The 'reifying' function of THING can certainly be related to the nominalizing function of THING-quantifiers when they occur in place of nonreferential complements, such as *that*-clauses, predicative complements, and complements of intensional transitive verbs, as discussed in Moltmann (2013).

On such singular count uses, THING acts like a numeral classifier in classifier languages, on a view such as that of Rothstein (2017), mapping a domain not specified for countability onto a countable one. That is, THING impose countability by picking up on a distinguishing property of elements of the domain, whether they are stuff or things. In a sense, THING is then both mass and count: it applies to a domain not specified for countability and may map it onto one that is. Given that, the selection of w-pronouns by THING-quantifiers can be attributed to the mass status (on one side) of (singular) THING.[9]

How does the light noun PLACE fare with respect to the mass-count distinction? There are a number of reasons to consider it a mass noun or at least not as a noun marked as [+count]. First of all, its manifest version (as in *someplace*) does not come with a plural (Collins 2007). Second, the singular *place* is usable for a plurality of places and thus is, at least, number-neutral:

(30) John's relatives live somewhere in Europe.

(30) does not imply that John's relatives live in the same place in Europe, rather *somewhere* can range over a plurality of places associated with the different relatives. Third, the noun *place* satisfies standard semantic criteria for mass nouns: it is cumulative (the sum of two places is again a place, as shown by (30)) as well as divisive: a part of a place is a place again. On a standard extensional mereological approach to the mass-count distinction, homogeneity (cumulativity + divisiveness) is a characteristic of mass nouns (Link 1983).

Even apart from standard extensional mereological criteria for mass nouns, there are fundamental ontological differences between places and individuals, which rank places below the level of individuals in terms of degrees of individuation and motivate a classification of PLACE as non-count. Thus, Strawson (1959) distinguishes a conceptually (and perhaps developmentally) earlier stage of the use of language, namely as a feature-placing language. A feature-placing language does not involve reference to individuals, but only the placing of a feature (quality) at a location. Locations thus are prior, conceptually and possibly developmentally, to individuals. Individuals that are material objects are individuated in terms of persistence conditions across different locations and at different times. Locations form a

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[9] There is also a view on which the mass-count distinction is a binary distinction, but may involve various criteria (Kulkarnik/Rothstein/Treves, to appear). Different criteria may then fail to classify THING and PLACE together with the count noun PERSON.

basis for the individuation of individuals, but not conversely. This gives a further reason to classify PLACE together with mass nouns, which will explain the selection of *wo*, and *where*.[10]

To summarize then, with light NPs as well as neuter full NPs without definite determiner, the choice of w-pronouns is indicative of the categorization of the NP as mass, whereas the choice of d-pronouns is indicative of its categorization as count.

3. Plural anaphora in English and German

That the mass-count distinction is at play in the choice between w-pronouns and d-pronouns becomes even clearer from the failure to support plural anaphora, which goes along with the selection of w-pronouns. This requires a few words about plural anaphora in German and in English, which show an important difference. The plural anaphor *sie* in German generally requires antecedents that are syntactically plural, as in (26a, b). By contrast, English *they* allows for antecedents that are syntactically mass, though semantically plural, namely in particular conjunctions of mass NPs, as illustrated by the acceptable English translations of (26a, b):

(26) a. Hans hat Mehl und Reis gekauft. Er hat * sie / ok es / das / ok beides bezahlt.
    'John bought flour and rice. He paid for them / it / that / both.'
   b. Maria hat das Silber und das Gold betrachtet. Sie hatte * sie / ok es noch nicht gesehen.
    'Mary has looked at the silver and the gold. She had not seen them / it before.'

Instead of the plural pronoun *sie*, German allows only for *es* 'it', *das* 'that' or *beides* 'both' (which is syntactically singular (mass), yet behaves like a plural semantically).[11]
    Let us assume that plural pronouns are in fact determiners, as suggested in Kayne (2010).[12] Then they require semantic plurality in English, but syntactic plurality in German.

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[10] Of course, the full noun *place* is count and comes with the plural. As such it is a noun of the sort *fence, wall,* and *entity*, nouns that satisfy mereological criteria for mass nouns, yet are count (Moltmann 1997, p. 22, Rothstein 2017). With the full noun *place*,it is the contextually given boundary or integrity of a place that ensures countability.

[11] See author (ms.) on *beides*.

Below this is made more precise, using the notion of an integrated whole (Simons 1987, Moltmann 1997), a notion of unity of entities that is independent of syntactic singularity:

(27) a. For a discourse context c and a NP X, [*they* X]^c is defined only if an utterance of X is part of c and the semantic value of X is a plurality of integrated wholes.

b. For a discourse context c and a NP X, [*sie* X]^c is defined only if X is part of c and [+plural].

Referents of singular count NPs are generally integrated wholes, but also referents of definite mass NPs are, such as *the silver*. The silver is an integrated whole in the sense that it is the maximal entity (in the context) whose parts share the property of being silver (Simon's 1987 notion of an FF-integrated whole, see also Moltmann 1997).

Why do English and German differ with respect to the antecedents of plural anaphora? This appears related to the fact that gender features are determined syntactically in German and semantically in English. In German, gender as a syntactic feature of nouns is fixed in the lexicon, rather than being based on the nature of the referent, as in English. German personal pronouns (*er* 'he', *sie* 'she', *es* 'it') and determiners (*der, die, das*), moreover, require syntactic agreement with the gender of the relevant NP. (27b) is then part of a more general condition according to which German pronouns select NPs based on syntactic features of the corresponding antecedents:

(28) Condition of English and German anaphoric pronouns

a. For an English pronoun p, an NP X, and a discourse context c, [p X]^c is defined only if an utterance of X is part c and the semantic value of X satisfies the features of p.

b. For a German pronoun p, an NP X, and a discourse context c, [p X]^c is defined only if an utterance of X is part of c and X agrees in syntactic features with p.

What is important in the present context is the observation that conjunctions of definite NPs that select w-pronouns fail to support plural anaphora, as seen in (29a, b):[13]

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[12] The fact that German *die* 'they', 'the' acts as a (colloquial) plural pronoun gives further support for the view that pronouns are determiners.

[13] Bare mass nouns as names of kinds in German also require w-pronouns (for the relevant range of speakers, see Fn 5.):

(i) a. Magnesium, was / ??? das lebenswichtig ist, ist ein wichtiges Metal.
    'Magnesium, which is essential for life, is an important metal.'

(29) a. Hans kann sich an das erste und das zweite erinnern, was Maria gesagt hat. Max kann

sich * an sie / ok daran auch erinnern.

'John can recall the first thing and the second thing Mary said. Max can recall them /

that.

b. (Der Regen und der Schnee,) Maria hat beides / das / * sie gesehen.

'The air and the snow, Mary has seen both / that / them.'

c. Hans kann sich an das erste und das zweite Ding erinnern. Max kann sich an sie auch

erinnern.

'John can recall the first thing and the second thing. Max can recall them too.

(29a) contrasts with (29c), with the full noun Ding, which goes with d-pronouns and supports

plural anaphora.

The selection of w-pronouns and the failure to support plural anaphora is thus indicative

of the mass status of an NP:

(31) <u>Generalization about w-pronoun selection and plural anaphora in German</u>

NPs that select w-pronouns as relative pronouns and fail to support plural anaphora when

conjoined are mass (i.e. not marked as [+ count]).

This generalization will play an important role in explaining the behavior of German names

with respect to relative pronoun selection and plural anaphora support.

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b. Reis, was / ??? der gesünder ist als Weizen, ist nicht teuer.
'Water (masc), which is healthier than beer, is not expensive.'

Moreover conjunctions of bare mass nouns in their kind-referring use do not support the plural anaphora:

(ii) a. Gold und Silber werden zum Schmuckherstellen verwendet. * Sie glänzen.
'Gold and silver are used to make jewelry. They are shiny.'
b. Magnesium und Eisen sind lebenswichtig. Jeder braucht * sie / ok das.
'John needs magnesium and iron. Mary needs them / that / that.

Bare mass nouns remain mass NPs even if they refer to a unique, well-individuated kind.
Note that even kind-referring mass NPs of feminine or masculine gender take w-pronouns (for the relevant range of speakers), as see in the inflection of the adjectival modifier below:

(iii) a. Brauner Reis, was / ??? der gesünder ist als Weizen, ist nicht teuer.
'Brown rice, which is healthier than wheat, is not expensive.'
b. Grosse Weisheit, was / ??? die nur wenige besitzen, ist selten.
'Great (fem) wisdom, which only few possess, is rare.'

4. Name 1 names in German: names for people, buildings and places

German names exhibit a remarkable pattern in the selection of w-pronouns and plural anaphora, displaying a sharp divide between person names on the one hand and place name on the other. In addition, 'productive' names for times, numbers and expressions side with names for places.

There are two types of proper names that need to be distinguished, for German as well as English and similar languages: type 1 names and type 2 names, as I will call them. Type 1 names take the form of simple nouns in argument position (English *John* or *London*). Type 2 names require a determiner in argument position (English *the Hudson*, *the Parthenon*).

In German, type 1 names for people and type 1 names for places (cities, villages, countries, and continents) differ with in two respects:

[1] selection of relative pronouns: d-pronouns (*der, die, das*) as opposed to w-pronouns (*was, wo*)

[2] plural anaphora support by a conjunction of proper names as antecedent.

The choice of d-pronouns strictly goes along with support of plural anaphora, whereas the choice of w-pronouns goes along with the failure to support plural anaphora.[14]

Here are the relevant generalizations regarding person names. Proper names for people (and animals) select d-pronouns:

(32) a. Hans, der / * was

    'John, who'

  b. Maria, die / * was

    'Mary, who'

Not only masculine or feminine names select d-pronouns, also diminutive names, which are syntactically neuter, do so:

(33) a. Er zeigte uns Fritzchen, das / * was wir noch nicht gesehen hatten.

    'He showed us little Fritz, whom we have not seen.'

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[14] The generalizations hold at least for standard German spoken in Southern Germany. For some German speakers the choice of d-pronouns and w-pronouns is interchangeable for place names as well as in other contexts.

b. Mariechen, das / * was wir sehr gerne mögen, kann uns helfen.

'Mariechen, whom we like a lot, can help us.'

There are also proper names for inanimate objects that select d-pronouns, for example proper names for castles and churches:

(34) a. Sanssouci, das / ?? was kleiner ist als Versailles.

'Sanssouci, which is smaller than Versailles'

b. Zarskoe Selo, das / ?? was grösser ist als Pavlovsk

'Zarskoe Selo, which is bigger than Pavlovsk'

c. Notre Dame, das / ?? was beinahe durch ein Feuer zerstört wurde

'Notre Dame, which was almost destroyed by fire'

Names for castles and churches are syntactically neuter. This is shown by the fact that a definite determiner that is required by an adjectival modifier of the name must be neuter (and that regardless of the gender of a suitable sortal noun (*Kirche* 'church' is feminine and *Palast* 'palace' masculine):

(35) a. das / * die schöne Notre Dame

'the beautiful Notre Dame'

b. das / * der erstaunliche Zarskoe Selo

'the amazing Zarskoe Selo'

Neuter gender here is chosen based on the nature of the referent.

Names for places, cities, countries, and continents select w-pronouns, not d-pronouns:[15]

(36) a. München, was / ??? das ich sehr gut kenne

'Munich, which I know very well'

b. Ich kenne Berlin, was / ??? das du ja nicht kennst.

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[15] There is one type of exception to the generalization for those speakers and that is plural country names such as *die Niederlande* 'the Netherlands', which selects d-pronouns:

(i) die Niederlande, die
   'the Netherlands, which'

Here the sortal appears overt (*–lande*), and the name may better be classified as a type 2 names, which come with a definite determiner (Section 6).

'I know Berlin, which you do not know.'

c. Ich liebe Italien, was / ??? das dir ja auch gut gefällt.

'I love Italy, which pleases you too.'

(37) a. Ich kenne Australien, was / ??? das du ja nicht kennst.

'I know Australia, which you do not know.'

b. Asien, was / ??? das weit grösser also Europa ist

'Asia, which is by far bigger than Europe'.

The same contrast holds for complex relative pronouns of the sort *wovon* 'of which', as opposed to *von dem* 'of which':

(38) a. Berlin, womit / ?? mit dem ich mich schon seit langem befasse, ist ein interessantes
Thema für eine Konferenz.

'Berlin, with which I have occupied myself for a long time, is an interesting topic for a
conference.'

b. England, wovon / ?? von dem er eine Stunde lang sprach

'England, of which he spoke for an hour'

c. Afrika, worüber / ?? über das wir uns lange unterhalten haben,

'Africa, which we talked about for a long time'

Turning then to plural anaphora, in German, as in English, conjunctions of proper names for people are unproblematic as antecedents for plural anaphora *sie* or *die*:[16]

(39) Anna mag Hans und Franz. Bill mag sie / die auch.

'Ann likes Hans and Franz. Bill likes them too.'

The same holds for names for churches and palaces:

(40) a. Ich kenne Notre Dame und Sainte Chapelle. Sie sind beide sehr schön.

'I know Notre Dame and Sainte Chapelle. They are both very beautiful.'

b. Zarskoe Selo und Pavlovsk, sie befinden sich in der Nähe von Sankt Petersburg.

'Zarskoe Zelo and Pavlovsk, they are located in the environment of Saint Petersburg.'

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[16] *Sie* 'they' is standard German, *die* 'they' is more colloquial. The generalizations about plural anaphora support hold for *sie* and *die* in the very same way.

By contrast, conjunctions of German names for places do not support plural anaphora. Rather, for the purpose of anaphoric reference to a conjunction of place names, a definite plural NP with a sortal head noun needs to be chosen:

(41) a. Ich kenne Berlin und München. Anna kennt ?? sie / ok diese Städte auch.

'I know Berlin and Munich. Ann knows them / them / those cities too.'

b. Ich mag Frankreich und Italien. Marie mag ?? sie / ok diese Länder auch

'I like France and Italy. Mary likes them / those countries too.'

Conjunctions of close appositions with place sortals as head nouns do support plural anaphora, as expected:

(42) Ich kenne die Stadt Berlin und die Stadt München. Maria kennt sie auch.

'I know the city of Berlin and the city of Munich. Mary knows them too.'

The conditions on plural anaphora support are different in English. Conjunctions of English place names are unproblematic as antecedents for plural anaphora:

(43) a. I know Berlin and Munich. Mary knows them too.

b. I like France and Italy. Mary likes them too.

c. I would like to visit Australia and Africa. Mary would like to visit them too.

Only in certain larger constructions can German place names go with d-pronouns and support plural anaphora. One of them is close appositions, where the d-pronoun is selected by the full head noun, with which it agrees in gender:

(44) a. die Stadt München, die /* was ich gut kenne

'the city of Munich which I know well'

b. Die Städte München und Berlin, ich kenne sie gut.

'The cities Munich and Berlin, I know them well.'

Another construction involves temporal modification:

(45) das Berlin der 20iger Jahre, das / * was ich nicht kenne

'the (neut) Berlin of the 20ies which I do not know well'

Here the proper name, most plausibly, has undergone meaning shift from a name referring to a place to a noun expressing a sortal concept for temporal stages of the place. The sortal noun is count, allowing for the plural, as in *die Berlins der verschiedenen Epochen* 'the different Berlins of the different periods'.

   Why do place names in German select w-pronouns and fail to support plural anaphora? According to the generalization in (31), NPs that select w-pronouns and fail to support plural anaphora are mass NPs. This means that German place names should be mass NPs. But how can place names be mass NPs given that they stand for single, well-distinguished entities? Cities, countries, and continents are clearly countable, or at least they are treated as such. The classification as mass can hardly be attributed to the semantics of place names itself. The light noun PLACE, however, like THING, is a mass noun, contrasting with PERSON. If silent light nouns form part of type 1 names, this will explain the difference in mass-count behavior between names for places and names for people in German.[17] A silent light noun thus should form the head of a type 1 name, as below, determining the mass or count status of the entire DP:

(46) a. [Hans [PERSON]$_{Nlight}$]$_{NlightP}$]DP

   b. [Berlin [PLACE]$_{Nlight}$]$_{NlightP}$]DP

English type 1 names will have the very same structures. English differs from German just in that English plural anaphora allow antecedents that are semantically plural, but not syntactically plural.

   A syntactic question that arises for type 1 names is: why do type 1 names not come with the definite determiner? This question needs to be pursued properly somewhere else. Perhaps the answer may reside in the ability for type 1 names (as light DPs) to move to SPEC(D) position, allowing the determiner to stay unpronounced, as has been proposed for light DPs in general by Collins (2007).

   Names for churches and palaces will involve a light noun that, like PERSON, is classified as count. It is plausible that HOUSE is such a light noun. HOUSE in various languages

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[17] For the suggestion that light nouns are part of names see Kayne (2010, Chap 8, Appendix).

functions as a bare NP, a syntactic role close to that of a light noun (Collins 2007), for example Italian (*Sono a casa* 'I am home', *Vado a casa* 'I go home') and French (*à la maison* 'at home').[18, 19] Thus, *Sanssouci* will have the structure [Sanssouci HOUSE]~NlightP~.

5. Productive names: names for times, addresses, numbers, and expression types

I will call *productive name* those names that are not attributed arbitrarily, based on some form of baptism or some other manner, case-by-case, but by a scheme aligned with a productive formation of names applied to a particular domain of entities. Productive names generally take w-pronouns and do not support plural anaphora, which means they contain mass light nouns.

Names for times (years, specific months, or dates) are productive names involving a combination of numerals and names for recurring periods of time in a certain order. German names for times take w-pronouns and do not support plural anaphora:

(47) a. 1968, was / ?? das interessanter ist als 1970

'1968, which is more interesting than 1970'

b. 1968, worüber / ?? über das ich einen Artikel geschrieben habe

'1968, about which I have written an article'

A close apposition is required to make d-pronouns acceptable for names of times:

(48) a. das Jahr 1968, das interessanter ist als 1970, …

'the year 1960, which is more interesting than 1970, …'

b. die Jahre 1968 und 1970, ueber die ich einen Artikel geschrieben habe

'1968, about which I have written an article'

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[18] Collins (2007) has argued that *home* has a light noun use, involving PRO for the relevant possessor ([PRO *home*]). However, it is more plausible that *home* has in fact the underlying structure [PRO HOUSE]. Many languages, it seems, do not have a light noun *home,* but use the noun for 'house' instead (Italian *a casa*, German *zu hause*). Alternatively, some languages just use first-person-oriented pronouns with a preposition (French *chez soi* 'at (one's) home').

[19] Note that overt *house* can be used to refer to churches, e.g. English, *house of god*, German *Gotteshaus* 'house of god', Italian *casa del Signore* 'the house of the lord'.

German names for times also fail to support plural anaphora, unlike their English counterpart (as the translations of the examples below make clear):

(49) a. Ich habe an 1968 und 1970 gedacht. Maria hat auch an * sie / ok diese Jahre gedacht.
     'I have thought about 1968 and 1970. Mary thought about them / those years too.'
   b. Anna schlug den dritten und den vierten August vor. Maria schlug * sie /ok diese Tage auch vor.
     'Ann proposed the third and the fourth of August. Mary proposed them / those days too.'

Names for years, days, or months as such could hardly classify as mass, since they stand for well-individuated temporal units and are part of a conventionalized schema for naming them in a certain order. The mass status of names for times, however, can be attributed to the presence of the light noun TIME, whose overt version *time* is clearly a mass noun. TIME as part of a name does not tell whether the referent is a year, month, or day. However, the choice of a particular temporal unit as the referent of the name will be part of the naming scheme that goes along with the particular type of productive name.

   Names for addresses are productive names referring to places. They select w-pronouns and support plural anaphora:

(50) a. 1600 Pennsylvania Avenue, was / * das die Adresse des Weissen Hauses ist
     '1600 Pennsylvania Avenue, which is the address of the White House'
   b. 1600 Pennsylvania Avenue und 10 Downing Street, ich merke mir ??? sie / ok diese Adressen.
     '1600 Pennsylvania Avenue und 10 Downing Street, I will recall them / those addresses.'

This is obviously due to the presence of the light mass noun PLACE in names for addresses. Recall, by contrast, that names for buildings (churches, palaces) involve the light count noun HOUSE and thus are not categorized as place names.

Names for numbers are also productive names, being formed by nominalizing the corresponding numeral adjective (or numeral quantifier). Number words such as *two* can occur in argument position, as below, and thus, can, at least syntactically, be used as names:[20]

(51) Two is smaller than four.

German names for numbers take w-pronouns and do not support plural anaphora: (Moltmann 2013a, Chapter 4, 2013b):[21]

(52) zwei, was / ?? das kleiner als vier ist, …

 'two, which is smaller than four, …'

(53) a. Hans addierte zehn und zwanzig. Maria addierte * sie / ok diese Zahlen auch.

  'John added ten and twenty. Mary added them too.'

 b. Zehn und zwanzig sind durch zwei teilbar. * Sie / OK Diese Zahlen sind keine

  Primzahlen.

  'Ten and twenty are divisible by two. They / Those numbers are not prime numbers.'

The mass status of number names can be attributed to the presence of the light mass noun THING.[22] Conjunctions of number words in English do support plural anaphora, as shown by

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[20] Moltmann (2013) and Hofweber (2006) take simple numerals to still have adjectival or quantificational meaning. But see Moltmann (2017) for arguments that their syntactic status is that of a name and no longer that of an adjective or quantifier.

[21] German number words may also enter the construction of type 2 names, which, as expected, go along with d-pronouns:

(i) die Zwei, die / * was eine Primzahl ist
 the (fem) two which is a prime number

In (i), the feminine gender of *die* matches the feminine gender of the unpronounced sortal *Zahl*. Such type 2 number names are restricted to relatively low numbers, a constraint that does not hold for close appositions with an overt head:

(ii) a. die Zehn,?? die Zwanzig, ??? die Dreiundzwanzig, ??? die Hundert
  'the ten, the twenty, the twentythree, the hundert'
 b. die Zahl dreiundzwanzig, die Zahl hundert
  'the number twentythree, the number hundert'

English does not have type 2 number names (just as it does not have type 2 names for lakes).
[22] One might think that number names contain a silent light noun NUMBER. NUMBER, however, is less obviously mass since it comes with the plural, at least in English (*enormous numbers of*, Kayne 2005, p. 182).

the acceptability of the translations of (53a, b), due to the fact that plural anaphora in English require just semantic plurality, not syntactic plurality for their antecedents.

Another productive type of name is pure quotations (in contexts in which they act as referential terms). Pure quotations are uses of expressions that appear to involve the formation of expression-referring names, at least in contexts such as the subject position in (54a) and the object position in (54b) (which replacement by an explicit expression-referring term of the sort *the name Anna*):[23]

(54) a. 'Anna' ist zweisilbig.

     'Anna' is disyllabic.'

  b. Hans buchstabierte 'Anna'.

     'John spelled 'Anna'.'

German pure quotations in contexts as in (55a, b) take w-pronouns rather than d-pronouns:

(55) a. 'Anna', was / * das der Name dieser Frau ist, ist zweisilbig.

     'Anna, which is the name of this woman, is disyllabic.'

  b. Hans buchstabierte 'ich', was / * das ein Pronomen ist.

     'John spelled 'I', which is a pronoun.'

Moreover, conjunctions of pure quotations in German do not support plural anaphora:

(56) a. 'Anna' und 'Marie' sind zweisilbig. ??? Sie sind nicht dreisilbig.

     ''Anne' and 'Marie' are disyllabic. They are not trisyllabic.'

  b. Hans schrieb 'Ich' und 'Du' an die Tafel. ??? Bill schrieb sie auch an die Tafel.

     'John wrote 'I' and 'You' on the blackboard. Bill wrote them on the blackboard too.'

German pure quotations thus pattern with mass NPs, which would be puzzling given the nature of expression types. However, the mass status of pure quotations can be attributed to the presence of the light mass noun THING in pure quotations when they are occur as expression-referring names.

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[23] Pure quotations as they occur in (54a, b) differ from pure quotations as small-clause predicates of verbs of calling and in *as*-phrases, where they act predicatively rather than referentially, see the Appendix.

As the translations of (56a, b) illustrate, conjunctions of pure quotations in English do support plural anaphora, which again is due to the fact that English plural anaphora require semantic plurality, not syntactic plurality.

6. Type 2 names in German: names for mountains, lakes, temples, and stones

Type 2 names display a different syntactic structure from type 1 names. Type 2 names involve a more specific, full sortal noun, which generally can appear overtly, as well as the definite determiner, which needs to agree with the sortal. German makes use of the construction of type 2 names for names for mountains, lakes, temples, and famous stones; other languages may make other choices. Below are examples with German names for mountains:

(57) a. der Mont Blanc, der

    b. die Zugspitze, die

    c. das Erzgebirge, das

In type 2 names for mountains, without explicit sortal, the masculine definite determiner matches the masculine gender of the German sortal *Berg* 'mountain' and obviously is indicative of its presence:

(58) a. der Fujiyama, der

    b. der Vesuv, der

    c. der Etna, der

The choice of type 2 names for mountains is rather strict. Just knowing that 'Kailash' is the name for a sacred mountain in Tibet, speakers have very firm intuitions that the name cannot occur on its own in argument position, but requires the masculine definite determiner: [24]

(59) a. * Man darf Kailash nicht besteigen.

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[24] There are certain sorts of names for mountains that are exceptions to the generalization. Names for alps, for example, may be feminine (*die Jungfrau, die Dent Blanche*) or neutral (*das Wiesmies*) Such names should be considered idiomatic. There are also certain German names for places that come with a definite determiner and should similarly be considered idiomatic (*die Camargue* 'The Camargue', *die Turkei* 'Turkey').

      'One is not allowed to climb Kailash.'

   b. * Kailash ist heilig.

     'Kailash is sacred.'

(60) a. Man darf den Kailash nicht besteigen.

     'One is not allowed to climb the Kailash.'

   b. Der Kailash ist heilig.

    'The Kailash is sacred.'

The definite determiner is not obligatory with type 2 names, though, when they are used as vocatives:

(61) (*Der) Kailash, endlich erblicke ich dich!

   '(The) Kailash, finally I see you!'

Also in the predicate position of small-clause complement of verbs of calling may type 2 names occur without determiner:

(62) Er nannte den Berg 'Kailash' / 'den Kailash'.

   'He called the mountain Kailash / the Kailash.'

Whether a determiner appears depends on whether the calling act is directed toward the referent, involving a vocative use of the name, as in (63a), or whether it makes reference to it in the third person, as in (63b):

(63) a. Er wandte sich an den Berg als 'Kailash'.

     'He addressed the mountain as 'Kailash'.'

   b. Er bezog sich auf den Berg als 'der Kailash'.

    'He referred to the mountain as 'the Kailash''.

   Examples of German names for lakes containing an explicit sortal (possibly from a different language) are *der Bodensee, der Zuricher See, der Lago Maggiore*. Other names for lakes require the masculine definite determiner, whose gender matches the gender of the sortal noun *See* 'lake'. Again, names for lakes not familiar to a speaker trigger clear intuitions that they must go with the masculine definite determiner in argument position.

Thus, just knowing that *Mansarovar* is a name for a lake (the lake next to mount Kailash, which is equally sacred), speakers know that the name can be used in argument position only with the masculine definite determiner:

(64) der Mansarovarsee / der Mansarovar / der See Mansarovar

 'the Mansarovar lake / the Mansarovar / the lake Mansarovar'

(65) a. I will * Mansarovar / ok den Mansarovar sehen.

  'I want to see Mansarovar / the Mansarovar.'

 b. * Mansarovar / ok Der Mansarovar ist ebenso heilig wie der Berg Kailash.

  'Mansarovar is equally sacred as the mountain Kailash.'

 In English, names for lakes are not type 2 names (*Lake Garda / * the Gardalake*), though names for mountains are (*the Vesuvius*). This illustrates that the choice among type 1 and type 2 names for particular kinds of entities is language-specific.

 Names for temples are type 2 names in both German and English. For a fairly familiar temple name, this is illustrated below: [25]

(66) Wir haben * Parthenon / ok den Parthenon / ok den Parthenontempel besichtigt.

 'We have visited Parthenon / the Parthenon / the Parthenon temple.'

The masculine gender of the definite article indicates the silent presence of the sortal noun *temple* 'temple'.[26]

 Unlike type 1 names, type 2 names always select d-pronouns and support plural anaphora:

(67) der Kailash, der heilig ist

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[25] It is remarkable that names for churches and for temples are treated so differently in one and the same language. In German, names for churches are type 1 names, whereas names for temples are type 2 names. Names for temples are less integrated into German than names for temples, presumably because of the dominance of Christianity in German culture.

[26] There are some yet to be explained differences between the construction with an overt sortal and the one with an unpronounced sortal. Thus the plural is possible in the former, but not the latter:

(i) a. die Tempel Houriaji und Toji
 'the temples Houriaji and Toji'
 b. die Houriaji und Toji
  the (plur) Houriaji and Toji.

This suggests that a silent head noun must be singular and cannot be plural.

    'the Kailash, which is sacred'

(68) Hans will den Kailash und den Mansarovar sehen. Maria will sie auch sehen.

    'John wants to see the Kailash and the Mansarovar. Mary wants to see them too. '

   Concerning the syntactic structure of type 2 names, I will simply assume that the overt or silent full sortal noun forms the head of a compound as in (69a) and (69b):

(69) a. der [Mansarovar [see]$_N$]$_{NP}$

    b. der [Mansarovar [e]$_N$]$_{NP}$

Such a compound structure is obligatory when forming new type 2 names whose sortal is not understood from the context, for example names for famous stones (*der Hopediamand* 'the hopediamond', *der Rockefellersmaragd* 'the Rockfelleremerald').[27]

   The sortal in type 2 names can hardly be considered a light noun, given the variety and culture-specificity of the sortals they involve. This may present a difficulty for the generalization that only light nouns, not full nouns, can remain silent without antecedent (Kayne 2005). There is a plausible extension of the notion of antecedent, though, allowing an antecedent for a silent full noun to be found not just in the preceding discourse context, but also as an activated concept in the community that forms the background of the conversation

   Why do type 2 names select d-pronouns and support plural anaphora? There is a double reason for that, namely first the presence of the definite determiner and second the presence of the sortal head noun, which is clearly count, given its overt version.

   Type 2 names differ syntactically from close appositions (Jackendoff 1984):

(70) the poet Goethe

Unlike in type 2 names, in close appositions the head noun is obligatory. Moreover, there are constraints on the head noun of close appositions not shared by type 2 names. For example, with person names, the head noun of a close apposition may not just be a sortal, but has to describe a professional role (??? *the person Goethe*). There is a natural explanation for that if a type 1 name occurs in a close apposition together with its silent light noun, so that (70) is in fact:

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[27] French uses close appositions instead: *le diamond hope, l'emeraud Rockefeller*.

(71) the poet [Goethe PERSON]

It is a plausible general constraint that the head noun of a close apposition has to be a more specific sortal than the light noun that is part of the type 1 name. This is the case for nouns describing professional roles as in (71). Why then is the close apposition *die Stadt Berlin* 'the city of Berlin' is fine? That is because *Stadt* is more specific than PLACE, the light noun that is part of the type 1 name *Berlin* PLACE.

7. Conclusion

This paper has argued that the light nouns are that part of light quantifiers in English, German and other languages are also part of certain types of proper names, namely type 1 names, which in German include names for persons, places, houses, as well as productive names. Light nouns display a mass-count distinction, with THING, PLACE, and TIME siding with mass nouns and PERSON and HOUSE with count nouns. This mass-count distinction explains puzzling differences in the mass-count behavior among type 1 names, which manifest themselves in the selection of relative pronouns and the ability to support plural anaphora.

   Light nouns are not generally sortals, that is, nouns that convey the identity conditions of types of entities. In particular, THING and PLACE comprise a range of sortal concepts (material object, artifact, number, expression type, city, country, continent) and thus would only have the status of 'dummy sortals'. Type 1 names are distinguished from type 2 names, which do not involve a light noun, but contain a specific silent or overt full sortal noun in a different syntactic structure.

   What does the presence of light nouns in names mean for the semantics of names? Just a few conclusions can be drawn from the discussion of the role of light nouns in type 1 names in this paper. First of all, since light nouns in type 1 names are silent, they cannot play a role in communicating what sort of object is being referred to. Second, since light nouns in type 1 names are not generally sortals, giving the identity conditions of the object the name stands for, they underspecify the type of entity being referred to and thus are not suited for the role of sortals that some philosophers took to be part of the meaning of names (Geach 1957, Dummett 1973) -- in contrast to the sortal nouns that are part of type 2 names. The function of light nouns in type 1 names thus is a somewhat different one. Note that the view about names

that has become standard in philosophy of language generally does not make use of sortals; it simply says that names refer in virtue of a causal-historical chain involving previous uses of the name or else a referent-fixing schema that goes along with a productive process of name formation.

Appendix: The predicativist theory of names and the mass status of place names and productive names

This paper has presupposed the standard view about proper names: as referential terms they stand for the same individual in different circumstances of evaluation, based on a causal-historical chain (for non-productive names) and a conventional naming schema (for productive names). The mass status of German place names and productive names was then attributed to the mass status of the light nouns that make up a silent component of such name. There is an alternative to the semantics of names that has been discussed in the recent philosophical literature, namely predicativist theory (Fara 2011, 2015, Matushansky 2008). On the predicativist theory, names, when forming referential terms, act as part of a definite description with an unpronounced definite determiner, referring to the contextually unique object bearing the property expressed by the name (being called 'N' or standing in a suitable contextually given naming relation to 'N'). This theory appears to offer a simpler account of the mass status of place names in German. German place names would be based on common nouns that would themselves be mass rather than count. There are a range of problems, though, for that view.

First of all, there is a general issue of linguistic plausibility for the predicativist view, which has been elaborated in the literature, in particular by Jeshion (2017) and Hinzen (2015).

Second, it is not clear how predicativism would explain the mass status of productive names. (In fact it is not clear how the predicativist view applies to productive names in the first place.)

Third, it would be hard to explain, given predicativism, why place names as common nouns should classify as mass. Cumulativity and divisiveness, considered defining characteristics of mass nouns in extensional mereological theories, certainly do not hold for place names: a neighborhood of Berlin is not called 'Berlin' again and if there was a city called 'Berlin' in the US, the German and the American cities would be 'two Berlins' and not form a single plurality called 'Berlin'. In fact when names are used as common nouns, they clearly are treated as count rather than mass (*the two Naples, a second Naples*).

Fourth, there are linguistic differences between common nouns and names when used as predicates of small-clause complements of verbs of calling. Matushansky (2008) took it to be syntactic evidence for the predicativist theory that (1a) is syntactically parallel to the small-clause construction in (1b):

(1) a. Mary called John 'Bill'.

   b. Mary called John a fool.

(1a) appears to require the name to make the same sort of semantic contribution as an ordinary predicate such as *a fool* in the small clause in (1b), namely attributing a property of the sort 'being called 'Bill' (or 'standing in a suitable contextually given naming relation R to the name 'Bill') (Matushansky 2008). Despite their similarities, however, (1a) and (1b) are not entirely on a par. Both (1a) and (1b) describe acts of attribution, but the acts are different in type, involving different conditions of satisfaction and different roles of the small-clause predicates. These differences manifest themselves syntactically in German, namely in the choice of different proforms for the small-clause predicates. In German, predicational *nennen* 'to call' as in (1a) goes along with the proforms *was* 'what' and *das* 'that' for the small-clause predicate, as seen in (2a, b), whereas appellative *nennen* as in (1b) goes along with the proforms *wie* 'how' and *so* 'so', as seen in (3a, b):

(2) a. Hans nannte ihn einen Esel. Maria hat ihn das / * so auch genannt.

      'John called him a donkey. Mary called him that too'.

   b. Was / * Wie hat Maria ihn genannt? Sie nannte ihn einen Esel.

      'How / What did Mary call him ? She called him a donkey'.

(3) a. Er nannte sie 'Susi'. Er haette sie nicht so / * das nennen sollen.

       'He called her Susi. He should not have called her so / that'.

   b. Wie / * Was hat er sie genannt? Er nannte sie 'Susi'.

      'How / What did he call her? He called her 'Susi'.'

Wie and *how* are also the proforms to replace *als* ('as')-phrases, as below:

(4) a. Er sprach 'Küsschen' so aus.

      he pronounced 'Kusschen' so

      'He pronounced 'Küsschen' that way.'

b. Wie sprach er 'Küsschen' aus?

'How did he pronounce 'Küsschen'?'

This indicates that names as small-clause predicates with verbs of calling do not contribute a property in the way ordinary small-clause predicates do. They may better be considered pure quotations, but now in a predicative function.[28] The semantic parallelism between (1a) and (1b) then consists in that the act described by the verb of calling is one of attribution of a name (expression type) in (1a) and attribution of a property in (1b). The satisfaction conditions of the former consist in John having the name, those of the latter in John having the property. Predicative occurrences of names do not require a property-denotation for names, but can be treated as pure quotations. Note that pure quotations can also occur after the preposition *as*, which is reserved for predicational uses of expressions:[29]

(5) a. John treats Bill as a brother.

b. John pronounced 'Küsschen' as 'Kusschen'.

Predicative uses of names with verbs of calling thus motivate a more general account of predicative quotation rather than a treatment of names as common nouns.

Acknowledgments

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[28] The predicativist theory is also motivated by 'common noun' occurrences of names as in *several Marys* or *every Kennedy*. But see Jeshion (2017) for an account of common noun uses of proper names in terms of meaning shift within the causal theory of names.

[29] In German, *call* itself may have to be translated by a verb taking an *as*-phrase, namely with adjectival predicates:

(i) Er bezeichnete sie als klug.
   he called her as intelligent
   'He called her intelligent.'

Nennen 'call' only allows for NPs and names as small-clause predicates and not adjectives:

(ii) a. Sie nannte ihn einen Esel.
     'She called him a donkey'
   b. Sie nannte ihn 'Johnny'.
     'She called him Johnny.'
   c. ?? Er nannte sie klug.
     'He called her intelligent.'

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