The morphosyntax of *kind* in English
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1 Introduction

The nouns *kind*, *type*, and *sort* present an agreement problem in English: they appear to suggest that nouns can agree with nouns:

(1)

a. This kind of rabbit
b. *This kind of rabbits
c. *These kinds of rabbit
d. These kinds of rabbits

(2)

a. This type of car
b. *This type of cars
c. *These types of car
d. These types of cars

(3)

a. This sort of rug
b. *This sort of rugs
c. *These sorts of rug
d. These sorts of rugs

The agreement patterns are schematized in (4) below. Only constructions in which *kind/type/sort* and the noun match in number features are judged grammatical, as has also been observed by Carlson (1977) and Lehrer (1986) (and others probably).

(4) Kind / Type / Sort Noun
    (a)  SG   SG
    (b) *  SG   PL
    (c) *  PL   SG
    (d)   PL   PL

This property of seeming nominal agreement is particular to the nouns *kind*, *type*, and *sort*. If nouns like *family*, *class*, *genre*, etc. are used, the (b)-type mismatch is perfectly acceptable.

(5) **This family of insects** is known to feed exclusively on prey. (COCA: AgricResrch 2007)\(^1\)

(6) Over time, **this class of drugs** increases bone mass and may induce remission (COCA: OrthoNursing 2004)

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\(^{1}\) These examples were taken from the Corpus of Contemporary American English (Davies, 2008-), COCA for short. Examples are referenced in the following way (COCA: Source Year_of_Source)
I teach a couple of classes that deal directly with **this genre of films** in one way or another. (COCA: NPR_TalkNation 2008)

Furthermore, we see that cross-linguistically the equivalent of the (b)-type mismatch is not ungrammatical, as in Dutch or Polish, suggesting that the semantic meaning is not interfering.

\[(7)\] **Dit soort konijnen**  
This. N.SG kind rabbits. C.PL  
’(lit.) this kind of rabbits’

\[(8)\] **Ten rodzaj królików**  
This. M.SG.NOM kind. M.SG.NOM rabbits. M.PL GEN  
’(lit.) this kind of rabbits’

Summarizing:

\[(10)\] Generalization on **kind / type / sort**: Kind, type, and sort (N1) must match in number features with the embedded noun (N2).

Thus, the nouns **kind**, **type**, and **sort** present us with an intriguing agreement problem:

**How and why should kind, type, and sort agree with their complements in number?**

To explore this issue, I turned to the Corpus of Contemporary American English, where I collected numerous examples of the use of **kind**, **type**, and **sort**. In this talk, I will discuss some of the major findings of this study, and a possible analysis.

I will focus on the (b)-type mismatch, but see the Appendix for more on the (c)-type mismatch.

## 2 Some background on kinds and the kind-construction

In the semantic literature, there is the notion of “kinds,” which goes back to Carlson (1977). Some descriptions of kinds in the (recent) literature are:

\[(11)\] Aguilar-Guevara (2014: 37): “kinds can be defined as abstract objects which are representative of a group of individuals with similar characteristics,“

\[(12)\] Castella (2014: 25): “…roughly, they correspond to ‘regularities occurring in the world.’ They can be ‘natural’ (e.g. rocks, plants, animals, etc.), ‘artificial’ (e.g. bottles, houses, lipsticks, etc.), or expressed by modified nominals (thus corresponding to some sort of complex object like **three-headed dogs**)”

In sentences like (13) below, for example, both **the potato** and **potatoes** are taken to be kind-referring. In these examples, the usage of **the potato** and **potatoes** does not refer to any particular potato or set of potatoes, but rather the kind or genus that the potato is, i.e. **Solanum tuberosum** (Krifka et al 1995: 2).
a. The potato was first cultivated in South America.
b. Potatoes were introduced into Ireland by the end of the 17th century.
c. The Irish economy became dependent upon the potato.
(Krifka, et al 1995: 2)

Nouns are assumed to be either kind-referring, as above, or object-referring, meaning that there is some particular object or set of objects that the noun refers to, as in (14) below.

a. The potato I bought yesterday is sitting on the table.
b. Can you please put the potatoes in the fridge?

Turning to the kind/type/sort-construction, these nouns pick out a sub-kind of the kind denoted by the noun. For example, in (15), there is the kind RABBIT, and then there are rabbits with long-ears (or medium sized ears, or short ears), which form a sub-kind of the RABBIT kind.

Do you see that rabbit over there with long ears? That’s my favorite kind of rabbit; I love long-eared rabbits.

The kind/type/sort-construction creates reference to a subkind of the N2 noun (cf. Zamparelli 1998).

3 Corpus study into kind, type, and sort

Most searches were conducted using the Corpus of Contemporary American English (COCA) which includes data from spoken language (transcripts), works of fiction, magazines, newspapers, and academic texts, with 520 million words, from between 1990 and 2015 (Davies, 2008-).

In this section, I will walk us through a few of the more prominent patterns found in the corpus, paying particular attention to how the distribution of number features is achieved.

3.1 Pattern 1: This kind of rabbits (type (b) mismatch)

Phrases of the type $N_{SG}$ of $N_{PL}$ were noted to be ungrammatical:

a. *This kind of rabbits
b. *This type of cars
c. *This sort of rugs
While it is true that the above examples are ungrammatical, it turns out that that ungrammaticality is dependent on the nature of the element which precedes the *kind / type / sort* word. While *this* produces ungrammaticality, *these* or *those* does not:

(18) We obviously made clear that we abhor this and will not let these kind of attacks stand. (COCA: CBS 2015)

(19) But you must be experienced filming in these kind of conditions. (COCA: ParisRev 2015)

(20) ...they’re accessible to people in a way that these kind of images never were (COCA: PBS_NewsHour 2012)

If *the* is present (which requires some kind of restrictive modifier, such as a relative clause), or *what*, it is also grammatical. ²

(21) Those are the kind of things that make headlines, and now that there is this massive earthquake off the coast of Chile, that could actually end up swamping some of the coverage of all of this. (COCA: Fox 2015)

(22) Well, the kind of fires that I’m photographing are quite different than what you’re seeing in California. (COCA: NPR_Sunday 2003)

(23) And I had never paddled in the type of conditions I would soon be facing (COCA: PopMech 2015)

(24) And who knows what kind of things are going to blow up. (COCA: CBS 2015)

(25) There also seems to be a misunderstanding of what type of operations are counted for air traffic purposes. (COCA: Chicago 1997)

(26) So, what sort of monsters lurk down here? (COCA: FantasySciFi 2014)

Zamparelli (1998) finds similar data in the British National Corpus for *kind*, where the majority of examples involving singular *kind* with a plural noun used *what, the, these, or those*. I compare it with counts from the COCA, which shows the same general trend.³

(27) Counts of phrases of the type pre-mod *kind* of *N*ₚₐₙ

<table>
<thead>
<tr>
<th>Pre-modifier</th>
<th>Counts (BNC, Zamparelli 1998)</th>
<th>Counts (COCA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>What</td>
<td>116</td>
<td>2137</td>
</tr>
<tr>
<td>The</td>
<td>526</td>
<td>2737</td>
</tr>
<tr>
<td>These / those</td>
<td>45</td>
<td>1248</td>
</tr>
<tr>
<td>This / that</td>
<td>6</td>
<td>266</td>
</tr>
<tr>
<td>Others</td>
<td>106</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>799</td>
<td>6388</td>
</tr>
</tbody>
</table>

² Participants in forum discussions on the use of *kind* often consider *these / those kind of Nₚₐₙ* to be colloquial, but not necessarily *the / what kind of Nₚₐₙ*.

³ There’s an obvious problem of getting false positives, which have not been excluded here.

i. So, maybe that’s an issue that kind of bridges the gap across Republicans (COCA: CBS 2015)

ii. So this kind of levels the playing field. (COCA: NPR 2013)

iii. This kind of grass-roots organizing could alienate some of the very lawmakers it aims to persuade (COCA: CSMonitor 2009)
What is intriguing about these examples is that verbal and demonstrative agreement appears to “ignore” the singularity of the kind / type / sort word, targeting the plural of N2:

(28) These / *this kind of attacks are / *is …
(29) These / *this kind of conditions are / *is …
(30) These / *this kind of images never were / *was …

(31) Those are / *that is the kind of things that …
(32) The kind of fires that I’m photographing are / *is …

(33) What sort of things are / *is going to blow up?
(34) What type of operations are / *is counted for air traffic purposes?
(35) So, what sort of monsters lurk / *lurks down here?

This suggests that the “singular” feature of kind / type / sort is inaccessible to agreement probes.

Additionally, elements which require a singular noun are generally bad with “singular” kind, type, or sort:

(36) Singular-requiring pre-modifiers
   a. *A / one / every / each kind of things are/is going to blow up.
   b. *A / one / every / each type of operations are/is counted for air traffic purposes.
   c. *A / one / every / each sort of monsters lurk(s) down there.

Together, this data suggests that despite the fact that kind, type, and sort look singular in type (b) mismatches, they cannot be singular. What seems most plausible is that they are numberless here, the numberless form being morphologically identical to the singular.

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4 Counts in the corpus for “___ kind of Nn”: one (7), a (23), every (1), each (4). I have not verified whether these are all positive hits.

5 Some exceptions to this. I don’t know what makes these examples different.

i. **One kind of parents** sent their kids to Dr. Lassiter. (COCA: BkSF:DownRabbitHole 2006)
   ii. Participants’ scores of modeling advantage in **each kind of teachers** ranged from 8 to 56 (COCA: Adolescence 2008)
   iii. Don’t stop at baking just **one kind of cookies** (www.holidayinsights.com/other/bakecookiesday.htm)
Now, if all this is true, then the generalization still holds – *kind, type, and sort* must match in number with the embedded noun, unless they lack number to do so, as is the case with these examples.

But then the question still remains: Why are *kind, type, and sort* prohibited from behaving as a singular count noun in these constructions?

3.2 Pattern 2: These kinds of rabbits (type (d))

Let’s look at some examples, from the corpus, and elsewhere. There are two main classes of examples:

**CLASS 1:**

(38) Earlier in this broadcast you heard Gianni Agnelli say there are **two kinds of men**, those who talk with women and those who talk about them. (COCA: ABC_Primetime 1991)

(39) I think that the more acceptance we can have for **the different types of families** and recognizing them as such will make the value system in our country more strong. (COCA: CNN_Sonya 1992)

(40) Harry recognized Valium, Seconol, and some type of amphetamine. He suspected the others contained **various sorts of painkillers**. (COCA: BKSilentTreatment 1995)

In this first set of examples, (38)-(40), we are clearly dealing with multiple sub-types, this being most obvious in (38) partially repeated as (41).

(41) Gianni Agnelli says there are **two kinds of men**, those who talk with women and those who talk about them.

(42) *Kind Hierarchy:*

```
MEN
men who talk with women men who talk about women
```

We will refer to these types of examples as having a “meaningful plural” on *kind / type / sort.*

**CLASS 2:**

(43) I’m thinking of planning a **launch party**, and um, I usually don’t ever plan **these types of parties**. (https://www.youtube.com/watch?v=VPf-gffGz5M, at 5:22)

(44) For 20 years now, Mangano has been racking up mega-sales with **why-didn’t-I-think-of-that kinds of inventions**. (http://abcnews.go.com/2020/story?id=1782048)

(45) Our, our, our parents were so intent on vaccinating us when **the Salk vaccine** came out because we knew and we came out of the generation that knew that the horrors of **these kinds of diseases**. (COCA: NBC 2015)
What’s interesting about this second set of examples, (43)-(45), is that it’s not entirely clear that there are multiple sub-kinds of the N2 involved:

(46) I’m thinking of planning a launch party. I don’t usually plan these types of parties.

→ these types of parties seems to mean something like “launch parties and other parties like them.” Does this imply sub-kinds of PARTY? of LAUNCH PARTY? simply some kind of plural?

(47) Kind Hierarchy:

```
PARTY
  -- launch parties
```

- Why-didn’t-I-think-of-that kinds of inventions: The inventions all seem to qualify as the “why-didn’t-I-think-of-that” type; where do multiple subtypes come in?
- These kinds of diseases: The context picks out the Salk vaccine, which is a vaccine for polio. The interpretation seems to be one of “polio and diseases like it.” Are there multiple subtypes here?

Note, that we also see different effects of reversing the order of N1 and N2 for these two classes of examples. A reverse order doesn’t seem to affect the interpretation very much for the first class, while for the second class, the reverse order is more felicitous if kind, type, or sort are singular rather than plural.

CLASS 1:

(48) Gianni Agnelli says there are men of two kinds.  
(49) I think that the more acceptance we can have for families of different types…
(50) Harry recognized Valium, Seconol, and some type of amphetamine. He suspected the others contained painkillers of various sorts.

CLASS 2:

(51) I’m thinking of planning a launch party … I usually don’t ever plan parties of this type / ??these types.
(52) Mangano has been racking up mega-sales with inventions of the why-didn’t-I-think-of-that kind(*s)
(53) Our parents were so intent on vaccinating us when the Salk vaccine came out because … we knew the horrors of diseases of this kind / ??these kinds.

There’s something interesting to be said about the pre-modifiers of kind, type, and sort in the reverse construction. Searching for the frame noun(s) of ___ kind(s) –of?, we get the following:

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6 Perhaps a better example: Vera and Lazar Feldman, […], found themselves proceeding from instructions of two kinds: one, from their own training in secular law; […]; the other, from the people p 102 who were thatching huts and surrounding them with fences of thorned branches and hacked-off prickly pear plants (COCA: Bk:NoneAccompany 1994)

7 Of excluded to block examples of the type: the outcomes of those kinds of trials
Premodifiers of kind(s) in the reverse construction (search: noun(s) of ___ kind(s))

<table>
<thead>
<tr>
<th>Premodifier</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstratives</td>
<td>669 (this)</td>
<td>4 (these)</td>
</tr>
<tr>
<td></td>
<td>165 (that)</td>
<td>1 (those)</td>
</tr>
<tr>
<td>Possessive pronouns</td>
<td>191</td>
<td>0</td>
</tr>
<tr>
<td>Articles</td>
<td>527 (the)</td>
<td>5 (the)</td>
</tr>
<tr>
<td></td>
<td>189 (a)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>142 (every)</td>
<td></td>
</tr>
<tr>
<td>Numerals</td>
<td>188 (one)</td>
<td>6 (two, three, …)</td>
</tr>
<tr>
<td>Some</td>
<td>931</td>
<td>0</td>
</tr>
<tr>
<td>Quantifiers (PL)</td>
<td>—</td>
<td>832 (all)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>56 (many)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9 (several)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 (both)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 (most)</td>
</tr>
<tr>
<td>Adjectives:</td>
<td>—</td>
<td>198 (various)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>36 (different)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22 (other)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16 (other adjs)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3002</td>
<td>1191</td>
</tr>
</tbody>
</table>

When kind (and presumably type and sort) is plural in the reverse construction, permitted pre-modifiers tend to be those which enforce a multiple sub-kinds reading, like several or various.

(55) In the marine reserve, illegal fishing of several kinds persists within a boom-and-bust cycle (COCA: Bioscience 2009)

(56) That would mostly be doctors, lawyers, professional people of various kinds, who now pay about 50 percent of their income taxes. (COCA: ABC_Brinkley 1992)

This suggests that the reverse construction enforces the meaningful plural (CLASS 1), hence the fact that it is generally incompatible with plural demonstratives (which are probably the most likely candidate for instantiating CLASS 2, given that they do not enforce multiple sub-kinds).

If so, the reverse construction is a diagnostic for CLASS 2 constructions, what we might term a “meaningless plural” on kind / type / sort.

**Question:** What is this meaningless plural?

**Proposal:** The meaningless plural represents the missing kind_{SG} of noun_{PL} (type (b) mismatch). The reason a singular kind is impossible (pattern 1) and that the CLASS 2 construction seems to actually mean kind_{SG} of noun_{PL} (pattern 2) is because kind is actually agreeing with N2.

(57) Kind of noun
[#:__]  [#:SG/PL]
4 A tentative analysis

There are two things to establish: (a) how a noun is able to agree with a noun and (b) under what conditions nominal agreement is triggered.

4.1 How does a noun agree with a noun?

First of all, noun agreement derives the facts presented so far:

- Singular kind/type/sort cannot precede a plural N2.
- Plural kind/type/sort does not necessarily mean “multiple sub-kinds”, unless the pre-modifier enforces a multiple sub-kind interpretation (quantifiers, some adjectives)

- Analysis: If N2 is plural, kind/type/sort must either be numberless (does not trigger agreement) (58) or plural (has a number feature which must agree with N2) (59).

\[(58) \textit{NUMBERLESS KIND/TYPEx/SORT}\]

\[
\text{D} \\
\text{kind} \\
of \\
\text{NumP} \\
\text{PL} \\
\text{noun}
\]

\[(59) \textit{AGREEING KIND/TYPEx/SORT}\]

\[
\text{D} \\
\text{NumP} \\
\text{#:}) \\
\text{kind} \\
of \\
\text{NumP} \\
\text{PL} \\
\text{noun}
\]

Suppose it is possible to merge an empty number head, in addition to a valued number head (SG/PL). Given that number must be expressed (morphologically) if present, an empty number head will trigger an agreement relation with a valued number head if possible.

Some other potential examples of this phenomenon might be:

- **Dependent plurals**: The plural on the subject noun seems to force a plural on the noun following the verb:

\[(60) \text{Unicycles have wheels / # a wheel.}\]
\[(61) \text{The girls are wearing blue dresses / # a blue dress (=all wearing the same dress).}\]
The girls kissed their boyfriends / # their boyfriend (=same boyfriend).\(^8\)

- **Modificational possessives** (Munn 1995): The modificational possessive (unlike regular possessives) must match in number with the modified noun.

(63)  
  a. These are *man’s / men’s shoes.  
  b. This is a man’s / ??men’s shoe.  

(Munn 1995)

In isolation, these are ambiguous with a regular possessive, but one-insertion can remove the ambiguity, as in (65).

(64)  
  a. a man’s shoe // ambiguous between some man’s shoe, and shoes for men  
  b. men’s shoes // ambiguous between some men’s shoes, and shoes for men

(65)  
  a. this man’s shoe and that one // shoe worn by men (unambiguous)  
  b. this man’s shoe and that one’s // shoe belonging to that man (unambiguous)

Potentially a similar process as with *kind, type, and sort* occurs with dependent plurals and modificational possessives.

4.2 What triggers nominal agreement?

We can view the lack of the (b)-type mismatch as a conspiracy: English conspires to avoid having two different number features on the two nominals, either by making one numberless, or by forcing agreement. Why?

Proposal: Two nouns in the same domain cannot have conflicting number features. *Kind, type,* and *sort* form part of the same domain of N2 (or perhaps, part of the extended projection), despite the presence of *of.* This restriction produces the conspiracy.

**Evidence for a single domain:**

- N2 cannot be preceded by a definite determiner, demonstrative, possessive, quantifier, or numeral; likewise, N2 cannot be a pronoun.

(66)  
*These kind(s) of the / those / my / many / two people

(67)  
*This kind of you

Such material is assumed to form part of the higher structure of the nominal – thus, if the upper layers of the DP are missing under *of,* it follows that this material cannot be inserted.

- *Kind / type / sort* do not behave like regular lexical nouns when it comes to extraction (examples based on Selkirk 1977).

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\(^8\) These last two examples and discussion of their judgments were found at: http://linguaphiles.livejournal.com/5762317.html
Lexical Nouns

(68) A review of answers to your argument was given. \( [N_1 \text{ of } N_2 \text{ to } N_3] \) \( V \)
(69) A review was given of answers to your argument. \( [N_1] \) \( V [N_4 \text{ of } N_2 \text{ to } N_3] \)
(70) *A review of answers was given to your argument. \( *[N_1 \text{ of } N_2] \) \( V [N_4 \text{ of } N_2 \text{ to } N_3] \)

Taxonomic Nouns

(71) Two kinds of answers to your argument were given. \( [N_1 \text{ of } N_2 \text{ to } N_3] \) \( V \)
(72) *Two kinds were given of answers to your argument. \( *[N_1] \) \( V [N_4 \text{ of } N_2 \text{ to } N_3] \)
(73) Two kinds of answers were given to your argument. \( [N_1 \text{ of } N_2] \) \( V [N_4 \text{ of } N_2 \text{ to } N_3] \)

Lexical Nouns

(74) What did you give a review of __? \( \text{WH} \) \( V [N_1 \text{ of } \text{WH}] \)
(75) *What did you give a review of your answers to __? \( *[\text{WH}] \) \( V [N_1 \text{ of } N_2 \text{ to } \text{WH}] \)

Taxonomic Nouns

(76) *What did you give two kinds of __? \( *\text{WH} \) \( V [N_1 \text{ of } \text{WH}] \)
(77) What did you give two kinds of answers to __? \( \text{WH} \) \( V [N_1 \text{ of } N_2 \text{ to } \text{WH}] \)

If we treat the \([N_1 \text{ of } N_2]\) complex of \textit{kind}, \textit{type}, and \textit{sort} as the equivalent of the \(N_1\) in the examples with a lexical noun, then they behave identically. Adding on an \(N_4\), which would be the equivalent of \(N_3\) with lexical nouns, we can replicate the lexical noun pattern:

(78) Two kinds of answers\textsubscript{\(N_1\)+\(N_2\)} to your argument\textsubscript{\(N_3\)} against abortion\textsubscript{\(N_4\)} were given.
(79) Two kinds of answers\textsubscript{\(N_1\)+\(N_2\)} were given to your argument\textsubscript{\(N_3\)} against abortion\textsubscript{\(N_4\)}.
(80) *Two kinds of answers\textsubscript{\(N_1\)+\(N_2\)} to your argument\textsubscript{\(N_3\)} were given against abortion\textsubscript{\(N_4\)}.

(81) What\textsubscript{\(N_3\)} did you give two kinds of answers\textsubscript{\(N_1\)+\(N_2\)} to __?
(82) *What\textsubscript{\(N_4\)} did you give two kinds of answers\textsubscript{\(N_1\)+\(N_2\)} to your argument\textsubscript{\(N_3\)} against __?

This suggests that \textit{kind}, \textit{type}, and \textit{sort} form one domain with the embedded noun.

If true, then it seems plausible that by forming part of the same domain, they are forced to match in number features, if they have them.

(What would this restriction derive from and is it cross-linguistic?)

4.3 A counterexample

While it is not possible to have a definite determiner, the indefinite determiner is acceptable:

(83) That kind of a dog\textsuperscript{9}

\textsuperscript{9} There’s a slight interpretational difference between \textit{that kind of a dog} and \textit{that kind of dog}, where without the indefinite article, we seem more prone to interpret it as referring to the breed, or more canonical uses of kinds with the noun dog, whereas the inclusion of the indefinite is more compatible with there being some existing exemplar dog (object) from which the sub-kind is built.
As it turns out, we even see examples (although very rare) of the indefinite article on N2 when *kind/type/sort* is plural:

(84) I was interested in portraying that a sexual life for a woman isn’t necessarily compartmentalized; it flows in and out of the other kinds of a woman that she is -- a worker, a lover, a mother, a daughter, a friend -- all those dimensions are woven into one another. (COCA: America 1994)

(85) “I felt like ten kinds of a fool when I knew the truth,” he said with quiet regret. (COCA: Bk:TrueColors 1991)

(86) Cultivated plants may be considered as special kinds of artifacts. They are created, maintained, and transported by people. Most American Indians grow several different kinds of a plant. Within each kind there are many variants…

(87) Firefighter Berkman Is Two Kinds of a Hero (womensenews.org/2001/12/firefighter-berkman-two-kinds-hero/)

(88) All kinds of a girl (1918 film)

While the example in (83) can be modeled under this hypothesis (both are singular), the examples in (84)-(88) present a problem – if there is agreement, why isn’t *kind* singular?

Potentially, some of these are idioms (cf. (85)), but some like (84) do not seem to be. In example (84), the N2 complex *a woman* is somehow able to refer to a woman as a plurality (*a worker, a lover, a mother, …*) despite the overt singularity.

Another intriguing problem are pluralia tantum nouns, which do not seem to enforce plural marking, despite their obligatory plurality:

(89) This kind of jeans

(90) These kinds of jeans

These types of examples may suggest that the agreement mechanism of *kind* is sensitive to the semantic number of the N2, in addition to the syntactic number. I leave this open for the moment.

5 Conclusion

- *Kind, type, and sort* appear to agree with the noun they modify.
- Upon closer inspection, we find there is a conspiracy of sorts – *kind/type/sort* are either numberless if the N2 is plural (Pattern 1) or they agree with the N2 (Pattern 2).
- This can be captured by assuming that there is some restriction which forces two nouns in the same domain to match in number features. Two solutions to the restriction exist: agreement between the two nouns, and a numberless noun.

10 “Ten kinds a fool” is also acceptable. This may be some kind of idiomatic expression.

Questions for further research: (a) Is this a cross-linguistic generalization? (b) What drives the generalization?

6 References


7 Appendix

7.1 Pattern 3: These kinds of rabbit (type (c) mismatch)

Phrases of the type N_{PL} of N_{SG} were noted to be ungrammatical:

(91) a. *These kinds of rabbit  
   b. *These types of car  
   c. *These sorts of rug

This follows from the semantics of kinds. The intended interpretation in (91) above, is one in which a single rabbit (SG) is taken to instantiate multiple RABBIT-subkinds (PL) within the same subkind hierarchy.

(92) Sub-kind 1  
    Sub-kind 2  
    Sub-kind 3  
    13
However, as has been noted by Carlson (1977), kinds have the property of mutual exclusivity: the set of elements instantiating some sub-kind $K$ cannot simultaneously instantiate sub-kind $K'$. This is illustrated in the following examples.

(93) There are two kinds of cars in the world: cars that run right, and Fords (Carlson 1977: 213)
(94) I only like two kinds of dogs: really big dogs and Chihuahuas (Lehrer 1986: 124)

This predicts the impossibility of the scenario in (92), and hence, the unacceptability of (91).

Do the corpus results support this? At first glance, no... there are two types of exceptions.

**Exception Type #1: Mass and abstract nouns:**

(95) Both types of fishing require fast, accurate casting. (COCA: OutdoorLife 1996)
(96) Three kinds of behavior are possible. (COCA: Weatherwise 1990)
(97) That's the thing that classical music does that other sorts of music don't do. (COCA: NPR_TalkNation 2002)

Two comments here:

- Mass and abstract nouns have been analyzed as lacking the projection(s) responsible for number marking (singular / plural), cf. Borer (2005), and are basically “numberless”; mass and abstract nouns cease to be a counterexample to the generalization under this approach, as they lack number to trigger agreement.

(98) Count Noun          Mass Noun  
  DP                  DP  
   NumP                NumP  
      √                     √

- Mass and abstract nouns are “unbounded” (cf. REFERENCES), and hence cannot be counted. A further property of mass nouns is that they are divisible (unlike count nouns). If we take a cup of water from some mass of water, both what’s in the cup and the mass are still water. If we try the same with a count noun, say rabbit, i.e. take a leg from the rabbit, we do not have two rabbits, but rather, one injured rabbit and one rabbit leg. Mass nouns are divisible; count nouns are not. Intuitively, abstract nouns seem more similar to mass nouns, although we cannot apply the mental exercise of division to an abstract noun like “honesty,” “behavior,” or “fishing.”

(99) One of the researchers' first projects was to create different kinds of water. Specifically, they had to decide on the compositions of waters used to irrigate flower species of interest. (COCA: AgricResrch 2004)

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\[12\] If we take a cup of water from some mass of water, both what’s in the cup and the mass are still water. If we try the same with a count noun, say rabbit, i.e. take a leg from the rabbit, we do not have two rabbits, but rather, one injured rabbit and one rabbit leg. Mass nouns are divisible; count nouns are not. Intuitively, abstract nouns seem more similar to mass nouns, although we cannot apply the mental exercise of division to an abstract noun like “honesty,” “behavior,” or “fishing.”
Exception Type #2: “Massified” count nouns

Some examples involving plural kind/type/sort with a singular noun:

(101) The use of window and whole-house fans can minimize very effectively the heat gain from the sun, lights used in the home, appliances, etc. Both types of fan are very inexpensive. (COCA: MotherEarth 1993)

(102) Check out an annual renewable term policy. If you need to buy life insurance in ’96, annual renewal term may be a better bet than the alternative, level term. Until recently, choosing between the two types of term was pretty much a toss-up. (COCA: Money 1996)

(103) The facts are that when you look at the 6,000-odd black elected officials in this country – and there are too few of them – there’s a disproportionate number of them under all kinds of investigation. (COCA: ABC_20/20 1990)

(104) She weaves two- and three-rod baskets. They are made of willow, both the coil and the wrap. Two-rod baskets use two rods of willow in the coil that are then wrapped in strips of willow. Three-rod baskets use three rods in the coil. If the rods are warped in weaving, the wrapping is the weft that holds it together and provides the pattern. The difference between the two types of basket is the tightness of the stitch. Two-rod baskets use a gap stitch, wrapping completely over the previous coil. A three-rod basket doesn’t skip over the previous row, instead weaving between the third rod of the previous row, so it has a tighter weave. (COCA: NewsNativeCA 2010)

In isolation, the bolded phrases are generally judged ungrammatical; however, in the given contexts, they become fully acceptable. The intuition is that some kind of massification has occurred, different from the Universal Grinder (Pelletier, 1975):

(105) a. There was fan all over the road. Universal Grinder
   → Pieces of broken fan across the road
b. Both types of fan are very inexpensive. Massification
   → Fan as a mass or kind?

This massification is not only particular to the kind/type/sort-construction – we find something similar in constructions where nouns are generally required to be plural or mass:
(106) **Context:** The barber owns a much larger house than we would normally expect a barber to be able to afford.
   a. That’s a lot of house for a barber.
   b. That’s too much house for a barber.

(107) a. *That’s a lot of a house* for a barber.
     b. *That’s too much a house* for a barber.
     c. *That’s too many (a) house* for a barber.

**Hypothesis:** In both types of fan and related examples, *fan* is a numberless noun. Adopting the assumption that a mass noun is mass because it lacks number (cf. Borer 2005), *fan* has been effectively massified, due to the absence of a number projection.

\[
\text{of } \sqrt{\text{fan}}
\]

Note that like with mass and abstract nouns, the failure to project NumP implies that if there is a nominal agreement relation with *kind / type / sort*, we will not see it in this context, as there is no number projection on N2 to be agreed with.

Furthermore, whatever makes it such that mass and abstract nouns are exempted from mutual exclusivity would be expected to apply to these uses as well.

Thus, English allows for a numberless, kind-referring use of nouns which are usually used as count nouns, although this requires a proper context to bring out the interpretation.

**Summary:**
- Plural *kind / type / sort* with a singular noun appears to be ungrammatical.
- This ungrammaticality can be understood in terms of mutual exclusivity, where kinds enforce mutual exclusivity of objects instantiating the kind.
- Abstract nouns and mass nouns appear to be a counterexample (to the generalization and mutual exclusivity); however, they lack a number projection which can derive why they are exempt.
- There are some examples of count nouns used in this way, but they appear to have been massified.

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13 But, *of* seems to improve it slightly (*That’s too much of a house for a barber*), although I do not know what that would mean. With other nouns, it’s perfectly acceptable and meaningful (*It creates too much of a problem to bother with now.*)