How do languages classify their nouns?
Cross-linguistic variation in the manifestation of the mass count distinction

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I have three goals in this paper: Empirically, I establish that nominal classification varies across languages. My second goal is an analytical one. I wish to show that Animacy in Blackfoot is not to be considered a Gender distinction. Instead I argue that it is formally identical to the mass/count distinction in Indo-European languages. My third and final goal is to argue that the two nominal classification devices (animacy and the mass/count distinction) are two instances of the same category, namely nominal inner aspect.

1 Nominal classification varies across languages

The empirical goal of this paper is to establish that languages differ in the way they classify their nouns. In particular, I compare the classification systems found in Blackfoot (Algonquian) with those of German and English. I demonstrate that we find three distinct systems: while Blackfoot classifies nouns in terms of animacy only, English classifies nouns in terms of the mass/count distinction, and in German we find a two-way classification in terms of both mass/count and gender. This is summarized in table 1.

<table>
<thead>
<tr>
<th></th>
<th>Blackfoot</th>
<th>English</th>
<th>German</th>
</tr>
</thead>
<tbody>
<tr>
<td>mass/count</td>
<td>X</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Animacy</td>
<td>✓</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Gender</td>
<td>X</td>
<td>x</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 1: Nominal classification across languages

I start with a discussion of the mass/count distinction, which functions as a classification system in German and English, but not in Blackfoot. This is not to say that Blackfoot nouns cannot refer to substances or individuals. There is still an ontological distinction but it does not serve as a formally grammaticized classification device. I will assume that the difference between an ontological distinction and a formal distinction correlates with a categorical difference, which is in turn reflected structurally. In particular, I assume that roots are
category-neutral (Marantz 1997) and are categorized by categorizing heads, in
this case n (Marvin 2003, Steriopolo 2008). I further assume that roots are
devoid of any grammatical features and consequently that formal properties are
restricted to categorial heads, such as n or F in (1).

(1) \[ [Fp \ F \ ]_n \ [\sqrt{\text{root}}]] \]

Formal properties \hspace{1cm} Ontological properties

In what follows, I establish some diagnostics for a formally active mass/count
distinction, which I will henceforth refer to as a boundedness distinction.

First, in a language with a grammaticized boundedness distinction, it is
subject to selectability. Thus, certain determiners and quantifiers are sensitive to
this distinction ((2) and (3)), pluralization targets count nouns only ((4) and (5)),
and only mass nouns can function as bare arguments (6).

(2) a. the/a/this/that/one/every/each/no/ tree
   b. these/those/two/several/some/many/no/all tree-s
   c. *much/little tree(s)

(3) a. ? the/a/this/that/one/every/no wood
   b. * these/those/two/several/some/many woods
   c. some/no/all/much/little wood

(4) a. There is a snowflake in my garden.
   b. There are snowflakes in my garden.

(5) a. There is snow in my garden.
   b. * There are snows in my garden.

(6) a. I saw snow.
   b. I saw snowflakes.
   c. * I saw snowflake.

Another criterial diagnostic for a formal boundedness distinction is the existence
of mismatches. In particular, the value of the formal boundedness distinction is
not always predictable from ontological properties. The nouns in (7) denote
individuals (rather than substances) but formally behave like mass nouns.

(7) furniture, silverware, grass, homework, luggage....

And finally, if a language has a formal boundedness distinction for nouns it has
strategies for reclassification. For example, English has classifiers naming the
unit of natural occurrence of a substance and such classifiers turn mass nouns
into count phrases.

(8) a. I didn’t see many drops of water. (I didn’t see much water.)
   b. I didn’t see many grains of sand. (I didn’t see much sand.)

Having established three diagnostics for a formal boundedness distinction
(selectability, mismatches, reclassification strategies), we can now turn to
Blackfoot which lacks such a distinction. First, to the best of my knowledge there are not determiners or quantifiers sensitive to a boundedness distinction. For example the universal quantifier *ohkan* (‘all’) and the modifier *i’nákh* (small, little) can combine with both substance and individual nouns (which I take to be the prototypical candidates to express a boundedness distinction).

(9) a. *nitohkanissimatoo’p annihkayi aohkií*
    nit-*ohkan*-a-simatoo.vti-*’p anni-hka-yi aohkií
    1-all-dur-drink.vti-2/1>in det-invis-in.sg water

   ‘I drank (up) all of that water.’

b. *nitohkannainowayi anniksisk pookaiks*
    nit-*ohkan*-a-ino-aa-yi ann-iksí pooka-iks
    1-all-dur-see.vta-dir-pl det-pl. child-pl

   ‘I saw all the children.’

(10) a. *i’náksikoo’nsko*  b. *i’nákaohki*  c. *i’nákonnikis*
    i’nák- kóónsksko i’nák-ahohki i’nák-ônnikis
    small-snow small-water small-milk/breast

   ‘a little bit of snow’ ‘a little bit of water’ ‘a little bit of milk’

(11) a. *i’náksipokaa*  b. *i’nákánao’kssi*  c. *i’nákónnikis*
    i’nák- pokaa i’nák-ánao’kssi i’nák-ônnikis
    small child small-halfdollar small-milk/breast

   ‘baby’ ‘quarter of a dollar’ ‘small breast’

Furthermore, virtually all Blackfoot nouns are associated with a lexical entry for plural in Frantz & Russell’s 1995 dictionary. Below I list some examples of pluralized nouns denoting substance:

(12) a. *sopo*  
    ikkinálsopoistsi
    ‘wind’ ‘soft winds’

b. *aaapan*  
    aaapaíistsi
    ‘blood’ ‘bloods’

c. *aiksinoosak*  
    aiksinoosaksí
    ‘bacon’ ‘bacon’ (slabs or slices of)

d. *isstskáán*  
    isstsskááíistsi
    ‘dust’ ‘dust’ (pl.)

e. *issttsiksípoko*  
    issttsiksípokoiíistsi
    ‘salt’ ‘salts’

f. *kaatsi*  
    káatsíistsi
    ‘driftwood’ ‘pieces of driftwood’

g. *kokóto*  
    kokótoíistsi
    ‘ice’ ‘ice’ (plural) Frantz & Russell 1995

And finally, the availability of bare arguments does not correlate with a distinction in boundedness. Neither substance nor individual nouns can function as bare arguments ((13) and (14)), but both can function as VP-internal (semantically incorporated) arguments ((15) and (16)).
Another striking fact about Blackfoot is that there does not seem to be a dedicated strategy for reclassification. This can already be seen in the examples in (10) and (11), which show that the same noun can be used to refer to a bounded or an unbounded individual. On several occasions I have asked my consultant how to say things like ‘several pieces of wood’ or ‘snowflake’ and she would consistently use nouns with a modifier that is compatible with both substance and individual nouns. Below are two more illustrative examples:

(17) a. *iikakayi amosti mistists
   iik-aka-i amo-istsi mistis-istsi
   int-many-be wood-pl.inanim wood-pl.inanim
   ‘There is a lot of wood.’
   MW: “Is there a way to just say “piece of wood”?
   BB: “No. We don’t get into this kind of stuff.”

b. *iikakayimi amaoksi mistiks
   iik-aka-imi amo-iksi mistis-iksi
   int-many-be.anim wood-pl.anim wood-pl.anim
‘There are a lot of trees.’

This much establishes that Blackfoot does not formally classify its nouns along a distinction in boundedness. This does however not mean that nouns cannot refer to either substances or individuals, just that this ontological distinction does not map onto a formal classification system.

2 Blackfoot animacy

My next goal is to analyze the pervasive nominal classification device Blackfoot does make use of, namely animacy. I first identify the analytical challenge we are facing (2.1), then I show that Blackfoot animacy is not a gender distinction of the German type (2.2). Instead I argue that it is formally equivalent to a boundedness distinction (2.3).

2.1 Is animacy like gender or like boundedness?

Consider again the distribution of nominal classification devices across the three languages under investigation. German has both a distinction in terms of gender and boundedness. The two classification devices are independent of each other, as evidenced by the fact that the boundedness distinction cuts across the gender distinction: we find bounded and unbounded nouns across all three genders as shown in table 2:

<table>
<thead>
<tr>
<th>Gender</th>
<th>[+bounded] (count)</th>
<th>[-bounded] (mass)</th>
</tr>
</thead>
<tbody>
<tr>
<td>masc</td>
<td>viele Bäume ‘many trees’</td>
<td>viel Wein ‘much wine’</td>
</tr>
<tr>
<td>fem</td>
<td>viele Birnen ‘many pears’</td>
<td>viel Musik ‘much music’</td>
</tr>
<tr>
<td>neut</td>
<td>viele Autos ‘many cars’</td>
<td>viel Wasser ‘much water’</td>
</tr>
</tbody>
</table>

Table 2: German nouns are classified in terms of gender and boundedness.

This pattern suggests that there are at least two layers of nominal classification: one for gender and one for boundedness as schematized in (18).

\[(a^P_2)[±bounded] \quad [a^P_1][gender] \quad [\sqrt{root}]\]

If there are indeed two layers of nominal classification made available by universal grammar (UG), then the question arises as to which of these two layers Blackfoot animacy is associated with? In other words, does Blackfoot animacy behave formally like gender as in (19) or like boundedness as in (20).

\[(a^P_2)[±bounded] \quad [a^P_1][gender/±animate] \quad [\sqrt{root}]\]
\[(a^P_2)[±bounded/±animate] \quad [a^P_1][gender] \quad [\sqrt{root}]\]

1 For now I simply assume that boundedness is associated with the higher position. I return to this issue in section 3.
In this paper I present evidence for the view that animacy is the formal
equivalent of the mass/count distinction. The first argument is a typological one.
We observe that in the (admittedly limited) sample of languages under
consideration, animacy and boundedness are in complementary distribution,
while gender and boundedness are not. Taking complementarity to be the
hallmark of identity as in the structuralist tradition (see also Borer 2005) we
have a first argument against animacy as a form of gender. In the next
subsection I present evidence that animacy is formally distinct from gender.

2.2 Blackfoot animacy is not a form of gender

The view that animacy is gender corresponds to the traditional Algonquianist
view (Dahlstrom 1995, Darnell & Vanek 1976, Goddard 2002, Greenberg 1954,
Hockett 1966, Joseph 1979). A contrastive examination of German Gender and
Blackfoot animacy reveals that the two classification devices differ in formal
and functional properties. For example Kilarski 2007: 334 points out that “the
principal differences between Algonquian and Indo-European gender, apart
from the different number of genders — usually two or three in Indo-European
— involve the type of assignment criteria: in contrast to Algonquian, semantic
criteria in Indo-European are usually weaker, being combined with formal ones
(morphological or phonological). Furthermore, sex, rather than animacy, is the
primary distinction [...]”

Here I am mainly concerned with the formal differences suggesting that
we are dealing with two distinct nominal classification devices. I present two
pieces of evidence. First, in German, all nominalizing suffixes are classified for
gender; this is not true for Blackfoot animacy. Second, in German all nouns are
associated with a unique value for gender; in contrast, there are numerous
Blackfoot nouns that are associated with different values for animacy.

2.2.1 Classification of nominalizing suffixes

Nominalizing suffixes in German are all associated with a unique value for
gender. The suffix –ik attaches to roots (which do not exist as independent
words) and derives feminine nouns (21). The suffix –er attaches to roots and
derives masculine nouns (22).

(21)-ik \(\rightarrow\) [fem]

a. die Grammat-ik
   det.f grammar
   ‘the grammar’

b. die Graf-ik
   det.f graphic
   ‘the graphic’

c. die Mus-ik
   det.f music
   ‘the music’

(22)-er \(\rightarrow\) [masc]

a. der Lehr-er
   det.m teach-er
   ‘the teacher’

b. der Fahr-er
   det.m driv-er
   ‘the driver’

c. der Gärtn-er
   det.m garden-er
   ‘the gardener’
There is evidence that the gender of the resulting noun is in fact dependent on the suffix rather than being determined by the root. There are some nominalizing suffixes that attach to existing nouns (as opposed to roots) which are already associated with gender. When suffixed with the nominalizer –in the resulting noun is of a different gender as shown in (23) suggesting that it is the suffix itself which determines the gender of the newly derived noun.

(23)  -in  [masc]  ➔  [fem]
   a.  der  Architekt  die  Architekt-in
      det.m  architect  det.f  architect-f
      ‘the architect’  ‘the female architect’
   b.  der  Lehrer  die  Lehrer-in
      det.m  teacher  det.f  teacher-f
      ‘the teacher’  ‘the female teacher’
   c.  der  Student  die  Student-in
      det.m  student  det.f  student-f
      ‘the student’  ‘the female student’

The pattern in (21)-(23) suggests that nominal suffixes are associated with gender, and to the best of my knowledge, this is the case for all such suffixes. Note that this pattern also suggests that gender is associated with the lowest layer of nominal classification, as in (24).

(24)  [a  | gender]  [v-root]]

If gender was associated with the higher position, we may expect nouns and nominalizing suffixes that do not uniquely determine the gender of a noun. This is precisely the pattern we observe in Blackfoot, as I will now show.

The Blackfoot nominalizing suffix a’tsis can derive [+animate] nouns as in (25) as well as [-animate] nouns as in (26). (Since in Blackfoot, plural marking varies with the value for animacy I use it as a diagnostic throughout this paper.)

(25)  a’tsis  ➔  [+animate]  
   a.  saa’kssoya’a’tsis  saa’kssóya-a’tsis-iksi
      saa’kssoya-a’tsis  saa’kssóya-a’tsis-iksi
      ‘poison ivy’  ‘poison ivy plants’
   b.  aawápspiinao’sa’tsis  sikawapsspiina’sa’tsiiki
      aawápspiinao’sa’tsis  sikawapsspiina’-a’tsis-iksi
      ‘eye-glasses’  ‘black eye-glasses’
   c.  ippotsíísoohsa’tsis  ippotsíísoohs-a’tsis-iksi
      ippotsíísoohs-a’tsis  ippotsíísoohs-a’tsis-iksi
      ‘pants, overalls’  ‘pants, overalls’

(26)  a’tsis  ➔  [-animate]  
   a.  isoohkamaa’a’tsis  poksisoohkamaa’tsiiki
      isoohkama-a’tsis  poks-isoohkama-a’tsis-istsi
      ‘container’  ‘little storage bags’
For completeness note that it is not the underlying form which determines the gender of the derived form. The suffixation of \(a\) 'tsis to a [+animate] nouns results in a [-animate] noun, as shown in (27).

(27) \(a\) 'tsis \([+\text{anim}]\) \(\rightarrow\) \([-\text{anim}]\)

2.2.2 Classification of nouns

The second argument that animacy in Blackfoot is formally distinct from German gender stems from the fact that some nouns are associated with two values, with a different albeit related meaning. Consider the example in (29).

The same form \(mìîstsì\) can be used as a [-animate] noun to mean stick or branch or as a [+animate] noun to mean tree.

(29) a. [-animate] \(mìîstsì\) \(mìîstsìi\text{ístsi}\)
    \(mìîstsì\) \(mìîstsìi\text{-ístsi}\)
    branch \(\text{branch-pl.inanim}\)
    ‘stick, branch’ ‘branches’

b. [+animate] \(mìîstsì\) \(mìîstsìi\text{íksi}\)
    \(mìîstsì\) \(mìîstsìi\text{-íksi}\)
    tree \(\text{tree-pl.anim}\)
    ‘tree’ ‘trees’
related in meaning. If a given form has two possible genders associated with it is for one of the following two reasons. We are either dealing with accidental homophony or else gender is in free variation and does not correlate with a meaning difference.

I conclude that Blackfoot animacy is not a form of gender. It displays formal properties different from those associated with German gender: not all nominal suffixes are classified for animacy, and some nouns can be associated with two values. This is summarized in table 3 below.

<table>
<thead>
<tr>
<th></th>
<th>German Gender</th>
<th>Blackfoot Animacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>all nominal suffixes are classified</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>some nouns can have two values</td>
<td>✗</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 3: Differences between German Gender and Blackfoot animacy

2.3 **Blackfoot animacy is like the boundedness distinction**

In this section I show that Blackfoot animacy formally behaves like the boundedness distinction which gives rise to a formal mass/count distinction in Indo-European languages.

In contrast to Gender, the mass/count distinction is not always uniquely determined for a given noun. Consider the German nouns in (30)-(31). They can all be used as mass nouns, in which case they denote an unbounded substance, as in (30). When pluralized, these nouns must be interpreted as denoting bounded individuals, as in (31). In all these cases the bounded form is the special form in that its meaning is not completely compositional: the bounded form of water for example can be used to denote the little liquids used in a salon or spa (which may not even contain water). The bounded form of bread is used for sandwiches and the bounded form of light can be used for Christmas lights.

(30) [-bounded]
   a. viel Wasser ‘much water’
   b. viel Brot ‘much bread’
   c. viel Licht ‘much light’

(31) [+bounded]
   a. viele Wässer ‘many waters’ (i.e., in a hairsalon)
   b. viele Brote ‘many breads’ (i.e., sandwiches)
   c. viele Lichter ‘many lights’ (i.e., christmas lights)

This pattern is reminiscent of a pattern we find associated with Blackfoot animacy marking on nouns. There are many cases where the [-animate] form

\[ \text{[2] The so called common gender of Russian differs in this respect (see Steriopolo 2008, Steriopolo & Wiltschko, in press for discussion).} \]
denotes the general referent, while the [+animate] is the special form. In this case it is often a culturally newer item.

(32) a. [-animate] \iri \iri i\iri h\iri t\iri á\iri s\iri í\iri n\iri a\iri a\iri k\iri o\iri 'p
  pencil, pen
b. [+animate] \iri i\iri h\iri t\iri á\iri s\iri í\iri n\iri a\iri a\iri k\iri o\iri 'p
  pencils/pens

(33) a. [-animate] \iri k\iri o\iri 's
  camera
dish (earthenware)

b. [+animate] \iri k\iri o\iri 's
  cameras
dishes

(34) a. [-animate] \iri k\iri s\iri s\iri á\iri k\iri i't\iri a\iri a\iri n
  arrowhead

b. [+animate] \iri k\iri s\iri s\iri á\iri k\iri i't\iri a\iri a\iri n\iri k\iri s\iri i
  cartridges

While I have nothing to say about the mechanism that would underly this pattern, it is of interest in the present context that animacy marking behaves like the boundedness distinction in German and not like the a gender distinction. In this context, an example from Fox cited in Goddard 2002 is of interest.

(35) a. [-animate] o\iri w\iri i\iri ·\iri y\iri a\iri ·\iri s\iri i
  “meat, flesh”
b. [+animate] o\iri w\iri i\iri y\iri a\iri ·\iri s\iri i
  “a piece or cut of meat”

(Goddard 2002: 213)

In (35), the [-animate] form refers to a substance, while the [+animate] form refers to the bounded version of the substance. As such animacy marking seems to play a role in individuation. This is consistent with the claim that it occupies the same position as the boundedness distinction in Indo-European languages.

A second piece of evidence for animacy patterning with the boundedness distinction stems from the fact that animacy marking is subject to selectability. As mentioned above, Blackfoot singular and plural marking is sensitive to animacy marking. As illustrated in Table 4, -\iri w\iri a\iri and -\iri ï\iri k\iri s\iri are singular and plural markings associated with [+animate] nouns while -\iri y\iri i\iri and -\iri ï\iri s\iri ï\iri s\iri i\iri are associated with [-animate] nouns.

<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>[+animate]</td>
<td>ponoká-wa ‘elk-sg’</td>
<td>ponoká-iksi ‘elk-pl’</td>
</tr>
<tr>
<td>[-animate]</td>
<td>i’ksisako-yi ‘meat-sg’</td>
<td>i’ksisako-istsi ‘meat-pl’</td>
</tr>
</tbody>
</table>

Table 4: number marking is sensitive to animacy

I interpret the sensitivity of number marking to animacy as an indication of selectability, one of the formal diagnostics for the boundedness distinction.

Another diagnostic we have identified in section two concerned mismatches between the meaning of the root and the nominal classification associated with it. That is, we have seen that the value of the boundedness distinction is not
always predictable from ontological properties. The same holds for the animacy distinction in Blackfoot: it cannot always be predicted on the basis of the ontological properties of the root. We have already seen instances of this in (29) and (32)-(34). But such mismatches between ontological and grammatical properties are not restricted to nouns associated with both values. There are also ontologically inanimate nouns that are grammatically classified as [+animate] as in (36). These nouns do not have a corresponding [-animate] noun.

\[(36)\]

\[
\begin{align*}
\text{a. } & \text{ pokón} & \text{‘ball’} & \text{d. } & \text{ moápssp} & \text{‘eye’} \\
\text{b. } & \text{ issk} & \text{‘pail’} & \text{ e. } & \text{ naató’si} & \text{‘sun’} \\
\text{c. } & \text{ isttoán} & \text{‘knife’} & \text{ f. } & \text{ ksisís} & \text{‘thorn’} \\
\end{align*}
\]

A final way in which animacy behaves formally like the boundedness distinction in Indo-European concerns its interaction with verbal aspect. It is well known that in English the boundedness distinction interacts with the verb to determine the telicity of the resulting VP. While an unbounded object (either mass or bare plural) derives an atelic VP, a bounded one derives a telic VP.

\[(37)\]

\[
\begin{align*}
\text{a. } & \text{Yesterday’s sun melted a snowflake (} & \text{but there is still some left)} \\
\text{b. } & \text{Yesterday’s sun melted snow} & \text{ (but there is still some left).} \\
\text{c. } & \text{Yesterday’s sun melted snowflakes} & \text{ (but there are still some left).} \\
\end{align*}
\]

In contrast in Blackfoot, it is the animacy distinction that interacts with the classification of verbal phrases. Like other Algonquian languages, Blackfoot verb stems are sensitive to the animacy of the object (in case of transitive verbs) or to the animacy of the subject (in case of intransitive verbs). This is summarized in table 5 (see Armoskaite in prep for a more fine-grained analysis).

<table>
<thead>
<tr>
<th>Participants</th>
<th>participant inanimate</th>
<th>participant animate</th>
</tr>
</thead>
<tbody>
<tr>
<td>final participant unmarked</td>
<td>II</td>
<td>AI</td>
</tr>
<tr>
<td>final participant marked</td>
<td>TI</td>
<td>TA</td>
</tr>
</tbody>
</table>

Table 5: Interaction of animacy with verbal classification

I am not aware of any such interaction between gender and verbal classification. Again, this makes Blackfoot animacy formally more similar to the boundedness distinction than to a gender distinction as illustrated in table 6

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3 This is a pervasive property of animacy marking across the Algonquian language family and has attracted much attention in the literature. In particular, it has served as a major argument in the claim that animacy is a formal property (Bloomfield 1933, Black 1969, Dahlstrom 1995, Darnell & Vanek 1976, Goddard 2002, Greenberg 1954, Lehmanna 1958) though attempts have been made to at least account for (if not predict) these apparent mismatches in semantic terms (Hallowell 1960, Black-Rogers 1982).
Table 6: Nominal classification device

<table>
<thead>
<tr>
<th></th>
<th>Blackfoot</th>
<th>German</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>{Boundedness, Animacy}</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Gender</td>
<td>✗</td>
<td>✓</td>
<td>✗</td>
</tr>
</tbody>
</table>

I thus conclude that Blackfoot gender is the formal equivalent of the mass/count distinction and as such is associated with the higher layer of nominal classification as illustrated in (38).

\[
(38) \ [nP \ n_2[^{±} \text{bounded}/^{±} \text{animate}] \ [nP \ n_1[\text{gender}]] \ [\sqrt{\text{root}}]]
\]

This leaves us with the question as to how two classification devices that appear very different in substantive content (animacy vs. boundedness) can be formally identical. I turn to this question in the next section.

3 Animacy as nominal inner aspect

Having established that Blackfoot animacy is formally equivalent to Indo-European boundedness we need to ask what the formal category underlying these two distinctions is. In other words, can we identify the categorial identity of \(n_2\) such that we can unify both animacy and boundedness? In what follows, I argue that the answer is positive and that the underlying category is that of nominal aspect, in the sense of Rijkhoff 1991 (his Seinsart) (see also Muramatso 1998). In particular, I assume that it is the nominal equivalent of verbal inner aspect (in the sense of Travis 2000, see also MacDonald 2009). So just like there is an aspectual phrase between two layers of verbal categories as in (39), there is an aspectual phrase between two layers of nominal categories, as in (40).

\[
(39) \ [vP \ v \ [AspP \ Asp[Asp]] \ [vP \ V \ [\sqrt{\text{root}}]]] \\
(40) \ [nP \ n \ [AspP \ Asp[Asp]] \ [\sqrt{\text{root}}]]
\]

English: \([^{±} \text{bounded}]\) Blackfoot \([^{±} \text{animate}]\)

I further propose that the difference between English and Blackfoot can be accounted for under the parametric substantiation hypothesis according to which Universal Grammar (UG) provides abstract functional categories which can be associated with different substantive content (Ritter & Wulstschko 2009). In particular, nominal inner Aspect is associated with the substantive content \([^{±} \text{bounded}]\) in English, and with \([^{±} \text{animate}]\) in Blackfoot. In this system animacy and boundedness compete for the same syntactic position, namely Asp. It thus follows that they are in complementary distribution. Consequently

\[4\text{ I assume without further discussion that the nominal layer above AspP is responsible for the marking of relational nouns in Blackfoot.} \]
Blackfoot lacks a grammaticized mass/count distinction while English lacks a grammaticized animacy distinction. The concepts bounded and animate can still be expressed at the root level within languages that do not grammaticize them.

4 Conclusion

I have argued that languages differ in the nominal classification devices they make use of. We have shown that a grammaticized mass/count distinction is not available as a nominal classification device across all languages: English makes us of it, Blackfoot does not. Instead Blackfoot uses animacy as its classification device. We have furthermore seen that languages can make use of more than one nominal classification device: German makes use of gender and a distinction in boundedness. This observation has raised the question as to whether Blackfoot animacy is more like German gender or like a boundedness distinction. The distributional properties of Blackfoot animacy indicate that it is formally more like the German mass/count distinction than like German gender. This casts some doubt on the traditional Algonquianist assumption that animacy is a form of gender. While this assumption appears to do justice to the notional similarity between the two categories, it doesn’t capture its formal dissimilarities. Assuming that syntactic categories are defined in terms of their formal (and thus distributional) properties we are lead to the opposite conclusion. In fact this assumption is at the core of the parametric substantiation hypothesis: functional categories cannot be identified by their content, precisely because their content can vary across languages.

5 References


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