What are categories?
Adjective-like and noun-like semi-lexical numerals in Polish

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1. Introduction
Corbett (1978) posits two generalizations with regards to numerals:
(i) The highest-number, the more noun-like
(ii) Numerals sit between adjectives and nouns
> Both found in Polish!

Property Type Property Property Type Property 
Adjective Case agreement + + + + + +
(Structural positions) Case agreement + + + + + +
Adjective Case agreement (oblique positions) + + + + + +
Gender agreement + + + + + +
Number agreement - + + + + +
Nominal Genitive assignment - - - - - -
(Structural positions) Genitive assignment (oblique positions) - - - - - -
Has plural morphology - - - - - -

In addition, there are "agreement mismatch", in which the features marked on the probe do not align to those marked on the expected subject, as in (6), (9), and (10) of the Data section.

Questions: How can we define numerals in such a way that we capture their adjectival and nominal like status, while also capturing their distinctive natures? What does this tell us about categories?

2. Theoretical Apparatus
Categories:
Baker (2003): Verbs have specifiers, nouns a referential index, and adjectives neither.

Translating this to features:
- Nouns have all valued phi-features
- Adjectives have all unvalued phi-features

Claim: It is possible to have mixed feature sets. This is what we find with the numerals 2,3,4 and 5.

Default Agreement:
Preminger (2011): Agree is obligatory, but its success is not. If Agree fails, default features are inserted.

Datylowicz (1999): Polish default verbal features are never singular.

(1) Padlo [bc] Wybrysz borybly dla mnie tragedia
Padlo [bc] To grow bald would be a tragedy for me

Claim: Agreement mismatches (8), (9), (10) are cases of default agreement.

Cyclical Agree:
Rennel (1983): A probe will search first in its own domain. If no suitable goal is found, it will also search upwards, towards its specifier and potentially higher.

3. Data: Verbal Agreement
Non-Masculine-Human (non-MH) Gender:
(6) Jedno dziewczyną spali
One plpl nom girl plpl nom slept vul
"One girl slept"

Masculine-Human (MH) Gender:
(7) Jedni chłopcy spalili
One plpl nom boy plpl nom slept vul
"Some boys slept"

(8) Dwoje chłopcy spalili
Two plpl nom boy plpl nom slept vul
"Two boys slept"

(9) Dwóch chłopców spali
Two ctwm nom boy plpl nom slept nsg
"Two boys slept"

(10) Pięć chłopców spali
Five ctwm nom boy plpl nom slept nsg
"Five boys slept"

N: Numerical
A: Full verbal agreement with the noun
N: (a) Full verbal agreement with the noun/noun
A: Agreement mismatch accompanied by genitive on noun/noun; Only MH gender

N: (b) (A) Agreement mismatch accompanied by genitive on noun
N: (B) And genitive on the numeral if MH gender

4. Numerical Feature Composition & Structure
Numerals in subject position by gender of following noun:

<table>
<thead>
<tr>
<th>Numerals</th>
<th>Adjective</th>
<th>Masculine</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,3,4</td>
<td>-</td>
<td>Masculine</td>
<td>+</td>
</tr>
<tr>
<td>5</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

Following the Non-Masculine-Humanity (Doroworzecki 1951; Przepiórski 2004; Klockmann 2012), numerals are nominative with non-MH gender (unshaded) and genitive with MH gender (shaded).

N: (a) Agree in gender, number, and case; thus, unvalued gender, number, case features

N: (b) Agree in gender; thus, unvalued number and case

N: No number morphology; restricted to modifying plural nouns ("two birds/): dwa ptak.pl / *ptak.sg; thus, valued number (plurality)

N: No gender agreement; missing gender feature (Dratowicz 1990)

| Structures: Following Ioni and Masubachska (2006), we assume a structure in which the numerals 2,3,4 and 5 are nouns which select for a nominal complement; in addition, assume there is an intermediate functional projection, FP, responsible for genitive case assignment.

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5. Analysis I: Case Assignment & Verbal Agreement

6. Analysis II: Derivations

7. Conclusions
- Categories are not syntactic primitives, but are rather notions, defined on the basis of features (elements with all unvalued features are "adjunctive" and all valued features "nouns")
- Treating categories in this way allows us to model the behavior of Polish numerals: Numerals show intermediate and varying behaviors because they have mixed valued, unvalued, and missing features, making them both syntactic and dissimilar to adjectives and nouns.
- This treatment also provides a mechanism for explaining other cases of semi-lexicality.