Gender features on $n$ & the root: An account of gender in French

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The Problem of Gender

- Gender is **NOT** just arbitrarily assigned inherent gender on nouns.
  - Inanimates $\rightarrow$ only grammatical gender
  - Animates $\rightarrow$ grammatical gender; natural sex
    - Agreement can occur with natural sex
    - Problems arise when natural sex & grammatical gender conflict

- Rather than collapsing the two, the analysis presented here allows each to act in isolation & to interact with one another.
Outline

I. French gender paradigm
II. Snapshot of the analysis
III. Architecture
IV. Kramer (2009)
V. Application to French
VI. Are two features necessary?
VII. Conclusion
I. French gender paradigm

• Two gender system – masculine & feminine
  • Masculine the default

• Not regularly marked on nouns
  • Marked on articles
    a) Definite:  le (m)  la (f)
    b) Indefinite:  un (m)  une (f)
    c) Possessive:  mon (m)  ma (f)

• Gender on inanimate nouns is purely grammatical
  a)  un magasin  a store (m)
  b)  une maison  a house (f)

(Jones 1996)
I. French gender paradigm (cont.)

• Gender on animate nouns interacts with natural sex
  • Sex differences expressed in several ways

Suppletive Forms

• Lexically differentiated by (conflated) sex & gender
  
  a) un homme  a man
  b) une femme  a woman
  
  c) un boeuf  a bull
  d) une vache  a cow

(Jones 1996)
I. French gender paradigm (cont.)

Stem Change

- Phonology of masc/male form modified to generate fem/female form
  
  a) un chat a (male) cat  
  b) une chatte a female cat  
  c) un étudiant a (male) student  
  d) une étudiante a female student  

Article Change

- Change to form of article but not to form of stem
  
  - Reserved for human nouns
    
    a) un enfant a (male) child  
    b) une enfant a female child  
    c) un élève a (male) student  
    d) une élève a female student

(Jones 1996)
I. French gender paradigm (cont.)

Epicenes

- No representation of natural sex
  - Fixed grammatical gender
    a) une souris a mouse (f)
    b) un assassin an assassin (m)
    c) une sentinelle a sentry (f)
    d) un mannequin a fashion model (m)

(Badecker 2007; Jones 1996)

(1) Les sentinelles barbues ont été prises (*pris) en otage.
  ‘The bearded.F.PL sentries were taken.F.PL (*taken.M) hostage.’
  (from Wechsler & Zlatić 2003)
II. Snapshot of the Analysis

- Gender represented by 2 features:
  - Feature on the root represents **grammatical gender**
  - Feature on $n$ represents **natural sex**

```
  DP
   \|   \n  D  nP
   \|   \n  DET  n
       \|   \n       [±fem]  \sqrt{[±fem]}
         male vs. female  masculine vs. feminine
```
III. Architecture

Structure

- Elements from Distributed Morphology (DM)
  - Lexicon consists of Vocabulary Items that are bundles of features
    - Example: $\begin{cases} +1 \\ +\text{PL} \\ +\text{NOM} \end{cases} \leftrightarrow [\text{wi}] \text{‘we’}$
  - Late insertion of VIs
  - Category-neutral roots (√) are inserted into the lexical heads (e.g., N)
    - Dominated by heads that categorize these roots
      - Nominalizing head = n

Mechanism

- Actual agreement happens via AGREE
- Unvalued features are probes
  - Probe down the tree to the first valued feature of the same type as the probe
  - Value the feature identically

IV. Kramer (2009)

- Gender features on $n$ and the root (both $[\pm \text{fem}]$)
  - Root = grammatical gender
  - $n =$ natural sex

- Three $n$ heads housing features corresponding to sex
  1) $n[+\text{fem}]$ Female Natural Sex
  2) $n[-\text{fem}]$ Male Natural Sex
  3) $n$ No Natural Sex (Defaults) / Epicenes

- Agreement occurs with highest gender feature
  - Natural sex on $n$ unless underspecified
  - Grammatical gender on root otherwise
V. Application to French (cont.)

Article Change

- Licensing Rule: All 3 ns possible
  - Natural sex expressed (except in default case)

1) *un enfant*    a male child  
2) *une enfant*    a female child

\[
\begin{align*}
\text{DP} & \quad \text{DP} \\
D & \quad D \\
[u:_=\text{fem}] & \quad [u:+=\text{fem}] \\
[i:=-\text{fem}] & \quad [i:+=\text{fem}] \\
\sqrt{\text{P}} & \quad \sqrt{\text{P}} \\
\text{AGREE} & \quad \text{AGREE}
\end{align*}
\]

\[
\begin{align*}
\text{nP} & \quad \text{nP} \\
\sqrt{\text{ENFANT}} & \quad \sqrt{\text{ENFANT}} \\
[u:=-\text{fem}] & \quad [u:+=\text{fem}]
\end{align*}
\]
Article Change - Default

- Licensing Rule: All 3 ns possible
  - In default case, grammatical gender is expressed

(3) un enfant  a child

---

Diagram:

```
DP
  |
  D    nP
  |
  [u:-fem]  n
  |           √P
  |       √ENFANT [u:-fem]
  |          Ø
  |      AGREE
```

- Licensing Rule: All 3 ns possible
- In default case, grammatical gender is expressed
V. Application to French (cont.)

Stem Change

- Licensing Rule: All 3 ns possible
  - **Natural sex** expressed (except in default case)

(4) *un étudiant*  a male student

(5) *une étudiante*  a female student
V. Application to French (cont.)

Stem Change - Default

- Licensing Rule: All 3 n's possible
  - In default case, grammatical gender is expressed

(6) un étudiant a student

[Diagram]

DP
   /\  
  D   nP
     /\  
    [u:-fem]  n
      |  |  \√P
      Ø  \√ÉTUDIANT [u:-fem]

AGREE
V. Application to French (cont.)

Suppletive Forms

- Licensing Rule: Only $n$ matching natural sex (= grammatical gender)
  - Natural sex expressed

(7) un homme  a man

(8) une femme  a woman
V. Application to French (cont.)

Inanimate Nouns

- Licensing Rule: Only underspecified \( n \)
  - Grammatical gender expressed

(9) un magasin  a store  (masc)  

\[
\begin{array}{c}
\text{DP} \\
\text{D} \\
[u:-\text{fem}] \\
\text{nP} \\
\text{Ø} \\
\sqrt{\text{MAGASIN}} [u:-\text{fem}] \\
\end{array}
\]

\( \text{AGREE} \)

(10) une maison  a house  (fem)  

\[
\begin{array}{c}
\text{DP} \\
\text{D} \\
[u:+\text{fem}] \\
\text{nP} \\
\text{Ø} \\
\sqrt{\text{MAISON}} [u:+\text{fem}] \\
\end{array}
\]

\( \text{AGREE} \)
Epicenes

- Licensing Rule: Only underspecified $n$
  - Grammatical gender expressed; natural sex cannot be expressed

(11) un assassin  an assassin  (masc)            (12) une souris  a mouse  (fem)
VI. Are two features really necessary?

- Short answer: Yes!

- Previous accounts of gender have attempted to use a single feature:
  - Feature on $n$ – Lowenstamm (2008)
  - Feature on the root – Alexiadou (2004)

- Both fail to account for a subset of the French data.
VI.i Feature on $n$ (Lowenstamm 2008)

- Gender feature on nominalizing head (i.e., $n$)
  - Based on observations of final vowel patterns in French
  - One head for each gender (i.e., [-fem] & [+fem] heads)
- Assumes functional categories must have phonological content
  - [+fem] = CV shell with [a] in vowel slot
  - [-fem] = empty CV shell
    - Default vowel inserted

Diagram:
```
DP
  D
  l nP
    n1
      C V
      a
  C V C V m o t o
```

Example: *la moto* the motorbike
VI.i Feature on $n$ (cont.)

- Simplifying theory to feature on $n$ head (no CV shell)

(1) *un enfant*  a male child  

```
  DP
  |   
  D  nP
  |   |    
[u:−fem]   n   √P
  |   |     |    
[i:−fem]   √ENFANT
```

AGREE

(2) *une enfant*  a female child

```
  DP
  |   
  D  nP
  |   |    
[u:+fem]   n   √P
  |   |     |    
[i:+fem]   √ENFANT
```

AGREE

\[ \text{un enfant} \quad \text{une enfant} \]
VI.i Feature on $n$ (cont.)

- Problems:
  - Designed to account for inanimates with related roots, but does not easily extend to animates
  - Limiting to two $n$ heads means sex & gender must be conflated
    1) $n[+\text{fem}]$ Female Sex / Feminine Gender
    2) $n[-\text{fem}]$ Male Sex / Masculine Gender
  - Sex & gender do not always pattern in this way (i.e., epicenes).

(3) une sentinelle a sentry entry

Which feature should go here?
VI.ii Feature on the root (Alexiadou 2004)

- Gender determined in two ways...
  1) Feature on the noun stem
  2) Agreement with a discourse referent (i.e., natural sex)
- Based on adjectival agreement in Spanish, Italian, Greek, & Hebrew

(1) un enfant    a male child

\[
\begin{array}{c}
\text{DP} \\
\text{D} \\
[u:\text{-fem}] \\
\sqrt{P} \\
\sqrt{\text{ENFANT}} [u:\text{-fem}] \\
\end{array}
\]

AGREE
VI.ii Feature on the root (cont.)

- Problems:
  - No procedure for agreement with discourse referent
  - Article change nouns (e.g., *enfant*) & stem change nouns (e.g., *un chat* vs. *une chatte*)
    - Require two lexical entries: √ENFANT [-fem]; √ENFANT [+fem]
    - Potential to generate the wrong form in the default case

(2) *un enfant*  a child  (3) *une enfant*  a female child

\[ DP \]
\[ D \]
\[ [u:-fem] \]
\[ √P \]
\[ [u:-fem] \]
\[ AGREE \]
\[ \]
\[ DP \]
\[ D \]
\[ [u:+fem] \]
\[ √P \]
\[ [u:+fem] \]
\[ AGREE \]
VI. Conclusions

• None of the theories of gender that posit a single feature (feature on the root, feature on $n$) account for all of the French data.

• Although formulated in response to Amharic data, only Kramer’s theory – a gender feature on $n$ & the root – covers the entire French paradigm.
  • Feature on $n$ $\rightarrow$ natural sex
  • Feature on root $\rightarrow$ grammatical gender

• This approach is successful for two very different languages – French (Romance) & Amharic (Afroasiatic) – which suggests this may be a general solution to the problem of gender representation.
References


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Musings about Stem Change Nouns

• Lowenstamm’s full proposal includes procedures for generating nouns with similar, related stems by including additional phonological content in $n$
  • Relates *la balle* ‘the ball’ and *le ballon* ‘the balloon’
    • Claims they have a common stem, along the lines of *ball-*
    • The ending is a realization of $n$ after left adjoining the noun stem

• Though may not be quite right, may be able to be adapted for stem change nouns.
  • Change to stem in female form generated as phonological content in $n$ and affixed to stem
Licensing Rules Summary

- Licensing rules – ensure that certain nouns merge with certain *n*:
  - Inanimates – underspecified *n*
    - Grammatical gender expressed
  - Suppletive forms – *n* matching natural sex
    - Natural sex expressed
  - Stem change – all 3 *n*:
    - Natural sex expressed except in default case
    - Open question: Where does the change to the stem originate?
  - Article change – all 3 *n*:
    - Natural sex expressed except in default case
  - Epicenes – underspecified *n*:
    - Grammatical gender expressed without concern for natural sex
Agreement with Discourse Referent

• Natural sex in this analysis could be construed as agreement with a discourse referent.
  • Epicenes - Strict agreement with grammatical gender can be ‘overridden’ provided enough context.

(1) Le mannequin et sa maquilleuse sont assises (*assis) dans le coin.
  ‘The fashion model & her make-up artist are sitting.F.PL (*sitting.M) in the corner.’

(2) La sentinelle et sa femme ont été pris (*prises) en otage.
  ‘The sentry and his wife were taken.M (*taken.F.PL) hostage.’

(Wechsler and Zlatić 2003)
Suppletive Forms – Alternate Analysis

(7b) un homme  a man

(8b) une femme  a woman

- Licensing Rule: Only underspecified $n$
  - Grammatical gender (= natural sex) expressed
Gender Projection (Picallo 1991)

- Gender feature heads its own projection (GenP)
  - Dominates NP and is dominated by NumP
- Based on phonological realization of gender in Catalan

Problems:
- Not semantically or syntactically necessary
- Independent projections can only be headed by features with semantic meaning (Chomsky 1995; Alexiadou 2004)
  - Gender of a noun does not affect its semantics
- Argued not to drive purely syntactic operations (i.e., movement or agree in the purely Chomskian sense)
- Not always phonologically distinct element