Direction Marking and Case in Menominee

Case, Valency & Transitivity: Nijmegen, June 17

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Central Claim

Direction Marking does not directly reflect Case but mediated by a very general mechanism implementing feature hierarchy effects
Overview

- Direction Marking in Menominee as Abstract Case
- An OT-Account of Hierarchy-Based Competition
- Direction Marking = Hierarchy-Based Competition + Case
- More Evidence for the Direction Marking/Case Connection
Direction Marking in Menominee as Abstract Case

(All Menominee data from Bloomfield, 1962)
Direction Marking (= Direct/Inverse Marking)

“Languages which have an opposition between direct and inverse verb forms build directly upon the animacy hierarchy:

The **direct forms** are used when the subject of the transitive verb is higher on the scale of animacy than the direct object . . .

The **inverse form** is used when the subject is lower in animacy than the object . . .” (Comrie, 1980:62)
Features relevant in Direction Marking in Menominee

<table>
<thead>
<tr>
<th>Feature</th>
<th>High in animacy</th>
<th>Low in animacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person</td>
<td>1/2</td>
<td>3</td>
</tr>
<tr>
<td>Obviation</td>
<td>proximate</td>
<td>obviative</td>
</tr>
<tr>
<td>Animacy</td>
<td>animate</td>
<td>inanimate</td>
</tr>
<tr>
<td>Specificness</td>
<td>unspecified</td>
<td>specified</td>
</tr>
</tbody>
</table>

Menominee Feature Hierarchy

\[
\left\{ \begin{array}{c}
[+2] \\
[+1] \\
\end{array} \right\} > [-\text{spec}] > [+3] > [+\text{obv}] > [-\text{an}]
Direction Marking with [-3]/[+3] forms . . .

a. \textit{ke-na\textcdot n-a\cdot w-a\cdot w} 'you (pl.) fetch him'
  \textit{2-fetch-DIR-[-3]-[-1+pl]}

b. \textit{ke-na\cdot n-ek-w-a\cdot w} 'he fetches you (pl.)'
  \textit{2-fetch-INV-[-3]-[-1+pl]}

. . . and [+animate]/[-animate] Forms

a. \textit{o-po\cdot n-a\cdot n-e\cdot n-an} 'he doesn’t put it’
  \textit{3-pot:put-DIR-[-per][-obv]-NEG}
  \textit{in the pot’}

b. \textit{nε\cdot qn-eko-n} 'it kills him'
  \textit{kill-INV-[-per]}
Direction Marking as Abstract Case

\[ \text{NP}_{\text{higher}} \downarrow \text{Subject} \]

\[ \text{NP}_{\text{lower}} \quad \text{AGR-V-}a\text{-AGR} \]

\[ \text{NP}_{\text{higher}} \downarrow \text{Subject} \]

\[ \text{NP}_{\text{lower}} \quad \text{AGR-V-}ek\text{-AGR} \]
Direction Marking as Morphological Case?
(Halle and Marantz, 1993; Bruening, 2001)

Direct: \(-a\) \iff \([+\text{Nom} \ +\text{high}] \ [+\text{Acc} \ -\text{high}]\)
Inverse: \(-ek_o\) \iff \([+\text{Nom} \ -\text{high}] \ [+\text{Acc} \ +\text{high}]\)

Problem

[+3 +animate] would have to be
[+Acc -high] in 1/2 \(\rightarrow\) 3 forms, but
[+Nom +high] in [+3 +animate] \(\rightarrow\)[+3 -animate] forms
An OT account of Hierarchy-based Competition
Hierarchy-based Competition

A transitive verb agrees with only one argument. The agreement target is determined on the basis of a prominence hierarchy.
Hierarchy-based Competition in Turkana (Dimmendaal, 1983)

1/2 > 3 ranks out Subj > Obj

(a) à-\textit{m}i\textit{n}-\textit{à} \quad \text{‘I love her’}
   \hspace{2cm} \text{1-love-ASP}

(b) \textit{k-à-m}\textit{i}\textit{n}-\textit{à} \quad \text{‘she loves me’}
   \hspace{2cm} \text{INV-1-love-ASP}

Emergence of \textbf{Subj > Obj}

(a) \textit{k-à-r}\textit{am-ì} \quad \text{‘I will beat you’}
   \hspace{2cm} \text{INV-1-beat-ASP}

(b) \textit{k-ì-r}\textit{am-e-\textit{t}è} \quad \text{‘you (pl.) beat me’}
   \hspace{2cm} \text{INV-1-beat-ASP-PL}

(1)  a. [+Nom] > [+Acc]
     b. 1/2 > 3

(2)  If A is distinct from B, and A ≥ B on a prominence scale S then there is a PARSE constraint PARSE [P]^A/B

(3)  a. PARSE [P][+1]/[+3]
     b. PARSE [P][+2]/[+3]
     c. PARSE [P][+Nom]/[+Acc]
Turkana

(1) **Mixed:** [+Nom +3]₁ [+Acc +1]₂

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<tbody>
<tr>
<td>a.</td>
<td>☞</td>
<td></td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>[+3]₁</td>
<td>*!</td>
<td></td>
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</tbody>
</table>

(2) **Only [-3] Arguments:** [+Nom +2]₁ [+Acc +1]₂

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<td>*</td>
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<tr>
<td>c.</td>
<td>[+1]₂</td>
<td></td>
<td>*!</td>
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</table>
Menominee Person Prefixes

(1) a. $ke$-$po$-$se$-$m$
   2-embark-[-3]
   ‘thou embarkest’ (p. 150)

b. $ke$-$na$·$n$-$ek$-$w$
   2-fetch-D- [+3]
   ‘he fetches thee’ (p. 154)

c. $ke$-$na$·$n$-$a$·$w$
   2-fetch-D- [+3]
   ‘thou fetchest him’ (p. 152)

(2) a. $ne$-$po$-$se$-$m$
   1-embark-[-3]
   ‘I embark’ (p. 150)

b. $ne$-$na$·$n$-$ek$-$w$
   1-fetch-D- [+3]
   ‘he fetches me’ (p. 154)

c. $ne$-$na$·$n$-$a$·$w$
   1-fetch-D- [+3]
   ‘I fetch him’ (p. 152)
## Competition of Person Prefixes (2 > 1 > 3)

<table>
<thead>
<tr>
<th></th>
<th>Subject</th>
<th>1</th>
<th>2</th>
<th>12</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>*</td>
<td>ke-</td>
<td>*</td>
<td>ne-</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>ke-</td>
<td>*</td>
<td>*</td>
<td>ke-</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>ke-</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>ne-</td>
<td>ke-</td>
<td>ke-</td>
<td>(o-)</td>
<td></td>
</tr>
<tr>
<td>none</td>
<td>ne-</td>
<td>ke-</td>
<td>ke-</td>
<td>(o-)</td>
<td></td>
</tr>
</tbody>
</table>
**Person Prefixes**

(1) **Input:** [+Nom +3]₁ [+Acc +1]₂

<table>
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<td></td>
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<td>!</td>
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(2) **Input:** [+Nom +2]₁ [+Acc +1]₂

<table>
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<td></td>
<td>!</td>
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</table>
Menominee Direction Marking as Hierarchy-based Competition
Basic Analysis

Direction Marking

= 

Hierarchy-based Competition + Case
## Distribution of -a· vs. -eko

<table>
<thead>
<tr>
<th></th>
<th>-a·</th>
<th>-eko</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[1/2 +an] → [3]</td>
<td>[3] → [1/2 +an]</td>
</tr>
<tr>
<td></td>
<td>[3 -spec +an] → [3 +spec]</td>
<td>[3 -spec +an] → [1/+2 +an]</td>
</tr>
<tr>
<td></td>
<td>[3 -obv +an] → [3 +obv +an]</td>
<td>[3 +obv +an] → [3 +obv +an]</td>
</tr>
<tr>
<td></td>
<td>[3 -obv +an] → [3 -an]</td>
<td>[3 -an] → [3 -obv +an]</td>
</tr>
<tr>
<td></td>
<td>[3 +obv +an] → [3 -an]</td>
<td>[3 -an] → [3 +obv +an]</td>
</tr>
</tbody>
</table>

## Vocabulary Entries for -a· and -eko

**Direct:**  
- a· ↔ [+Nom +an] [+Acc]

**Inverse:**  
- eko ↔ [+Nom] [+Acc +an]
Ambiguous Constellations

(1) a. [+Nom +1 +an] [+Acc +3 -obv +an]
b. [+Nom +3 -obv +an] [+Acc +1 +an]

Hierarchy-Based Competition

(2) \[
\begin{array}{c}
\{ [+1] \} \\
[+2] \\
\end{array} > 
\begin{bmatrix}
+3 \\
-\text{spec} \\
\end{bmatrix} > 
\begin{bmatrix}
+3 \\
+\text{spec} \\
\end{bmatrix} > [+\text{obv}] > [-\text{an}]
\]

(3) If A is distinct from B, and A \geq B on a prominence scale S then there is a PARSE constraint PARSE [+an]^{A/B}

(4) PARSE [+an][+1]/[+3]
### Deriving the Distribution of -a· vs. -eko

#### (1)
**Input:** \([+\text{Nom} +1 +\text{an}]_1 [+\text{Acc} +3 -\text{obv} +\text{an}]_2\)

<table>
<thead>
<tr>
<th>PARSE ([+\text{an}]^{[+1] / [+3]})</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. -a· ([+\text{Nom} +\text{an}]_1 [+\text{Acc}]_2)</td>
</tr>
<tr>
<td>b. -eko ([+\text{Nom}]_1 [+\text{Acc} +\text{an}]_2) *!</td>
</tr>
</tbody>
</table>

#### (2)
**Input:** \([+\text{Nom} +3 -\text{obv} +\text{an}]_1 [+\text{Acc} +1 +\text{an}]_2\)

<table>
<thead>
<tr>
<th>PARSE ([+\text{an}]^{[+1] / [+3]})</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. -a· ([+\text{Nom} +\text{an}]_1 [+\text{Acc}]_2) *!</td>
</tr>
<tr>
<td>b. -eko ([+\text{Nom}]_1 [+\text{Acc} +\text{an}]_2)</td>
</tr>
</tbody>
</table>
More Evidence for Direction Marking as Case
1/2 → 1/2 forms (Independent Order)

(1)  
   a. ke-na·tom-enenɛ-m-enaw  ‘we call you (sg./pl.)’ (p. 156)  
      call-???-[3]-1pl  
   b. ke-nɛ·w-e-m  ‘you (sg.) see me’ (p. 156)  
      see-???-[3]

3 → 1/2 forms (Independent Order)

(2)  
   a. ne-na·n-eko-w  ‘he fetches me’ (p. 154)  
      1-Stamm-INV-[+3]  
   b. ke-na·n-eko-w  ‘he fetches you (sg.)’ (p. 154)  
      2-Stamm-INV-[+3]
1/2 → 1/2 forms (Conjunct Order)

(1) a. na·tom-enenge-an
    call-???-[−3]
    ‘when I call you (sg.)’

   b. nε·w-e-yan
    see-???-[−3]
    ‘when you (sg.) see me’

3 → 1/2 forms (Conjunct Order)

(2) a. na·tom-enenge-k
    call-D-[+per]
    ‘when he calls you (sg.)’

   b. nε·w-e-t
    see-D-[+3]
    ‘when he sees me’ (p. 181)
## Distribution of -e, -eko and -enenε

<table>
<thead>
<tr>
<th></th>
<th>Independent Order</th>
<th>Conjunct Order</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>-e</strong></td>
<td>2 → 1</td>
<td>2 → 1</td>
</tr>
<tr>
<td></td>
<td>3 → 1</td>
<td>3 → 1</td>
</tr>
<tr>
<td><strong>-eko</strong></td>
<td>[-an] → 1</td>
<td>[-an] → 1</td>
</tr>
<tr>
<td></td>
<td>[-spec] → 1</td>
<td>[-spec] → 1</td>
</tr>
<tr>
<td></td>
<td>[-spec] → 2</td>
<td>[-spec] → 2</td>
</tr>
<tr>
<td></td>
<td>[-an] → 2</td>
<td>[-an] → 2</td>
</tr>
<tr>
<td><strong>-enenε</strong></td>
<td>3 → 2</td>
<td>3 → 2</td>
</tr>
<tr>
<td></td>
<td>1 → 2</td>
<td>1 → 2</td>
</tr>
</tbody>
</table>
Observations

- **-enen** and **-e** are bound to 1st/2nd person objects, not to direct/inverse

- Nevertheless they pattern otherwise with direct/inverse markers

→

- Direction Markers are agreement (portmanteau) markers specified for **case**

- Hierarchy Effects follow from independently motivated constraints
Summary

- Case cannot directly capture Direction Marking, **but**
- Case mediated by Hierarchy-Based Competition can explain the affinity of direction and portmanteau marking
- Extension to "improper" direction systems e.g. Dumi (van Driem, 1993) and Arizona Tewa (Klaiman, 1993)
References


