Modeling the proximate/obviative contrast in Algonquian languages

Carol-Rose Little
Cornell University

Mary Moroney
Cornell University

May 6, 2016

1 Introduction

- Algonquian languages make a distinction between proximate-marked nouns (i.e., foregrounded) or obviative-marked nouns (i.e., backgrounded).
- Once a proximate has been established, a speaker has a choice whether to introduce the next noun as either proximate (prominent) or obviative (nonprominent) (Goddard, 1990; Thomason, 2003).
- Consider the following excerpt from Meskwaki, a Central Algonquian language

  (1) o ni=na hkaˇci nekotenwi mahkate´wi-anakwewa e=ˇsiˇsaˇci, e=h=nesaˇci peˇskeksiwani. And then another time Black Rainbow (P) went hunting and killed a deer (O).

  (2) e=wiˇnanihaˇci, e=h=mo˜hkiˇhˇtarkoˇci aˇsaˇhahi, e=h=maˇrneˇniˇci.

As he (P) was butchering it (O), some Sioux (O) rushed out at him (P), a lot of them (O). (Goddard, 1990: 324)

- In (1) the topic is Black Rainbow whereas the obviative is a deer.
- Speaker can introduce Sioux in (2) as proximate (central characters) or as obviative (less central characters) thus, prima facie, maintaining the previously established central character Black Rainbow.
- To investigate the proximate/obviative contrast, we use data from fieldwork on Mi’gmaq, an Eastern Algonquian language.
- Consider the differences between pronouns in English and obviation marking in Mi’gmaq

(3) Susan, scratched Mali, then she /j went home.

- The same sentence in Mi’gmaq is not ambiguous

  (4) Susan gejgapa’l-a-pn-n Mali-al

  Susan.PROX scratch-DIR-PST.3-OBV Mali-OBV

  ‘Susan (P) scratched Mali (O).’

  a. . . . toqo enmie-p.

  then go.home-3.PST.PROX

  ‘. . . then she (Susan) went home.’

  b. . . . toqo enmie-nipm.

  then go.hom-3.PST.OBV

  ‘. . . then she (Mali) went home.’

- Each argument in (4) is either marked as proximate (PROX) or obviative (OBV).
- The third person agreement on the verb enmie- reflects this and thus there is no ambiguity as to who went home.
- We model this data on the proximate/obviative contrast using Predicate Logic with Anaphora (PLA; Dekker 1994), a system that keeps track of the salience of individuals.

Roadmap

§2 Background on obviation

§3 Background on PLA

§4 PLA analysis for data in (4): one-list system

§5 Ambiguity with third individual: two-list system

§6 Conclusion

2 Obviation in Algonquian languages

- Proximate and obviative are two ways to differentiate third person arguments.
- In contexts with two third persons, the topical, foregrounded third person is proximate and the nontopical, backgrounded third person is obviative.
- In Mi’gmaq, the proximate (P) is unmarked, as in (5a), and the obviative (O) is marked with the suffix -l, as in (5b).

(5) a. e´pites woman

  ‘woman (P)’

  b. e´pites-l woman-OBV

  ‘woman (O)’
3 Background on PLA

- Predicate Logic with Anaphora (PLA; Dekker 1994) extends standard Predicate Logic in order to keep track of individuals in a discourse

(7) A sample PLA information state
\[ s = \{ \{ a, b, c \} \} \]
- \( p_i \): indexes the position of the pronoun
- \( \exists : \) introduces individuals to information state

(8) Susan, scratched Mali, then she went home.

(9) \( \exists(x = s \land \exists y(y = m \land Sxy)) \land Wp_0 \)

(10) \( \exists(x = s \land \exists y(y = m \land Sxy)) \land Wp_1 \)

1Here the inverse marker is null. However in the negative we can see that it is -gu:

(1) Mu gesal-\text{-}\text{-}g-u-l

\text{NEG love}\text{-}\text{INV}-3\text{-}\text{NEG-OBV}

\text{‘She (O) doesn’t love her (P).’} \quad \text{(Hamilton, 2015: 20)}

2For convenience, we gloss this whole morpheme as the third person past obviative. However, it can be separated out as -ni-\text{-}pn-n or 3\text{-}OBV\text{-}PAST-OBV.

4 Analysis

- In English the ambiguity of she is represented in PLA by different pronoun terms: \( p_0 \) and \( p_1 \)
- Intuitively we can represent the lack of ambiguity in the Mi’gmaq data, repeated below, by uniformly translating the proximate and obviative agreement as \( p_0 \) and \( p_1 \), respectively

(4) Susan gejgapa’l-a-pn-n Mali-al

Susan.PROX scratch-DIR-PST.3-OBV Mali-OBV

‘Susan scratched Mali.’

a. . . . toqo enmie-p.

then go.home-3.PST.PROX

‘. . . then she (Susan) went home.’

# ‘. . . then she (Mali) went home.’

b. . . . toqo emmie-nipnn.

then go.home-3.PST.OBV

‘. . . then she (Mali) went home.’

# ‘. . . then she (Susan) went home.’

- The quantifier with narrower scope first adds \( m \) to the information state
- The quantifier with widest scope then adds \( s \) to the information state
5 More complicated data

- New data: introducing a third argument creates ambiguity³

(14) Susan gejgapa’l-a-t-l Mali-al.

Susan.PROX scratch-DIR-3.OBV Mali-OBV

‘Susan (P) scratches Mali (O).’

a. Anna gejgapa’l-a-t-l.

Anna.PROX scratch-DIR-3.OBV

‘Anna (P) scratches her (O).’

b. Anna-ɬ gejgapaɬ-O-t-l.

Anna-OBV scratch-INV-3.OBV

‘Anna (O) scratches her (P).’

In (14a), when $a$ is added to the end of the list, the obliative agreement, $p_1$ is expected to pick out $s$ unambiguously, which is not the case

³We use a different tense here (present) than in (4) however the ambiguity is also preserved in the past.

⁴The ambiguity goes away if elg ‘too/also’ is added. Though this shows that the particle elg targets the VP in Mi’gmaq, like it does in English.

(1) Sa’u’al elg gejgapa’l-O-t-l.

John-OBV too scratch-INV-3-OBV

‘John (O) scratches her (P).’

Mali scratches John.

- Can be ameliorated if the obliative agreement is translated as any index that is not 0, so $p_1$ or $p_2$ can pick out the obliative argument.

- In (14b) when $a$ is added in the second to last position on the list, it is not clear how we could say that either $p_0$ or $p_2$ can pick out the proximate argument.

- Next: how to capture this ambiguity under a two-list system

5.1 Two list system analysis

- We adapt PLA to be a two list system

Bittner (2011) also uses a two list system in her analysis of the proximate/obliative affixes in West Greenlandic

(15) A sample two list information state

\[ s = \{ \langle a, b \rangle, \langle c, d \rangle \} \]

\[ \uparrow \uparrow \uparrow \]

\[ p_1^* \quad p_0^* \quad p_1^* \quad p_0^* \]

- PROX: $p_1^*$

- DIR: $Vp_1^*p_1^*$

- OBV: $p_1^*$

- INV: $Vp_1^*p_1^*$

5.2 Accounting for data in (4)

(16) (4) $\leadsto \exists \alpha \exists \beta (x = s) \land \exists \gamma (y = m) \land Sp_0^*p_0^*$

(17) (4a) $\leadsto Wp_0^*$

(18) (4b) $\leadsto Wp_0^*$

Table 6: Analysis of (4)

<table>
<thead>
<tr>
<th>Gloss</th>
<th>PLA</th>
<th>Pro. Intp.</th>
<th>Output State</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td></td>
<td></td>
<td>$s_0 = { (\cdot, \cdot) }$</td>
</tr>
<tr>
<td>b. Susan.PROX</td>
<td></td>
<td></td>
<td>$s_1 = { (\cdot, (\cdot, \cdot)) }$</td>
</tr>
<tr>
<td>c. Mali-OBV</td>
<td></td>
<td></td>
<td>$s_2 = { (\cdot, (\cdot, \cdot)) }$</td>
</tr>
<tr>
<td>d. scratch-DIR-3.OBV</td>
<td>$Sp_0^<em>p_0^</em>$</td>
<td>$[p_0^<em>]_{s_2} = s, [p_1^</em>]_{s_2} = m$</td>
<td>$s_3 = { (\cdot, (\cdot, \cdot)) }$</td>
</tr>
</tbody>
</table>

Table 7: Analysis of (4a)

<table>
<thead>
<tr>
<th>Gloss</th>
<th>PLA</th>
<th>Pro. Intp.</th>
<th>Output State</th>
</tr>
</thead>
<tbody>
<tr>
<td>e. then go.home-3.PROX</td>
<td>$Wp_0^*$</td>
<td>$[p_0^*]_{s_3} = s$</td>
<td>$s_4 = { (\cdot, (\cdot, \cdot)) }$</td>
</tr>
</tbody>
</table>

Table 8: Analysis of (4b)

<table>
<thead>
<tr>
<th>Gloss</th>
<th>PLA</th>
<th>Pro. Intp.</th>
<th>Output State</th>
</tr>
</thead>
<tbody>
<tr>
<td>e. then go.home-3.OBV</td>
<td>$Wp_0^*$</td>
<td>$[p_0^*]_{s_3} = m$</td>
<td>$s_4 = { (\cdot, (\cdot, \cdot)) }$</td>
</tr>
</tbody>
</table>
5.3 Accounting for data in (14)

In (c), the proximate list is added to the obviative list from input state, in this way the ambiguity in Mi’gmaq is represented in the same way as in English where

\[ (14a) \rightarrow \exists x(x = a) \land S_0^2 P_0 \]

\[ (14b) \rightarrow \exists y(y = m) \land S_0^2 P_0 \]

\[ (14c) \rightarrow \exists x(x = a) \land S_0^2 P_0 \]

- Note that the index on obviative term can be 0 or 1.

Table 9: Analysis of (14)

<table>
<thead>
<tr>
<th>Gloss</th>
<th>PLA</th>
<th>Pro. Intp.</th>
<th>Output State</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Mali-PROX</td>
<td>\exists x(x = s)</td>
<td>s_0 = {\langle s \rangle, \langle s \rangle }</td>
<td></td>
</tr>
<tr>
<td>b. Susan-PROX</td>
<td>\exists y(y = m)</td>
<td>s_1 = {\langle y \rangle, \langle y \rangle }</td>
<td></td>
</tr>
<tr>
<td>c. Mali-OBV</td>
<td>\exists y(y = m)</td>
<td>s_2 = {\langle y \rangle, \langle m \rangle }</td>
<td></td>
</tr>
<tr>
<td>d. scratch-DIR-3-OBV</td>
<td>S_0^2 P_0</td>
<td>s_3 = {\langle a \rangle, \langle m \rangle }</td>
<td></td>
</tr>
</tbody>
</table>

Table 10: Analysis of (14a)

<table>
<thead>
<tr>
<th>Gloss</th>
<th>PLA</th>
<th>Pro. Intp.</th>
<th>Output State</th>
</tr>
</thead>
<tbody>
<tr>
<td>e. Anna-PROX</td>
<td>\exists x(x = a)</td>
<td>s_4 = {\langle a \rangle, \langle m \rangle }</td>
<td></td>
</tr>
<tr>
<td>f1. scratch-DIR-3-OBV</td>
<td>S_0^2 P_0</td>
<td>s_5 = {\langle a \rangle, \langle m \rangle }</td>
<td></td>
</tr>
<tr>
<td>f2. scratch-DIR-3-OBV</td>
<td>S_0^2 P_1</td>
<td>s_5 = {\langle a \rangle, \langle m \rangle }</td>
<td></td>
</tr>
</tbody>
</table>

- In (c), the proximate list is added to the obviative list from input state, s_1, to form the obviative list of the output state, s_2, and a becomes the only member of the proximate list of the output state.

Table 11: Analysis of (14b)

<table>
<thead>
<tr>
<th>Gloss</th>
<th>PLA</th>
<th>Pro. Intp.</th>
<th>Output State</th>
</tr>
</thead>
<tbody>
<tr>
<td>e. Anna-OBV</td>
<td>\exists x(x = a)</td>
<td>s_4 = {\langle a \rangle, \langle m \rangle }</td>
<td></td>
</tr>
<tr>
<td>f1. scratch-INV-3-OBV</td>
<td>S_0^2 P_0</td>
<td>s_5 = {\langle a \rangle, \langle m \rangle }</td>
<td></td>
</tr>
<tr>
<td>f2. scratch-INV-3-OBV</td>
<td>S_0^2 P_1</td>
<td>s_5 = {\langle a \rangle, \langle m \rangle }</td>
<td></td>
</tr>
</tbody>
</table>

- In this way the ambiguity in Mi’gmaq is represented in the same way as in English where translating the pronoun term with different indices generates the different meanings.

6 Conclusion

- We discussed two PLA analyses for how to account for this data
  - One account uses Dekker’s (1994) one-list system
  - The other account modifies his system to two lists to separate proximate and obviative-marked individuals
- New fieldwork on Mi’gmaq shows that an ambiguity arises when a third individual has been introduced in a discourse
- This makes the two-list system better equipped to account for the new data because it captures the ambiguity

References


A Formulas

PLA

\[ s \{ \exists x \phi \} \#_g \#_g = \{ e' \cdot d' | d \in D \land e' \in s \{ \phi \} \#_g \#_g \} \]

<table>
<thead>
<tr>
<th>One List System</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. s { \exists x \phi } #_g #_g = { e' \cdot d</td>
</tr>
<tr>
<td>b. s { \exists x \phi } #_g #_g = { e' \cdot d'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Two List System</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. s { \exists x \phi } #_g #_g = { \langle e, e' \rangle</td>
</tr>
<tr>
<td>b. s { \exists x \phi } #_g #_g = { \langle e', e'' \rangle</td>
</tr>
</tbody>
</table>