I. Relevant work on linguistic determinism


B. Linguistic determinism has received renewed attention in the last two decades. This attention spans the fields of psychology (Gordon 2004, Pica et. al 2004), anthropology (e.g. Levinson 1997), and linguistics (e.g. Levinson et. al 2003).

C. New methods are being applied to the discussion of linguistic determinism. Methodology more systematic, experimentally-oriented. Claims are generally more moderate than SW hypothesis.

D. Linguistic domains that have served as fecund sources for evidence of language-mediated thought include references to spatial topology (cf. Levinson and Wilkins 2006), classifier systems (Lucy and Gaskins 2001), and numerals (Gordon 2004).

II. Relevant work on grammatical gender and perception

A. Flaherty 2001. Spanish speakers tended to name objects in a way that was consistent with gender reflected in grammar.

B. Vigliocco et. al 2005. Italian speakers tend to group lexemes in semantic discrimination tasks according to grammatical gender.

C. Tight 2006. : “Perceived gender affects how native speakers of a language with only natural gender assign grammatical gender in a second language.”

D. Konishi 1993. German and Spanish speakers judged masculine words higher in potency.

F. Conclusion: residual semantics of grammatical gender clearly affects perception of real and nonsense lexical items. True in Arabic, Spanish, German, Italian.

III. Tupí-Karitiâna


B. Culture: Traditionally patrilineal, patrilocal. 260 in Rondônia, Brazil.

### Table 1: Pronominal forms in Karitiâna.

<table>
<thead>
<tr>
<th></th>
<th>Free pronouns</th>
<th>Absolutive verbal agreement prefixes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1S</td>
<td>ḗ, n</td>
<td>^-</td>
</tr>
<tr>
<td>1PL.INCL</td>
<td>^‘tSa</td>
<td>^j-</td>
</tr>
<tr>
<td>1PL.EXCL</td>
<td>^tak</td>
<td>^ta-</td>
</tr>
<tr>
<td>2S</td>
<td>a, n</td>
<td>a-</td>
</tr>
<tr>
<td>2PL</td>
<td>a˘tSa</td>
<td>aj-</td>
</tr>
<tr>
<td>3</td>
<td>i</td>
<td>ø-</td>
</tr>
</tbody>
</table>

1. i na-aka-t i-tep ˘k-Ø  ese-pip
   3  NSAP-COP-NFUT   INTR-dive-NFUT   water-ALL
   ‘S/he dove into the water.’

2. a˘tSa na-ok ˘t
   2PL NSAP-kill-NFUT  him/her
   ‘You all killed him/her.’

3. i a-taka-hi˘t-O  a,n i-t˘
   3  2S.ABS-SAP-give-NFUT  2S  3-OBL
   ‘S/he gave you to them.’

4. ḗ,n naka-hi˘t-O  i a,n˘t˘
   1  NSAP-give-NFUT  3  2S-OBL
   ‘S/he gave them to you.’

5. i na-attik-Ø  kinda o oh ḗ,n t
   3  NSAP-throw-NFUT  thing fruit upwards
   ‘S/he threw the fruit upwards.’
IV. Pilot study

A. One of several pilot studies on language-mediated thought.

B. Methods different from previous studies on semantic effects of grammatical gender. Less oriented according to individual lexemes.

C. Do gender-neutral pronominal systems lead to a more gender-neutral construal of event participants?

D. Choice for perception of actions involving non-gendered figures.

E. Languages considered: English, Portuguese, Karitiâna.

V. Methods

A. Subjects were presented with seven short cartoons representing actions performed by gender-ambiguous characters with generally human appearances but without distinguishable gender characteristics.

B. Subjects were asked to describe action observed. Responses were transcribed.

C. After describing each short cartoon, the subjects were asked to name the figure/face in the cartoon.

D. Results were tabulated, and analyzed according to language and sex of speakers.

VI. Data and results

A. Sample descriptions:

\[
\begin{align*}
i & \quad na-aka-t & \quad i-tat \\
\text{s/he} & \quad \text{NSAP-COP-NFUT} & \quad \text{IRR-go} \\
& \quad \text{‘S/he went.’} \\
\end{align*}
\]

\[
\begin{align*}
i & \quad i-ot \\
\text{s/he} & \quad \text{IRR-fall} \\
& \quad \text{‘S/he fell down.’} \\
\end{align*}
\]

\[
\begin{align*}
taso & \quad i-hyryp-Ø \\
\text{man} & \quad \text{INTR-cry-NFUT} \\
& \quad \text{‘The man cried.’} \\
\end{align*}
\]
He walked off the screen.   Ele foi embora.
The man cried.    Ele chorou.
He opened his mouth.    O menino pulou.
The guy fell down.   Ela caiu.

B. Results

<table>
<thead>
<tr>
<th>Language</th>
<th>Male names</th>
<th>Female names</th>
<th>Ratio M/F</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>248</td>
<td>63</td>
<td>3.93</td>
</tr>
<tr>
<td>Portuguese</td>
<td>25</td>
<td>3</td>
<td>8.33</td>
</tr>
<tr>
<td>Karitiâna</td>
<td>23</td>
<td>12</td>
<td>1.91</td>
</tr>
</tbody>
</table>

**TABLE 2:** Ratio of male to female names for three subject groups.

<table>
<thead>
<tr>
<th>Language</th>
<th>Male names</th>
<th>Female</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>245</td>
<td>63</td>
<td>25</td>
</tr>
<tr>
<td>Karitiâna</td>
<td>23</td>
<td>12</td>
<td>0</td>
</tr>
</tbody>
</table>

**TABLE 3:** English vs. Karitiâna contrast. $\chi^2 = 6.67$ p<0.05

<table>
<thead>
<tr>
<th>Language</th>
<th>Male names</th>
<th>Female</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portuguese</td>
<td>25</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Karitiâna</td>
<td>23</td>
<td>12</td>
<td>0</td>
</tr>
</tbody>
</table>

**TABLE 4:** Portuguese vs. Karitiâna contrast $\chi^2 = 4.76$ p<0.05

<table>
<thead>
<tr>
<th>Pronoun usage</th>
<th>Male names</th>
<th>Female</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>159</td>
<td>44</td>
<td>26</td>
</tr>
<tr>
<td>Yes</td>
<td>70</td>
<td>18</td>
<td>2</td>
</tr>
</tbody>
</table>

**TABLE 5:** Further breakdown of English-speaking responses. $\chi^2 = 6.79$ p<0.05

C. Use of pronominal paradigm, regardless of pronoun choice, increased inter-linguistic disparity, suggesting linguistic effects on difference already present.

VII. Conclusions.

A. Preliminary results support presence of language-mediated thought in the perception of depictions of non-sexuated, animate entities.

B. Provides further evidence for some form of influence of language’s grammar on cognition.

C. Experiment suggests effect of pronominal gender on task that is not restricted to the lexico-semantic domain.
REFERENCES


