

EVIDENCE FOR LANGUAGE-MEDIATED THOUGHT IN THE PERCEPTION OF NON-GENDERED FIGURES

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I. Relevant work on linguistic determinism

- A. The Sapir-Whorf hypothesis, most famously expressed in Whorf (1956). Influenced by Boas, as well as Humboldt, Verner, Vico, and others. (cf. Koerner 1992)
- 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.
- E. Others include: Mills 1986, Zubin and Köpcke 1984.

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

A. Language: Polysynthetic, agglutinating, head-marking, relatively free word order, split-GR's. Described in Storto (1999) and Everett (2006).
Typologically-unusual patterns of velic movement.

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

	Free pronouns	Absolutive verbal agreement prefixes
1S	Æ, n	^-
1PL.INCL	^~tSa	^j-
1PL.EXCL	^ta	^ta-
2S	a, n	a-
2PL	a~tSa	aj-
3	i	ø-

TABLE 1: Pronominal forms in Karitiâna.

- i* *na-aka-t* *i-tep^k-o* *ese-pip*
3 NSAP-COP-NFUT INTR-dive-NFUT water-ALL
'S/he dove into the water.'
- a~tSa* *na-ok^-t* *i*
2PL NSAP-kill-NFUT him/her
'You all killed him/her.'
- 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.'
- Æ, n* *naka-hi~t-o* *i* *a, n-t^*
1 NSAP-give-NFUT 3 2S-OBL
'S/he gave them to you.'
- i* *na-atik-o* *kinda* *o* *ohÆ, nt*
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:

i *na-aka-t* *i-tat*
s/he NSAP-COP-NFUT IRR-go
'S/he went.'

i *i-ot*
S/he IRR-fall
'S/he fell down.'

tasô *i-hyryp-Ø*
man INTR-cry-NFUT
'The man cried.'

*He walked off the screen.
The man cried.
He opened his mouth.
The guy fell down.*

*Ele foi embora.
Ele chorou.
O menino pulou.
Ela caiu.*

B. Results

Language	Male names	Female names	Ratio M/F
English	248	63	3.93
Portuguese	25	3	8.33
Karitiâna	23	12	1.91

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

Language	Male names	Female	Neutral
English	245	63	25
Karitiâna	23	12	0

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

Language	Male names	Female	Neutral
Portuguese	25	3	0
Karitiâna	23	12	0

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

Pronoun usage	Male names	Female	Neutral
No	159	44	26
Yes	70	18	2

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.

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