Interactions of Landscape and Language: Spatial Language in Three Communities of Zapotec Speakers

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Outline

– The big picture
– *Diidxa za*
– Communities of speakers
– Data Collection Methods
– Findings
– Implications for Linguistic Relativity
The big picture

– Linguistic Relativity
  – Role of language vs. non-linguistic factors on linguistic and non-linguistic cognition
    – Li & Gleitman 2002; Li et al 2011

– Factors such as
  – Education, literacy, second language use, age, gender
  – Population geography: density, urban/rural
  – **Topography**: local landscape features
The big picture

- Domain of study: spatial reference frames
- Conceptual coordinate systems used to locate and orient entities
  - Strategies for describing/thinking about space
- Frame types defined by their ground or anchor
  - Observer, ground object, environmental feature
The big picture

- What factors are contributing to
  - Systems/strategies of spatial reference?
  - Choice of object to ground these spatial descriptions?
- What factors influence patterns in language and cognition?
  - Are such factors external or internal to language?
  - What is the relationship between communities of practice and individual linguistic and cognitive practices?
This presentation

- What effect, if any, does local landscape have on the language and cognition of speakers (Isthmus Zapotec)?
- How do we define “landscape”?
  - What landscape features exist locally?
  - What features are salient to speakers?
- Research tradition of Ethnophysiography
  - (Burenhult & Levinson (2008); Mark et al (2011); inter alia)
Isthmus Zapotec (Diidxa za)

- Otomanguean language; Zapotecan branch
- Tonal; Verb-initial
- ~100,000 speakers (INEGI 2010 census)
- Endangered in most communities
  - Shift to Spanish in younger speakers
- Strong preference for geocentric reference frames in La Ventosa (Pérez Báez 2011)
Communities of study

- Isthmus of Tehuantepec,
  - La Ventosa
  - Juchitán de Zaragoza
  - Santa María Xadani
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Data collection methods

- Landscape entity listing and description
- Route description task
- Spatial description referential communication task
  - “Talking Animals”
Mixed methodologies

- Explore effects of local landscape on reference frame use
  - Lexical inventory (Listing)
  - Salience of landscape entities in local environment (Listing, Route)
  - Use of landscape terms in small-scale spatial descriptions (Talking Animals)
  - Reference frame use in small-scale spatial descriptions (Talking Animals)
Listing Task

- 2 parts: Listing & Descriptions
  - Lists
    - Analyzed for recurrence of terms for landscape entities across communities
    - Establish salience of landscape features across populations
    - Contribute to documentation and revitalization efforts
  - Descriptions
    - Used to for semantic analyses
    - Contribute to documentation and revitalization efforts
<table>
<thead>
<tr>
<th>La Ventosa</th>
<th>Juchitán de Zaragoza</th>
<th>Santa María Xadani</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Yaga</em> ‘tree’ (13)</td>
<td><em>Yaga</em> ‘tree’ (12)</td>
<td>*Nisa do’ ‘sea’ (10)</td>
</tr>
<tr>
<td><em>Dani</em> ‘hill’ (13)</td>
<td><em>Guiigu</em> ‘river’ (9)</td>
<td><em>Dani</em> ‘hill’ (9)</td>
</tr>
<tr>
<td><em>Bi</em> ‘wind’ (12)</td>
<td><em>Dani</em> ‘hill’ (9)</td>
<td><em>Guiixhi</em> ‘forest/jungle’ (7)</td>
</tr>
<tr>
<td>*Mani’ ‘animal’ (9)</td>
<td><em>Mani</em> ‘animal’ (8)</td>
<td><em>Ranya</em> ‘milpa’ (6)</td>
</tr>
<tr>
<td><em>Nisa</em> ‘water’ (7)</td>
<td><em>Yuu</em> ‘house’ (5)</td>
<td><em>Guiigu</em> ‘river’ (6)</td>
</tr>
<tr>
<td><em>Guiigu</em> ‘river’ (7)</td>
<td><em>Nisa</em> ‘water’ (5)</td>
<td><em>Bize</em> ‘well’ (6)</td>
</tr>
<tr>
<td>*Nisa do’ ‘sea’ (5)</td>
<td><em>Guixi</em> ‘trash’ (5)</td>
<td><em>Esteru</em> ‘marsh/swamp’ (5)</td>
</tr>
<tr>
<td><em>Guie</em> ‘rock/soil’ (5)</td>
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</tbody>
</table>

- Items that occurred 5 or more times (10 speakers each)
- Prompt words were: *dani, guiigu, guiixhi* (greyed out)
- Numbers include modified variant (e.g. small hill, yellow dirt, cold wind)
Route description task

- Guessing game
- Analyze descriptions for landscape entities used in direction giving
- Compare to landmarks used in Talking Animals
Talking Animals

– Spatial description referential communication task
  – Matching game

– Analyze Director’s speech
  – Spatial reference frames
    – Strategies for locating and orienting objects
    – “Landmarks”/Landscape entities used to anchor frames
Talking Animals Findings

– Reference frame preferences vary across communities
  – La Ventosa strongly prefers Absolute frames
    – anchored by cardinal directions
  – Juchitán uses a greater variety of frame types
Landmark use in spatial descriptions

- Landmark use varies across communities
  - La Ventosa: Only 4% of stimuli described using a “landmark”
  - Juchitán: 37% of stimuli described using a “landmark”
- “Landmarks” ≠ Environmental features*
  - People, Structures (neighbor’s houses)
  - La Ventosa: Evenly split between people, houses
    - one pair uses ‘sea’ and ‘where the wind comes from’
  - Juchitán: Majority are people
Conclusions

- Local landscape features are NOT necessarily used in small-scale spatial descriptions
- Rather, the overall environment influences which frame type speakers use
  - Rural La Ventosa with salient winds: absolute frames are dominant
  - Urban Juchitán: local “landmarks” are used along with a variety of frame types
- Possibly an urban/rural divide
  - “Environmental” features don’t appear frequently in the city-dwellers’ lists
  - As reflected in the “landmarks” used in reference to small-scale space (buildings, people, and other features of enclosed living)
Future Plans

- Additional qualitative analyses of geocentric frame use
  - To what extent are speakers in each community using various abstracted geocentric axes (North-South winds, rising-setting sun) and environmental landmarks
- Finish my dissertation
  - Quantitative analyses of all potential factors influencing reference frame use
  - Additional semantic analysis with speakers on extensions of landscape terms
  - Landscape entities used in route descriptions, correlation with list and spatial description data
Thank you!
_Xquixe pe’laatu_!

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References


References


References