A cognitive linguistic approach to studying language relationships in Athapaskan

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The Athapaskan Languages

• Spoken across the western half of North America

• Most languages endangered to varying degrees

• Large differences in the quality and extent of documentation

• No truly satisfactory classification

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Problems in Sub-grouping

• “Athapaskan linguistic relations ... cannot be adequately described in terms of discrete family-tree branches.” (Krauss 1969)

• “...Athapaskan linguistic relationships, especially in the subarctic area, cannot be adequately described in terms of discrete family-tree branches.” (Krauss and Golla 1981)

• “...intergroup communication has ordinarily been constant, and no northern Athapaskan language or dialect was ever completely isolated from the others for long” (Krauss and Golla 1981)
Sampling

- The approach taken here is *onomasiological*: using a list of concepts to generate the data
- Semantic domain (BEETs):
  - Body parts: *leg, arm, stomach*
  - Ephemera: *hair, fingernails*
  - Effluvia: *blood, urine*
- 53 terms in total
- 34 languages and dialects
- 1479 terms under consideration
Phonological similarity

• Languages can be compared and grouped according to the similarity of phonological strings representing BEETS
• This leads to aggregate similarity judgments between languages
• These judgments can be used to cluster languages
Semantic similarity

- Observing similarities in semantic structure:
  - Lexicalization patterns
  - Dena’ina (Inland): ‘leg’
    - \(q^{ha-k\text{\text{"o}}na}\)
    - ‘foot-base’
  - Dene Śuline: ‘eyelid’
    - \(na-\text{\text{"o}}\text{\text{"o}}\)
    - ‘eye-skin’
Semantic similarity

- Observing similarities in semantic structure:
  - Shared semantic shifts for target 'leg'
  - Chilcotin: $t\theta'\acute{e}n$
    - ‘bone’
  - Navajo $t\breve{f}\acute{a}\acute{a}\acute{t}$
    - ‘lower leg, shin’
  - Kaska (Liard): $\gammaos$
    - ‘thigh’
Semantic similarity

• Three changes:
  • ‘bone’ > ‘leg’
  • ‘thigh’ > ‘leg’
  • ‘lower, leg/shin’ > ‘leg’

• All three can be understood as metonymic changes between adjacent elements in the ICM of a human body

• Similar changes have also been observed in other language families (Wilkins 1996: 284)
Semantic similarity

- This map is a geographic representation of the dendrogram showing phonological proximity.

- The orange areas indicate a region of greater (aggregate) phonological similarity.
Semantic similarity

- This region is dissected by the semantic shifts (black line):
  - ‘bone’ > ‘leg’ to the east
  - ‘thigh’ > ‘leg’ to the west
Semantic similarity

- A subgroup of the “orange” languages also share the lexicalization pattern 'eye-skin' for 'eyelid' (red line)
Semantic similarity

- The orange areas indicate a region of greater (aggregate) phonological similarity.
- This dissected by the semantic shifts (black line):
  - ‘bone’ > ‘leg’ to the east
  - ‘thigh’ > ‘leg’ to the west
- A subgroup of the ‘eastern’ languages also share the lexicalization pattern 'eye-skin' for 'eyelid' (red line)
Language relationships in Athapaskan

• Language relationship and phylogenticis in Athapaskan are 'a bit of a mess'
• BUT..it is a very interesting mess problem
• As scholars such as Krauss and Golla have pointed out the stability of Athapaskan linguistic systems has been undermined by very fluid interactions and exchanges among Athapaskan languages speaking communities
• While Cognitive Linguistics provides us with excellent tools to carry out detailed semantic analyses: ICMs, metaphor, metonymy, etc.
• Solving this problem will require going beyond semantics and phonology and looking at it from the perspectives of different kinds of data (ethnohistorical, archaeological, etc.)
Outlook

• Furthermore...

• If we are to follow Dr. Bybee in considering languages as Complex Adapative Systems, perhaps we should also consider language families as Complex Adapative Systems

• I believe that taking this seriously requires looking beyond linguistics to related fields, such as for example archaeology and anthropology

• LOOKING FORWARD: more inter-disciplinary interactions!
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