Are cognitive universals of language a myth?

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1. Some examples of empirical universals of human languages

(i) All languages have consonants and vowels. (absolute universal)

(ii) If a language has an [ø], it also has an [o]. (implicational universal)

(iii) Object-Verb languages tend to have Possessor-Noun order, and Verb-Object languages tend to have Noun-Possessor order (Greenberg 1963) (bidirectional implicational universal)

(iv) If a marker expresses both reflexive meaning (e.g. moet-sja) and passive meaning (obsuždaet-sja), then it also expresses anticausative meaning (e.g. lomaet-sja) (Haspelmath 1987, Geniušienė 1987). (semantic-map universal)

(v) If a language has distinct patient marking for inanimate noun phrases, then it also has distinct patient marking for animate noun phrases (Silverstein 1976, Comrie 1981, Bossong 1985). (scale-based coding universal)

(vi) If a language has overt genitive marking for inalienable nouns (kinship terms, body-part terms), then it also has overt genitive marking for other nouns (Nichols 1988). (scale-based coding universal)

2. Three explanatory approaches to empirical universals

(1) The purely cognitive approach (Baker 2001, etc.)

domain-specific cognitive constraints on grammar (fixed principles and variable parameters) explain the limits on language variation

(2) The communicative-cognitive-diachronic approach (Givón, Bybee, Hawkins, Croft, A.E. Kibrik, etc.)

communicative efficiency, coupled with domain-general cognitive principles, coupled with diachronic trends, explain the cross-linguistic generalizations

(3) The „historicist“ approach (Evans & Levinson 2009?)
language universals have been exaggerated and often disappear on closer examination; whatever generalizations are found are often due to historical accidents, e.g. inheritance from a common ancestor, macro-areal contact effects

3. How did the doubts about cognitive universals arise?

Three developments of the last two decades:

(i) the growth of fieldwork as an important activity of linguists
   (particularity is emphasized over generality)

(ii) the greatly increased interest in geographical distributions of patterns
   (a trend captured and strengthened by WALS)

(iii) the collapse of the Bakerian programme of a purely cognitive explanation
   (cf. Haspelmath 2008)

Possible conclusion: There are no cognitive universals of language
   („The myth of language universals“, Evans & Levinson 2009)

Fieldworkers tend to emphasize the uniqueness of their language
   e.g. Dan Everett on Pirahã and recursion

Geographical distributions sometimes show macro-areal effects
   e.g. front rounded vowels [ø] and [y] (Maddieson 2005 in WALS)

Grammatical diversity cannot be easily captured by means of Chomskyan parameters

Baker (1996: 7):
   "One might expect that more and more parameters comparable to the Pro-Drop Parameter would be discovered, and that researchers would gradually notice that these parameters ... themselves clustered in nonarbitrary ways... It is obvious to anyone familiar with the field that this is not what has happened."

   "Twenty years of intensive descriptive and theoretical research has shown, in our opinion, that such meta-parameters [e.g. the Null-Subject Parameter, or the Polysynthesis Parameter] do not exist, or, if they do exist, should be seen as artefacts of the 'conspiracy' of several micro-parameters."

Baltin (2004: 551): "I have never seen convincing evidence for macroparameters."
4. Against the pure cognitive approach

assumption:
in each language, we first identify the mental grammars, and then we compare the mental grammars

Newmeyer (1998: §5.2)
"The explanation of typological patterns in language requires, as a first step, the construction of a formal theory...

...the subject is that element underlyingly occupying the highest argument position within VP... But one cannot casually observe a set of sentences in a language to determine where precisely the highest argument position within VP is or what structural configuration identified [Spec, IP]. These determinations require deep grammatical analysis."

two serious problems:
A. mental grammars cannot be identified uniquely
B. language-specific grammars cannot be compared

A. Mental grammars cannot be identified uniquely

*Tom’s house:* is Tom(‘s) in the DET position or in the spec-DP position?

- DET position: explains why *Tom’s the house* is impossible
- spec-DP position: is compatible with X-bar theory

*mnoj o ljudej:* where is the head, where is the dependent?

Georgian subject inflection: zero prefix or zero suffix?

\[
\begin{align*}
v-xedav & \quad \text{‘I see’} \\
xedav & \quad \text{‘you see’} \\
xedav-s & \quad \text{‘s/he sees’}
\end{align*}
\]

There are multiple possibilities of describing languages, and often none is clearly better than another one – our preferences often depend on general philosophical considerations (or on fashion), but not on data from the language.

Moreover, it could be that different speakers have different mental grammars, even though they show the same behaviour. Identical behaviour can be explained by social constraints, which have little to do with grammatical cognition.

Solution:
Give up the attempt at language-particular cognitive description, or get more data than simple language structure data (e.g. psycholinguistic tests).
**B. language-specific grammars cannot be compared**

Each language has its own generalizations, and hence its own categories, e.g.

- Predeterminer in English (*all, both, half, double, ...*)
- VP in English, but not in Russian
- *Kategorija sostojanija* in Russian, but not in English
- Middlefield in German, but not in English
- Slavic Aspect vs. Romance Aspect (French: *(im)perfectif* vs. *(in)accompli*)
- Tagalog Topic (*ang*-marked phrase) vs. English Topic (topic-fronted phrase)

It is often possible to squeeze these into a pre-established general framework, but only with subjective decisions. The method is not rigorous.

<table>
<thead>
<tr>
<th>Solution:</th>
<th>Compare languages not in terms of grammatical categories which are justified internal to the language, but in terms of special <strong>comparative concepts</strong> (Haspelmath 2010).</th>
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**5. Examples of the communicative-cognitive-diachronic approach**

(iii) Object-Verb languages tend to have Possessor-Noun order, and Verb-Object languages tend to have Noun-Possessor order (Greenberg 1963) (*bidirectional implicational universal*)

**explanation** (Hawkins 1990, 2004):

- „harmonic orders“ are more efficient to parse (early immediate-constituent recognition)
- speakers unconsciously tend to choose the more efficient orders when they have the choice
- in this way, over time, languages tend to become harmonic diachronically
(vi) If a language has overt genitive marking for inalienable nouns (kinship terms, body-part terms), then it also has overt genitive marking for other nouns (Nichols 1988). (*scale-based coding universal*)


a. *Soma ra monbilo*

    Soma of car

    'Soma's car' (*Soma monbilo*)

b. *Soma bulo-ni*

    Soma arm-pl.

    'Soma's arms' (*Soma ra bulo-ni*)

Russian

a. машина Сом-ы

b. руки Сом-ы

but no language has genitive-marking only with ‘arms’, not with ‘car’

**explanation** (Haspelmath 2012++):

– inalienable nouns are more frequently possessed, hence the possessive relation is more predictable with them
– speakers unconsciously tend to choose the shorter constructions where these are less necessary
– in this way, over time, languages tend to get a Jeli-type system or a Russian-type system

**Comparison without analysis**

Comparative concepts:

– precede/follow

– object, verb = patient, action-word

– possessor, possessed noun = owner/whole/ego, thing/body-part/relative

– genitive marking = short morph that occurs in possessor-noun construction and that is not part of the possessor or of the noun

Nothing is implied about language-particular analysis of the constructions, whether mental grammatical patterns or non-mentalist analysis. All we need is to identify morphs and their meanings and their position.
6. Comparing linguistics, biology, and chemistry

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<th>chemistry</th>
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(from Haspelmath 2004)

7. What is cognitive in the communicative-cognitive-diachronic approach?

Basic efficiency principles:

- **ease of production** (speakers try to expend as little coding and articulation energy as possible)

  e.g. *Soma buloni* 'Soma's arms', instead of *Soma ra buloni*

- **ease of perception** (speakers try to make their message as transparent as possible to the hearers)
- „Ease“ has both a **cognitive** and an **articulatory** component, as well as a **time** component (life is short).

- Speakers adjust their speech in accordance with hearers’ needs – this is not a cognitive factor, but a **communicative** factor (speakers want communicative success).

- In addition, diachrony is crucial in this approach, because efficient patterns arise over time in a complex process of diachronic change, which is again primarily explained by **social** principles, not by cognitive principles.

8. **Back to Evans & Levinson (2009)**

- This was mostly addressed to generative linguists, or rather, to cognitive scientists who think that generative linguistics has discovered that all languages share a common blueprint („Universal Grammar“).

- Evans & Levinson are right that generative linguistics does not help us understand linguistic diversity, but the problem for generative linguistics is not that there are too few universals.
  - One problem is that the actual cognitive constraints on mental grammars (whatever they are) seem to have no interesting effect on the distribution of languages.
  - Another problem is that with the programme of comparing mental grammars, generative linguists cannot find generalizations.

- More recent work by Levinson’s associates (Dunn et al. 2011, Bickel et al. 2012+), which denies the validity of well-established universal generalizations, needs to be taken seriously, but is not very interesting, as long as there are no competing theories.

9. **Some underlying problems**

- American linguistics is still under the spell of Chomsky (cf. Lakoff and his „cognitive linguistics“, Everett and his crusade against recursion)

- The rest of the world is still under the spell of American linguistics

- Chomsky is a philosopher of mind, not really a linguist; he never had any interest in social or communicative aspects of language, so these have been neglected over the past few decades
– To fully appreciate the role of linguistic diversity, one needs to consider multiple diverse languages – but 90% of linguists only work on one language, which facilitates the spread of views that are incompatible with what is known about linguistic diversity

but this problem is not specific to language...

References


