Pitfalls in the language-thought distinction: a view on studies of linguistic relativity

Holden Härtl
Universität Kassel
holden.haertl@uni-kassel.de
Linguistic relativity hypothesis:

“We dissect nature anlong lines laid down by our native language [...] the world is presented in a kaleidoscopic flux of impressions which has to be organized by our minds – and this means largely by the linguistic system in our minds.”

see Whorf (1956: 213); cf. Pederson et al. (1998), Boroditsky et al. (2003)
The LRH is compatible with (at least) two different models of cognition.

“The particular language we speak and its grammar shape our thought”
Can we test linguistic relativity at all?
How circular are the empirical arguments? What are potential solutions?
Do we have to take the philosophical doubts seriously?

1 Empirical language-thought research and problems
   Grammatical gender
   Event conceptualization

2 Circularity problem
   Thinking for speaking

3 Philosophical notions of circularity
   Language *apriori*
   Unaviodability of language
Do we attribute specific biological qualities to inanimate objects?

Apparently yes: Boroditsky et al. (2003) show that grammatical gender influences perception and memorization of objects.

Germans remembered a male name (Patrick) for apple better than a female one (Patricia).

Spanish subjects showed opposite results (manzana, Patricia).
Object perception and gender

Picture similarity test: Spanish subjects > German subjects

→ la tostadora
→ der Toaster

Picture similarity test: German subjects > Spanish subjects

→ la cuchara
→ der Löffel

Pitfall 1

Circularity of the argument
Objection and alternative explanation:

- “Don’t the participants simply name the objects internally? From this the detected similarity between *der Löffel* und *der Prinz* follows logically!!”
- „So, people do not perceive the two alike, they are just labeled in similar ways!“
Solution 1

Block the language system

Try to strain the language system thus **obstructing internal naming**:

Results were **identical** and the authors conclude that the picture similarity effect is indeed based on **non-linguistic** associations.

Invent a new cognitive level

Other studies have shown that only word stimuli elicit gender effects:

\[ \text{asino} (‘Esel’) = \text{cammello} (‘Kamel’) \]

(Non-linguistic) pictures do not trigger Whorfian effects:

Explanation: Gender information does not influence non-linguistic representations but the level of (linguistically oriented) “Thinking for speaking”.

cf. Vigliocco et al. (2005); Slobin (1996)
Thinking for speaking

Abbildung: Modell der Sprachproduktion (vereinfacht)

Konzeptualisierung

Thinking for speaking

Formulierung

Grammatische Repräsentation

Artikulierung

Phonetische Repräsentation

Außersprachliches Wissen
(Episodisches und Weltwissen)

Mentales Lexikon

s. Levelt (1989); Slobin (1996)
Eye-tracking studies show similar TfS-effects for event conceptualization.

At 0 ms after SO:

see Papafragou et al. (2008)
Thinking for speaking

- Eye-tracking studies show similar TfS-effects for event conceptualization.

  At 1500 ms after SO:

  - Crucially, the effect was found only for verbalization; no Whorf-effect for (non-linguistic) memorization of the events.

  Conclusion: Language affect TfS only and nothing “beyond”.
Pitfall 2:
Can we look beyond language?
Herder’s circularity criticism:

C: Language is a product of thought, which is independent from language.
Herder: But you can only have thought if you have language.

Language apriori (à la Wittgenstein, Herder, Davidson, Heidegger, etc.):

“All knowledge is based on language.”

Cognitive-psychological evidence (cf. de Villiers & de Villiers 2000):

Mastering (false) beliefs depends on linguistic abilities and propositional embedding; test group: deaf children with delayed language development
A philosophical issue: Language apriori

Bierwisch’s (2008) answer:

“Propositional knowledge is based on language.”

“Everything thinkable is expressible.” (à la Searle 1969)

“Language separates propositional thought from everything beyond.”

Bierwisch’s examples of “beyond language” (i.e. non-propositional) knowledge:

- Face recognition
- Music comprehension
But even if we accept knowledge beyond language, can we access it at all?

- Problem: **Unavoidability** (‘Unhintergebarkeit’) of language

  If language relates to propositional knowledge only, this implies that there is **no linguistic means** available to consult non-linguistic knowledge.

  Wittgenstein (1922):
  “Denn um dem Denken eine Grenze zu ziehen, müssten wir beide Seiten dieser Grenze denken können (wir müssten also denken können, was sich nicht denken lässt.”

- So, in a strict sense, any empirical / experimental approach **towards non-linguistic cognition fails from the outset** because the approach itself is always in some sense **linguistic**.

Solution: ???
Research on linguistic relativity of thought presumes a separation of linguistic from non-linguistic cognition (otherwise it would be trivial).

Empirical research is challenged by the circularity problem: Are the empirical effects really non-linguistic in nature?

A (pretty trivial) solution is to implement a “linguistically oriented” level of non-linguistic cognition (thus accepting circularity): Thinking for speaking.

The circularity problem has its underpinnings in the philosophical notions of the language apriori and the unavoidability of language, of which at least the latter seems somehow serious to me.

Thank you.


