Lexical splits and asymmetries in spatial referencing:

Revealing universals through the study of variation

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Revealing universals through the study of variation

• Early studies in the linguistic representation of space were commonly inspired by cross-linguistic variation. New insight can be gained by shifting the emphasis from sweeping typologies to fine-grained analysis of language-internal variation.

• In addition to the variation between languages, cultures, and individuals, different words of the same language behave differently and show preference for different encoding strategies.

• Three insufficiently studied areas:
  - the choice between overt encoding and zero encoding of motion information (*Put it in the box ~ Put it into the box*);
  - the choice between static and dynamic expressions (*It’s on your left ~ It’s to your left*);
  - the choice of a frame of spatial reference (*on the left from whose point of view?*)
Static relators vs. access paths

Dynamic descriptions are commonly used to encode static spatial relations:

A big storage chest stood to the left of the door.

This strategy was even more prominent in ancient Indo-European languages, cf. Ancient Greek:

\[
\begin{align*}
\text{hoi} & \quad \text{tà} & \quad \text{epì} & \quad \text{deksià} & \quad \text{tôn} & \quad \text{kefaléōn} \\
\text{they:NOM} & \quad \text{ART:ACC.PL} & \quad \text{on} & \quad \text{right:ACC} & \quad \text{ART:GEN.PL} & \quad \text{heads:GEN} \\
\text{kómōsi}, & \quad \text{tà} & \quad \text{d’} & \quad \text{ep’} & \quad \text{aristerà} & \quad \text{keípoui} \quad \text{(Hdt. Hist. 4.191.4)} \\
\text{let.hair.grow:PRES.3PL} & \quad \text{ART:ACC.PL} & \quad \text{PRT} & \quad \text{on} & \quad \text{left:ACC} & \quad \text{shave:PRES.3PL}
\end{align*}
\]

‘They let their hair grow long on the right side of their heads and shave the left.’
(literally, “to the right side, “to the left”)

\[
\begin{align*}
\text{ek} & \quad \text{deksiàs} & \quad \text{d’} & \quad \text{autôn} & \quad \text{leukádioi} & \quad \text{kai hoi} & \quad \text{álloi} & \quad \text{bárbaroi} \quad \text{(Thuc. 2.81.3)} \\
\text{from} & \quad \text{right:GEN} & \quad \text{PRT they:GEN} & \quad \text{L.:NOM.PL} & \quad \text{and} & \quad \text{ART:NOM.PL} & \quad \text{other:NOM} & \quad \text{barbarians:NOM}
\end{align*}
\]

‘and on their right [were] Leukadians and other barbarians’ (literally, “from their right”)
The access path strategy:

• describes how one can arrive at the Figure, by projecting a path of fictive motion relating the Figure and the Ground. The path lead away from the reference object (‘to the right’) or toward it (‘from the right’).

• appears with less conventional and rarely invoked spatial relations (relations for which no specialized preposition is available: ‘to the north’, ‘to the right’, etc.’);

• are on the decline in the modern Indo-European languages, gradually replaced by specialized static prepositions, cf. etymological evidence for earlier uses in Fr. *de-dans* ‘inside’, etc.

The use of this strategy is lexically restricted, i.e. the strategy does not apply indiscriminately to all spatial relations.
The choice of frames of spatial reference

• Speakers of Bashkir choose between three descriptions where English speakers choose between two.
Intrinsic (function-based mapping) + relative frame

From the point of view of the sitting chair, the ball is on the right side, from our point of view, the ball is on the back side, at its back.
Intrinsic (shape-based mapping) + relative frame

‘In between, the ball is sitting on the right side... from your side, it is now on the left side.’
Lexical distribution of frames and mappings

Frames: intrinsic relative
FRONT/BACK 94 25 119
LEFT/RIGHT 37 30 67
Fisher’s exact test, p < 0.001

Mappings: shape-based function-based
FRONT/BACK 10 84 94
LEFT/RIGHT 18 19 37
Fisher’s exact test, p < 0.0005

This effect is independent of individual preference and other factors, i.e. different words show different preference in all speakers and across the tasks.
Conclusion

• The study of cross-linguistic variation at a more fine-grained level can lead to insights into the way different strategies co-exist within one language. An important factor in this variation are preferences associated with individual words:
  - some spatial relations can be described using the access path strategy (on the left vs. to the left), other can’t;
  - different relations show preference for different frames and mappings (front/back ~ intrinsic, right/left ~ relative).

• Accounting for the different preferences of individual words is a challenge. Are these preferences encoded as part of the word’s meaning? Do they follow from independent principles of association between words and constructions? How can we measure goodness of fit between a word and different cognitive strategies (the access path strategy, the different frames of reference)?