

Achieving reference via contrast in route descriptions and spatial object identification

Tenbrink, Thora, University of Bremen & Alexander Klippel, University of Melbourne

The investigation of the semantics of spatial projective terms such as *left*, *in front of*, or *above* regularly encounters problems with respect to the question which of the aspects that are clearly involved in the interpretation process belong to the semantic core of the expressions, and which are due to contextual or pragmatic aspects (e.g., Grabowski 1998, Coventry & Garrod 2004). Herskovits (1986) proposes to capture the **ideal meaning** of spatial terms by describing the geometric relationships underlying their semantics, and to derive a range of different **use types** in which the ideal meaning is stretched and adapted according to context. In her account, the semantics of spatial terms involves a certain **gradedness of interpretation**; this notion has later on been described in more detail in terms of **spatial templates** (e.g., Carlson-Radvansky et al. 1997). Basically, it means that projective terms can be applied best near a focal axis; for example, a good *front* position is one directly located on the straight line of sight of an observer. Positions further away from that axis are preferentially described using linguistic modifications or combinations of the terms.

However, there are good reasons for rejecting the notion that the gradedness of applicability is part of the terms' core semantics. Crucially, the effects of the spatial relation to the focal axis seem to depend on the discourse task. There are three basic contexts in which the application of projective terms have been investigated: first, they describe the location of one known object relative to another, for example, as an answer to the question "Where is the object?". Second, they are used in route directions where they indicate directions of movement and describe the position of landmarks along the way. Third, they are used to identify an object out of a number of competing objects, for example, as an answer to the question "Which object is it?". According to the results of our own research in comparison with previous investigations, it seems that the gradedness of applicability most prominently comes into play in the first of these three discourse tasks (which is the one most often used for the investigation of projective terms), while it plays only a secondary role – if at all – in the second and third tasks.

In giving route directions, people typically indicate the directions of movement in vague and simple terms, using an expression like *turn left* for a range of angles that a curve might take. The positions of landmarks are also not described in a very precise way; it is sufficient to identify their existence near the route. Similarly, in spatial object identification tasks people may use an expression like *the one on the left* as long as the object referred to is positioned somewhere on the left half plane. Crucially, in both kinds of tasks the presence of **competing objects** or **directions** is decisive for the linguistic choices speakers make. Thus, they use the projective expressions in a way that is maximally **contrastive** with respect to the current context, enabling the listener to identify the intended object or direction. We conclude that the semantics of projective terms involves only a spatial direction; effects of gradedness can be traced back to the current discourse context and therefore belong to pragmatic research.

References

- Carlson-Radvansky, L.A. and G.D. Logan. 1997. The Influence of Reference Frame Selection on Spatial Template Construction. In: *Journal of Memory and Language* 37, pp. 411-437.
- Coventry, K. R. and Garrod, S. C. 2004. *Saying, seeing and acting: The psychological semantics of spatial prepositions*. Psychology Press: Essays in Cognitive Psychology series.
- Grabowski, J. 1998. Ein psychologisch-anthropologisches Modell der einheitlichen semantischen Beschreibung dimensionaler Präpositionen. In P. Ludewig & B. Geurts (Hg.), *Lexikalische Semantik aus kognitiver Sicht – Perspektiven im Spannungsfeld linguistischer und psychologischer Modellierungen* (S. 11-40). Tübingen: Narr.

Herskovits, A. 1986. *Language and spatial cognition*. Cambridge University Press.