

# Use and Understanding of Intrinsic Frames of Reference

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Keywords: *Spatial cognition, Frames of reference, Spatial semantics, Semantic typology*

In this research, I investigate the cross-linguistic use and understanding of intrinsic frames of reference with non-canonically orientated ground objects. Frames of reference are conceptual coordinate systems that are projected onto 'figures' and 'grounds' (Talmy, 2000, p.312) in order to orient the former and locate it with respect to the latter. In intrinsic frames of reference, the ground object is the anchor that the axes are derived from. Levelt (1984) proposed that there is a restriction on the use of intrinsic frames of reference depending on the orientation of the entity that the intrinsic frames is derived from. This restriction stems from the disalignment of the vertical axes of the ground object and the figure's perceptual frame of reference. Thus, his claim predicts that speakers would not produce descriptions such as (1) below to describe a ball sitting at the top of a chair laying on its right side. This exemplifies DISALIGNED intrinsic (DIS) use. Using cross-linguistic data collected with a referential communication design, Alshehri et al (2018) shows that there exists a cross-linguistic variation in terms of the degree to which Levelt's constraint is violated.

- (1) The ball is above the chair.
- (2) The ball is right of the chair.

Alshehri et al's work noted another type of intrinsic use that is found with noncanonical grounds: DYNAMIC intrinsic (DYN). This intrinsic type does not use vertical relators and so is not a violation of Levelt's constraint. Speakers are found to use horizontal instead to describe the same scene: A non-canonically oriented of vertical relators as in (2). The study shows that use of DYN is significantly higher than DIS use with noncanonical grounds. The present research aims at investigating factors affecting use of these two types of intrinsic with noncanonical grounds cross-linguistically. Ad hoc analysis of Alshehri et al's data suggest that distance and type of relator (front/back vs. right/left) have an effect on whether DIS or DYN is used. To probe this further, I designed four comprehension and production experiments in which I manipulated the above factors along with two additional factors which are expected to have an effect, specifically dynamicity and type of ground object. The test populations include: Arabic, English, K'iche', Spanish and Yucatec speakers. The findings of this study contribute to the ongoing debate regarding the role of linguistic, sociocultural and environmental factors as determinants of frames of reference selection in cognitive tasks.

## References

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