This poster presents a detailed examination of the variation in spatial reference frame use among Isthmus Zapotec speakers of La Ventosa, Oaxaca, Mexico. Spatial reference frames are conceptual coordinate systems used to locate and orient objects in space. Crosslinguistically, speakers vary greatly in the reference frames they use and the entities they select to anchor such frames (e.g. speakers’ bodies, ground objects within a spatial configuration, environmental entities, or cardinal directions).

For Isthmus Zapotec, analysis of data from a small sample of speakers has shown a strong preference for absolute reference frames that are anchored by the rising and setting sun and the locally salient North-South prevailing winds (Pérez Báez 2011). This poster presents the analysis of discourse from a large-scale sample of 33 pairs of speakers. Whereas data were previously elicited using photographs as stimuli within a referential communication task (Clark & Wilkes-Gibbes 1990; Ball & Chair, MesoSpace), data in the current study were elicited using three-dimensional toy animals to allow speakers to more readily access geocentric (environmentally anchored) reference frames. A set of four trials (four different configurations of four toy animals) was conducted with each pair of speakers; the shortened task allowed for the collection of spatial descriptions from a greater number of speakers, as compared to the photo stimuli task Ball & Chair. One speaker was presented with a configuration to describe for their partner on the other side of a screen; the director then had the opportunity to review their partner’s attempt and provide further instructions if needed.

Results from the community of La Ventosa support the previous finding of a strong preference for geocentric frames anchored by wind direction and sun, but also reveal greater use of “secondary strategies” (Moore 2015) than observed in response to photo stimuli. Such strategies include use of egocentric frames (relative and ‘direct’ (Danziger 2010)) and landmark-based frames (‘projected’ in Mishra et al 2003, ‘head-anchored’ in Bohnemeyer & O'Meara 2012). In locative descriptions, 5%, 7%, and 8% of frames used were relative, direct, and landmark-based, respectively. In orientation descriptions, 7% and 17% were direct and landmark-based respectively, with the remaining 76% frames used being absolute.

The collection of data on speakers’ age, gender, education level, reading and writing frequency, and frequency of use of Spanish as a second language allows for a multivariate analysis of the effects of such factors on reference frame use within the community. Previous studies (Bohnemeyer et al 2012, in press, ms) have shown L2, literacy, population geography and topography to be significant predictors of frame use. The increased data sample from this community of Zapotec speakers sheds further light on these claims. Preliminary modeling shows that language, use of L2 Spanish and gender significantly predict geocentric use as well as a significant effect of task (Ball & Chair vs. the current task). This poster will examine these issues within the Isthmus Zapotec population.

References


