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Patterns of functional containment in Latvian

In our talk we will discuss results from several studies on Latvian prepositions and other spatial expressions indicating that geometric knowledge is constrained by functional factors such as support, locational control and enclosure. Even if there is no topological containment, functional containment is frequently perceived and expressed, e.g., in Latvian case-marked locative.

We will show results from several empirical studies that we have conducted within the framework of extended Region Connection Calculus (RCC+) (for the original version of the RCC cp. Randell, Cui, & Cohn,1992), functional knowledge analysis (Coventry, Carmichael, & Garrod, 1994, Coventry & Garrod, 2004, Gärdenfors, 2014). First, we have used acceptability rating task (Coventry, Prat-Sala, & Richards, 2001) where we have related to both visual and verbal stimuli. Second, we have used different modifications of production task (Munnich, & Landau, 2010; Carlson, & Hill, 2007) where we asked subjects to complete a sentence referring to a visual stimulus representing a spatial configuration or to describe a spatial configuration. We also asked subjects to provide us with explanations why they think this preposition or case marking is the correct one.

According to our results functional factors seem to constrain geometric ones. However, the impact of functional factors on diverse spatial configurations is different. In particular we were able to show empirically confirmed and functionally constrained sense overlaps between (a) case-marked locative and '*uz* ' ('on'), (b) '*uz'* ('on') and '*virs'* ('above'), (c) *'blakus'* ('next to / beside') and *'pie'* ('by').

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