The EASP travel grant supported me to visit Prof. Dr. Norbert Schwarz at the University of Southern California. The aim of my visit to was to further a project that Dr. Schwarz and me are pursuing about how evaluative judgments are influenced by perceptual aspects of scale design, in particular physical distance between scale anchors.

Spatial distance[1] plays an important role in people's perceptions of what goes together in the world. Specifically, things that are spatially close to one another are often similar, whereas things that are spatially far from one another are often different. For instance, animals of the same kind often flock together, flowers of the same kind bloom in close proximity, to each other and people's location reflects assortative matching. People appear to use these spatial proximity patterns spontaneously in organizing their own environment. For instance, people place books with similar subjects (or similar colors for some people) together on shelves, and put plates together with other plates, rather than cups, in the kitchen cupboard.

This consistent pairing of sameness with spatial closeness leads to an automatic grouping of close things when people perceive objects in the world. For instance, most people perceive the following two objects ● ● ● ● as two pairs of dots instead of four dots. Such grouping based on the smallest interval is described in the law of proximity by Wertheimer (1938) as one of the most influential principles for visual grouping. In human experience, what is close together, goes together.

The automatic inference that what is close together, goes together, has consequences for determining same versus different. For instance, when people have to determine whether the colors of two different cubes are dissimilar, they are slower to do so when the cubes are close together rather than far apart (Boot & Pecher, 2010). Similarly, response time in categorization tasks is slowed down when the response keys on the keyboard are close together (K & L) compared to further apart (A & 5 on the numeric pad) (Lakens, Schneider, Jostmann, & Schubert, 2011). These effects are not limited to simple response facilitation, but also apparent in tasks that require more deliberation, such as choice. Indeed, when people are

---

[1] Egocentric spatial distance, or the spatial distance between the self and some reference point in the world, has been elaborated on by construal level theory (CLT, e.g.Trope & Liberman, 2010), an influential social-psychological perspective that posits that one's personal distance to an object or place influences whether one thinks in a more abstract or more concrete way. However, although CLT has yielded many insights into the way egocentric spatial distance maps onto psychological distance, it does not consider the spatial distance between objects independent of ego reference, in other words, outside the self, in the world

choosing between options, decision difficulty is higher when the choice options are spatially close to one another rather than far apart (Schneider, Schwarz, & Koole, 2015). Moreover, spatial distance facilitates peoples understanding of sameness or differences. Sentences describing sameness (war and battle are the same) are easier to read when preceded by two close objects, compared to sentences describing differences (war and peace are different) (Guerra & Knoeferle, 2014).

Current project

The aforementioned findings suggest that spatial distance not only plays a role in the activation of the concept of same and different, but also influences *to what degree* things are different or the same. Specifically, I have initiated a multi-study project in which we look at how spatial distance influences the interpretation of conceptual distance, or differences.

In our studies, we addressed the implications of spatial distance for the use of rating scales, e.g., in consumers' online product ratings. At the University of Southern California I was able to further explore these implications with Dr. Schwarz. We presented participants with consumer ratings of two products, made along a continuous scale. We manipulated the absolute distance between the rating mark and the scale anchors by varying the length of the scale (240 vs. 600 pixels), while keeping the ratings conceptually identical, by presenting ratings at 75% of the scale, resulting in a spatial distance between the right anchor and the product of 60 pixels on the short scale but 150 pixels on the long scale. Of interest is whether these conceptually identical ratings along two differentially long scales result in different impressions of the cakes' quality. This was the case. Participants perceived the products as more better, as reflected in quality ratings and willingness to pay, when their rating marks were spatially distant from the anchor rather than close, despite the conceptual equivalence of both sets of ratings.

This observation has important conceptual and methodological implications. On the conceptual side, it bears on the role of physical distance in perceptions of similarity and their consequences for decision making; on the methodological side, it raises new questions about the impact of scale length on inferences from ratings and suggests that perceivers focus on absolute distance rather than relative distance between ratings, thus neglecting scale length as a relevant frame of reference. We are currently testing the robustness of this effect through both direct and conceptual replication, and plan to write an empirical paper about our

findings.

I am very grateful for my time at the University of Southern California, and would like to express my gratitude to the University of Southern California, Dr. Schwarz, and the SEEP lab for their hospitality, time and care. Furthermore, I wish to thank the European Association of Social Psychology for enabling my visit and Sibylle Classen in particular for her assistance.

References

Boot, I., & Pecher, D. (2010). Similarity is closeness: metaphorical mapping in a conceptual task. *The Quarterly Journal of Experimental Psychology,* 63(5), 942-954.

Guerra, E., & Knoeferle, P. (2014). Spatial distance effects on incremental semantic interpretation of abstract sentences: Evidence from eye tracking. *Cognition,* 133(3), 535-552.

Lakens, D., Schneider, I. K., Jostmann, N. B., & Schubert, T. W. (2011). Telling Things Apart The Distance Between Response Keys Influences Categorization Times. *Psychological Science*, 22(7), 887-890.

Montello, D. R., & Raubal, M. (2013). Functions and applications of spatial cognition. The APA handbook of spatial cognition.

Schneider, I.K., Schwarz, N, & Koole, S.L. Room to decide: the influence of spatial distance on choice difficulty. *Manuscript in preparation.*

Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review, 117(2), 440.*

Wertheimer, M. (1938). *Laws of organization in perceptual forms.*