

## **REVIEW**

of “Analogies and Understanding Intentions”,

a thesis submitted by Luiza Shahbazyan in partial fulfillment of the requirements for the degree of Ph.D. in Cognitive Science (3.2. Psychology)

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Reviewer: Assoc. Prof. Lilia Gurova

### ***Summary of the work***

The main question addressed in the dissertation of Luiza Shahbazyan is whether single episodes which are seemingly irrelevant (i.e. superficially dissimilar) to a target situation could nevertheless influence the attribution of intention to an ambiguous action in the target. The tested hypothesis is that episodes which are structurally similar to an ambiguous target situation could influence the attribution of intention to the ambiguous action in the target. This hypothesis builds upon previous research in cognitive science that demonstrates priming effects of structurally similar episodes in problem-solving as well as in memory and text comprehension tasks. The hypothesis is tested through a series of 5 experiments the results of which reveal that single episodes preceding structurally similar but superficially dissimilar target situations do influence the attribution of intention to the ambiguous action in the target but this priming effect is mediated (enhanced or suppressed) by activated positive or negative stereotypes and by the evaluation of the structural similarity between the priming and the target episodes (the rejection of the analogy between them leads to an “inverted effect”).

### ***General evaluation***

The dissertation of Luiza Shahbazyan is focused on an interesting and important question. The ability to understand others’ intentions is crucial for human social life and researchers from different areas of psychology (social, cognitive, developmental, clinical) are trying to reveal what stands behind this ability and what might influence understanding intentional actions in real-world situations. Although the current theories of understanding other minds (theory-theory, simulation theory and direct perception theories) through light on the role of some general mechanisms such as schema-based inferences, simulations and

direct perceptions, they are silent about how these mechanisms interfere with other real-world factors. The dissertation of Luiza contributes to filling in this gap by revealing the effect of seemingly irrelevant episodes (which, however, are structurally similar to the target containing an ambiguous action) and the interaction of this effect with schema-based inferences as well as with the evaluation of the structural similarity.

In her thesis Luiza has demonstrated a good knowledge of the literature on mindreading and analogical inference. Her main hypothesis is well grounded in the theoretical and empirical achievements of analogy research in cognitive science. The five experiments are carefully designed to discriminate between alternative hypotheses, and different interpretations of the obtained results are thoroughly discussed. Part of the obtained results have been presented at the Annual Conference of Cognitive Science Society and published in the Proceedings of the conference (see Shahbazyan et al., 2014). There are some noticeable flaws in the thesis, however, which are discussed in the next part of this review.

### ***Critical comments***

- (1) My main concern regarding this dissertation is the reliability of the obtained empirical results. All effects have been demonstrated practically on the same set of stimuli and this, as the author herself correctly states, “limits the generalizability of results” (p.138).
- (2) In all experiments the priming episode which is structurally similar to the ambiguous target situation always contains characters which are supposed to activate either positive or negative stereotypes. Given that the effects of structural similarity and general schemas (stereotypes) have never been disentangled in these experiments, one cannot assume without additional stipulations that the stereotypes mediate the effect of structural similarity, and not vice versa. What if it turns out that stereotypes could influence the attribution of intention even when they are activated by characters belonging to priming episodes which are not analogous to the target?
- (3) The claim that the view of analogical transfer of intentions is alternative to the current theories of understanding intentions seems to be an overstatement. The observed interaction of effects of structural similarity and schema-based inferences seems to be more in tune with seeing theory-theory and analogical transfer as complementary rather than as rival theories of mindreading.

***Conclusion***

In summary, the dissertation of Luiza Shahbazyan presents interesting results which constitute a contribution to the field although further tests are needed to prove the reliability of these results as well as to justify the proposed theoretical interpretation. I, hereby, strongly recommend that Luiza Shahbazyan be awarded the Degree of Doctor of Philosophy in Psychology.

Assoc. Prof. Lilia Gurova

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