

REFERENTIAL ATTITUDE upon the thesis
Analogies and Understanding Intentions

submitted to the New Bulgarian University
in partial fulfilment of the requirements for the degree of
DOCTOR OF PSYCHOLOGY

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The presented material consists of 167 pages as follows: 50 pp. introduction, review of literature and justifications for the work attempted; 60 pp. genuine experimental material (including 5 separate tests, each containing methods, design, results and short discussion); general discussion of just 15 pages, unfortunately involving – again – the tedious frame of unanswered questions, noticeable limitations and the inevitable promise for future work. We have to accept that the conclusion of 1 page presents all possible contributions – the heyday of each and every dissertation. About 180 references are mentioned and the two appendices proved very valuable: the second one, in Bulgarian, describes the real stories which the experiments were based upon and thus I got relief from my initial bewilderment stemming from unthinkable bear/wolf intercourse – it turned out that bears were just naïve CUBS!

The aim of the dissertation is to shed light upon a unique phenomenon of human social cognition, known as “mindreading”. Based on such assumptions as analogy making and intention understanding, it proposed and tested a novel hypothesis, relying on the process of decision making in ambiguous situations. Those were artificially created by reading a fictitious stories to the subjects and getting their responses. Having in mind the frail and unexploited venue to such an idea, the author’s bold attempt by itself deserves praise and recognition. The reader gets a good impression from the numerous – and very recent – reviewed studies touching upon the related matter and is fully convinced by the hypotheses and proposals to test them, put forward by the author. I have to admit to be a proponent of *Simulation Theory*, which describes how perceivers not only pretend, but truly believed, what their own mentality, ideas and intentions are the same as those within other people heads. Thus, I stand firmly behind the statement of Ms. Shahbazyan that “*generating inferences about the mental state of others is a simple explanation of understanding their intentions*”.

There followed 5 consecutive experiments, each designed so as to ask particular question: role of structural similarity in generating inferences (1); increased preference toward negative intention (2); differentiation among positive and negative stereotype accounts (3);

exclusion of inverted effect from negative target intention (4) and altered evaluation of intentional inferences resulting from analogical processing (5). The results are neatly presented, with the knowledgeable use of convincing statistics.

The major findings to which a label of scientific contribution might be ascribed, were put by the author under the heading *Implications*. I mostly agree with these statements and deliberately take to describe them in the way they appear in the text:

1. One specific implication is that altering dysfunctional attributions of intention seems possible. O.K., but why substantiate this with yet another examples from the literature? It is not advisable in a paragraph named implications (that would have to stress dissertation's own contributions and major achievements) lengthy descriptions of other authors papers (Perrot etc., concerning gay people for example) to appear.

2. An important lesson from the current research is that positive structurally similar stories may produce undesirable effects if the key objects in the analogical stories do not correspond. Here comes again a cited reference, which could have been used in the general discussion chapter.

3. A more general implication is formulating testable predictions about how people understand intentions in addition to the already documented influence of analogical processing in other aspects of social cognition. This provides a way forward from the debate between ST and TT toward theories that are more plausible given accumulated knowledge in areas such as memory and similarity processing.

4. The results bear on the idea that analogical processing is a domain-general mechanism in operation across all human cognitive functioning. The role of analogies has been demonstrated in areas that have been considered uniquely human such as complex reasoning and scientific thinking. The presented findings extend this work by providing empirical evidence for the involvement of analogies in fast and effortless human processes such as mindreading.

This leads us to the general conclusion – here again I borrow author's own wording:

The presented empirical findings support the hypothesis that relational knowledge plays an important role in the generation of inferences about the intentions of others. Even a single concrete prior episode, which is structurally similar to the current ambiguous situation, may influence the attribution of intention to the ambiguous action. In the same time, generalized schemes interact with - either facilitating or hindering - the analogical inferential process.

Furthermore, deeper processing seems to enhance analogical inferences. However, these inferences are not unconditionally accepted, but seem to be evaluated according to the alignment of the elements. This evaluation seems to play a significant role as aligned

inconsistencies does not lead to lack of predicted effect but rather to an inverted effect. These results cannot be accounted by any of the existing theoretical paradigms (ST and TT), neither by the proposed hybrid models for understanding mental states. The reported empirical findings, as well as the proposed explanatory hypothesis about the existence of a single domain-general mechanism of using relational knowledge to understand others' intentions, demonstrate the fruitfulness of the link which we have established between analogy research and the traditional studies on social cognition.

Following these deliberations, the reader is fully convinced about the aspirant's skill in conducting experiments of her own design, to justifiably analyze results and to propose sensible hypotheses. The study has provided *moderate support* for the hypothesis that **analogical inferences play a role in understanding others' intentions**. Mechanisms of analogy making include **both concrete and abstract prior knowledge**. The role of **evaluation and learning as methodological tool in social cognition** was revealed. The proposed third alternative theory (**inference AND unification**) may help in understanding controversial empirical data.

The so-called "extended resume" describes well all milestones of the dissertation and I fully agree with the four contributions listed in Appendix 1.

Four publications with aspirant's participation are presented: I assume that the first one is an abstract in *Folia Medica* while the remaining three are included in annual Proceedings of the Cognitive Science Society. No citations are mentioned. In view of the already established practice, we will have to comply with this scant production.

Since no biographical data were supplied, I cannot comment on characteristics and propose advices or personal impressions, which I do not have.

In conclusion, the matter put into investigation in this dissertation is by itself a rather tricky, universally unexplored in depth, and deserves being put into trial. The accumulated data are sufficiently abundant and their analysis has been performed according to the state of the art statistics. The somewhat murky and shallow discussion might be excused. Thus, I recommend that the academic position of *Doctor in Philosophy* should be awarded to Luiza Shahbazyan by the members of the honourable scientific jury.

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