Daria Ford **Warsaw, 4.04.2024**

Cardinal Stefan Wyszyński University in Warsaw

Faculty of Christian Philosophy

Institute of Psychology

Doctoral dissertation entitled *Memory for Truth and Falsity: An Investigation from the Perspective of Dual-Recollection Theory*

Supervisor: prof. UKSW dr hab. Marek Nieznański

Summary

For over thirty years, experimental psychologists have investigated the processes underlying memory for truth and falsity trying to validate which model - the Spinozan or the Cartesian – describes the processes for encoding truth and falsity more accurately. To deepen the understanding of memory processes underlying memory for truth and falsity, in the presented series of five experiments, the dual recollection theory was employed, which introduces a distinction between three retrieval processes: context recollection, target recollection, and familiarity.

In the article “Recollection of “true” feedback is better than “false” feedback independently of a priori beliefs: an investigation from the perspective of dual-recollection theory” this novel approach was successfully applied in research on memory for truth and falsity. We conducted two experiments using the conjoint recognition paradigm. The goals of the experiments were: the application of dual-recollection theory to the research on memory for truth and falsity (Experiment 1) and the measuring of the influence of prior knowledge on memory for truth and falsity (Experiment 2). Results showed a satisfactory goodness of fit of data to the dual-recollection multinomial model, which allowed us to interpret the contribution

of memory processes in the dual-recollection theory. The context recollection parameter (memory for feedback information) was significantly higher for true than for false statements in both experiments. Moreover, the target recollection parameter (memory for the sentence itself) was significantly higher for true than for false sentences when participants believed this sentence is true before the memory experiment.

The article „Cognitive load reduces context recollection for true sentences" presents an experiment designed to verify which model describing encoding processes for truth and falsity (Spinozan vs Cartesian) will be supported by the findings based on dual-recollection theory. An additional aim was to test whether the use of different types of cognitive load tasks have different effects on memory for truth and falsity. In the between subjects design, students performed the conjoint recognition test under: no-load, refreshing-interference or rehearsal-interference encoding conditions. Incorrect attribution of a "true" label to false sentences compared to a "false" label to true sentences indicated no difference under cognitive load, which supported the Cartesian model. Dual-recollection multinomial processing tree model analyses confirmed better context memory for true than false sentences in the no-load condition (and the rehearsal-interference condition). In contradiction to the Spinozan model, cognitive load mostly influenced context recollection for true sentences, with nonsignificant effects on context recollection for false sentences. The manipulation of the type of cognitive load task (refreshing-interference or rehearsal-interference conditions) did not evoke expected effects, however, it indicated that true information is processed on a deeper level (more attentional resources are allocated to truth), than false information.

The article entitled „The effect of value on context and target recollection in memory for truth and falsity" aimed to investigate whether memory effects observed for true statements resemble the value effect. In Experiment 1, the primary objective was assessing how importance influences the processes defined by dual-recollection theory. Results showed

that both context and target recollection were significantly better for important items compared to unimportant ones. In Experiment 2, the focus was to examine interaction between importance and veracity on memory. The findings revealed significant differences in the ability to prioritize truth over falsity. For prioritised true information there was an increase in the contribution of context recollection to memory performance, but this was not the case for prioritized false information. Additionally, there was higher level of context recollection for true than false sentences in the true-prioritized condition, but not in the false-prioritized condition. These results suggest that better memory for truth may be a special case of the value effect.

The new theoretical approach used in the presented series of experiments provided meaningful insights into memory for truth and falsity research by showing that there are important differences in retrieval processes for “truth” vs. “false” feedback information. These differences in context recollection depending on veracity status interacted with the effects of value and cognitive load on memory performance.

Keywords: memory for truth and falsity, dual-recollection theory, conjoint recognition paradigm, prior knowledge, cognitive load, value-directed remembering