David Over & Jean Baratgin 講演会「思考研究の新パラダイム」講演要旨

「New paradigm psychology of reasoning and three-valued logic」

Jean Baratgin (Paragraphe [Universite Paris 8, Saint-Denis] & Institut Jean Nicod [ENS, Paris])

Two bodies of research in the psychology of reasoning support the new paradigm. The first result is that most people judge the probability of a conditional sentence to be equal to the conditional probability of the consequent on the antecedent (as implied by the Ramsey test). The second result is very old. It is the existence of a so-called defective
truth table in which people judge irrelevant (`I') the two cases where the antecedent is false. Our presentation focuses on this second point.

Uncertainty is a hallmark of the new paradigm. Thus if `I' is considered as a third value there is no defective table but rather a coherent table in which a third truth value that represents uncertainty is introduced.

However a variety of three-valued systems of logic are available. We examine their descriptive adequacy for the usual connectives, including the conditional. Within this framework the so-called defective truth-table in which participants choose a third truth value when the antecedent of the conditional is false becomes an explainable and coherent response. Our main result is that the logic of de Finetti (and only this one) has a very good descriptive adequacy when uncertainty takes place as a third truth-value.

「Scope ambiguities, modal fallacies, and new paradigm psychology of reasoning」

David Over (Psychology Department, Durham University)

There is a new Bayesian / probabilistic paradigm in the psychology of reasoning. It depends on experiments in which participants respond that the probability of the natural language indicative conditional P(if p then q) is the conditional probability of q given p. Once this result, P(if p then q) = P(q | p), is fully established, a Bayesian account of conditional reasoning, and so of reasoning in general, is sure to follow. However, the result depends on the participants applying the probability operator to the whole conditional, in a wide scope interpretation, and not to its consequent, in a narrow scope
interpretation. The problem is that modal operators like probability can cause scope ambiguities in natural language and modal fallacies. Scope ambiguities and the associated modal fallacies are a well researched topic in logic and philosophy. Yet the psychology of reasoning has paid little attention to this topic, in spite of its intrinsic interest and relevance to the new paradigm. We will illustrate how modal fallacies have been committed by supporters of old paradigm psychology of reasoning in their response to the evidence for P(if p then q) = P(q | p).

An experimental programme will be described supporting the conclusion that the probability operator is generally given wide, and not narrow, scope in conditionals.