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L'intuition

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Logic, beliefs and effortful processing : the case for intuitive logic

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Simon Handley studied Psychology at Cardiff University, where he also completed his PhD on disjunctive reasoning under the supervision of Professor Ruth Byrne. He has worked at Plymouth University since 1993, where he is now a leading member of the Thinking and Reasoning Research Group, working alongside Professor Jonathan Evans and Professor Steve Newstead. His research has examined two broad issues in the field of human

reasoning; 1) the impact of knowledge and beliefs on thinking in children and adults and 2) the psychological processes underpinning our understanding and reasoning from conditional assertions. Most recently he has critically examined the evidence for dual process accounts of reasoning drawing upon developmental, individual differences and experimental evidence. This work has provided intriguing evidence for rapid and intuitive sensitivity to logical structure that often pre-empts the influence of beliefs on reasoning.

Résumé de la conférence

Dual process accounts of reasoning make a distinction between Type 1 processes that are claimed to be automatic and intuitive in nature and Type 2 processes that are conscious and effortful to apply. Beliefs influence logical reasoning because reasoners are unable to inhibit belief based responses in favour of resource intensive, logic based analysis. In this presentation I will review a range of recent evidence that is difficult to reconcile with these accounts: 1) Belief based errors in reasoning increase with age and cognitive capacity;



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[Résumé de la conférence de S. Handley, suite]

2) Evaluating the logical validity of a conclusion on a simple reasoning task is often accomplished more quickly than evaluating its believability; 3) The logical validity of a conclusion interferes with judgments of its believability more than vice versa and 4) Reasoners prefer sentences that are logically implied by previous text more than sentences that are not logically implied, irrespective of their believability. Taken together these findings suggest that logical reasoning is often accomplished rapidly and 'by default'. We discuss these findings in the context of recent claims of an intuitive basis for logical processing.

Lecture proposée

Morsanyi, M., & Handley, S. J. (2012). Logic feels so good – I like it! Evidence for intuitive detection of logicity in syllogistic reasoning. *Journal of Experimental Psychology: Learning Memory and Cognition*, 38, 596-616.

Handley, S.J., Newstead, S. E., & Trippas, D. (2011). Logic, beliefs and instruction: A test of the default interventionist account of belief bias. *Journal of Experimental Psychology: Learning, Memory and Cognition* 37, 28-43.