Looking for logic in all the wrong places: An investigation of language, literacy and logic in reasoning
Counihan, M.E.

Citation for published version (APA):
Counihan, M. E. (2008). Looking for logic in all the wrong places: An investigation of language, literacy and logic in reasoning Amsterdam: ILLC
This dissertation provides a critical assessment of investigations into logical reasoning ability as reported in the psychology of reasoning literature. This is achieved through a combination of original empirical research with theoretical analysis, using insights from formal semantics and philosophy of language. In the first chapter, the findings of an interview study with subjects with varying but low education levels are presented. The aim of the chapter is to engage with and challenge the negative conclusions reached in previous studies with illiterate subjects. This is achieved by reanalysing the typical responses with heightened attention to semantic and pragmatic factors which shape subjects' responses.

Chapter 2 provides an exploratory analysis of the everyday use of some terms used in reasoning studies. Comparing everyday usage with typical usage of the terms in reasoning studies enables us to explain why certain terms are more difficult for some subjects than others. In Chapter 3 these findings are placed in the context of the broader debate on the cognitive consequences of literacy. The work of David Olson is handled in detail, and an adapted version of his 'literal meaning' hypothesis is proposed to explain the difference between schooled and unschooled subjects' performance in reasoning tasks. Consideration of the notion of 'literal meaning' feeds directly into the next chapter, Chapter 4. This is the analytic backbone for the dissertation, as it explains how much previous work in the psychology of reasoning has relied on an oversimplified picture of the relations between natural language, logic, and reasoning, giving rise to confusions about logical form, its relation to meaning in general and to literal meaning in particular. Finally, Chapter 5 reports on an interview study on Wason's original selection task, building on the work of Stenning and van Lambalgen in this area. This chapter is intended to show that, despite the criticisms of the previous chapter, standard reasoning experiments can provide rich data for a positive theory of human reasoning. The dissertation ends with a summary and concluding remarks.