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INSTITUTE OF RESEARCH IN MANAGEMENT
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**Determinants of linear judgment: a meta-analysis
of lens studies**

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Natalia Karelaia

and

R.M. Hogarth

ABSTRACT:

The mathematical representation of Brunswik's lens model has been used extensively to study human judgment and provides a unique opportunity to conduct a meta-analysis of studies that covers roughly five decades. Specifically, we analyze statistics of the "lens model equation" (Tucker, 1964) associated with 259 different task environments obtained from 78 papers. In short, we find - on average - fairly high levels of judgmental achievement and note that people can achieve similar levels of cognitive performance in both noisy and predictable environments. Although overall performance varies little between laboratory and field studies, both differ in terms of components of performance and types of environments (numbers of cues and redundancy). An analysis of learning studies reveals that the most effective form of feedback is information about the task. We also analyze empirically when bootstrapping is more likely to occur. We conclude by indicating shortcomings of the kinds of studies conducted to date, limitations in the lens model methodology, and possibilities for future research.