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e.g. **CHALLENGING G-MANIA IN INTELLIGENCE RESEARCH: ANSWERS NOT GIVEN, DUE TO QUESTIONS NOT ASKED**
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Abstract

In the last decade the London school was on the rise again. Spearman's g attracted a lot of research interest. Carroll s (1993) heroic attempt to find all published correlation matrices and reanalyze them convincingly, supported Spearman's positive manifold thesis. All measures ever invented to measure intelligence correlate positively with one another, at least in unrestricted samples, which is the sine qua non condition for g. That little g is out there in the real world, there is no doubt and no real challenge exists in disputing this simple fact! What

are we doing and what should we do about g? Answering questions like these bring us to the birthplace of our most loved and hated controversies and debates in psychology. Concentrating on g as Herrnstein and Murray (1994) or Brand (1996) did, or looking for the biological bases of g or its reducibility to speed of information processing, we easily forget the second important part of Carroll's message. Not only was g found but also evidence for hierarchical models of intelligence with g at the apex. What kind of questions can be asked with hierarchical models? Our questions should be related to the criteria we are most interested in. In seeking to ask good questions it is wise to look where the very smart guys are. What are the commonalities of questions they ask leading to answers which sometimes are reinforced with Nobel and other prizes? If we do this we will notice one general class of principles behind those successful questions, especially in physics, i.e. principles of symmetry. In psychology, many years ago Egon Brunswik incorporated them in his famous lens model. Using hierarchical variants of the lens model we were forced to think about the relationship between predictor and criterion model hierarchies. From what level of generality in the predictor or what level of generality in the criterion do the best predictions and explanations occur? Using the framework of a hierarchical variant of the Berlin model of intelligence structure (BIS) (Jäger, 1984; Wittmann, 1988) in predicting school grades or complex problem solving performance we found that the g-level was not the best level to predict and explain hierarchical variants of these criteria. For working memory capacity the g-level was very good, but even here we profited much from lower levels as regards explanation. The principles coined Brunswik-symmetry are demonstrated at a modification of Tucker's lens equation leading to explanations under what conditions predictions succeed or fail.

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