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Where Process and Measurement Models Meet, Revisited

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Some years ago, Drösler (1981) has advocated to apply theories of measurement to problem solving, an area of psychology where - up to then - such models had hardly been applied to. With a somewhat different point of view, Gregg & Simon (1967) have compared mathematical theories to computer simulation models with respect to their costs and benefits. On the basis of these methodological investigations, I will present an overview of a contemporary cognitive architecture of human problem behavior (Anderson & Lebiere, 1998). I will thereby apply a levels description (Schmalhofer, 1998, chapter 3). A discussion about which aspects of current models of problem solving (e.g. Lifschitz, 1987, Anderson & Lebiere, 1998) satisfy the objectives of mathematical theories will conclude my presentation.

Anderson, J. R. & Lebiere, C. (1998) *The atomic components of thought.* LEA, Mahwah, New Jersey.

Drösler, J. (1981) Where process- and measurement models meet: evaluation of states in problem solving. Proceedings of the Third Cognitive Science Conference, Berkeley, CA, pp. 207–209.

Gregg, L. W. & Simon, H. A. (1967) Process models and stochastic theories of simple concept formation. *Journal of Mathematical Psychology, 4,* 246–276.

Lifschitz, V. (1987) On the sematics of STRIPS. Reasoning about Actions and Plans: Proceedings of the 1986 Workshop (pp. 1–9) Timberline, Oregon.