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# New Conceptualizations of Intelligence: An Interview with Robert Sternberg

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# New Conceptualizations of Intelligence:

## An Interview with Robert Sternberg

By Carolyn R. Benz,  
University of Dayton

**B** How did you come to question the traditional definitions of intelligence?

**S** I've written for many years about intelligence. As I uncovered anomalies with respect to test scores, I became interested in people with high IQ's who were "losers" and those with low IQ's who performed highly in various areas. Dramatic variations in students applications for graduate programs stimulated my thinking about what, in fact, intelligence really was. Intelligence might not be one and the same thing in all instances.

**B** Could you describe your triarchic theory of intelligence for me?

**S** Yes. Not only is there the internal world of the individual (learning how to do things, planning, and actually doing things), there's the external world of the individual. This is the context the person must adapt to. Thirdly, there are those things that the individual does, the activities that require both novelty and automatization. I basically see these three, then, as subtheories of intelligence. The first explains what's usually referred to as information processing or cognition, the second addresses how intelligence relates to the context of one's experience or behavior, and the third is a theory that deals with how people select from a wide spectrum of tasks and experiences where intelligence is used. These three subtheories together, I'm proposing, do a better job of explaining what we mean by intelligence than does our traditional way.



*Robert J. Sternberg, IBM Professor of Psychology and Education, Yale University's Psychology Department has developed the triarchic theory of intelligence, which he discussed in this interview. A graduate of Yale and Stanford Universities, his research has dealt with theories of intelligence, individual differences in cognition, thinking and reasoning, problem solving, and multivariate data analysis with latent variables and observable variables. He is a productive writer, having authored approximately 30 books, and authored or coauthored more than 300 articles and book chapters. His most recent book is *Metaphors of the Mind* (1990), published by Cambridge University Press.*

**B** What do you see as applications for measuring intelligence in these new ways? Are there practical applications particularly for educators?

**S** I'll give you an example. Included as one aspect of this conceptualization of intelligence is the ability to use context to learn, for example. Using context to effectively adapt requires thinking. We need to teach thinking skills; infuse thinking into books. We can test these skills. Testing and training go together.

**B** Is intelligence testing, then, the testing of thinking?

**S** No, not always. Not every thinking process is related to intelligence. Testing intelligence, however, includes testing the ability to think.

**B** Tell me more about those individuals who piqued your interest in intelligence, i.e., the "stars."

**S** Often people have one well-developed skill, not a wide diversity of skills or abilities. However, they have an extraordinary ability to capitalize on that one skill. They're able to make it work for them to an unusually high level. This phenomenon led me to consider that what we need are more reality-oriented measures—measures of things that relate to the "real world." These behaviors are the kinds of behaviors that relate to all sorts of human performances, not just intellectual abilities.

**B** What would be an example?

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*An Interview with Sternberg* (continued)

**S** IQ test questions assume that there's only one answer and only one way to the solution to a problem. That's not like life. There is a practical intelligence; such as how to manage yourself, or how to make decisions about your career, for example. Those are kinds of intelligence, too.

**B** That reminds me of Seymour Epstein's test of constructive thinking or some of the new ways of defining intelligence that Howard Gardner writes about; that there are multiple intelligences—spatial, musical, logical-mathematical, etc., as well as interpersonal and intrapersonal intelligence. Aren't some of these what we'd call mental health? And, aren't some psychotics geniuses?

**S** Well, psychotics could be geniuses. But "no" to your first question—mental health is not intelligence. An anxiety problem could affect your ability to *use* your intelligence. If a person's mental health is good, they're better able to exploit the ability that they have. We have to distinguish the criteria from intelligence, the thing itself. By this I mean we have to distinguish what we define as intelligence itself from the criteria we use to show evidence of it. Doing well in business, for example, might be evidenced by a salary increase, the number of people who like you, positive personnel evaluations, etc. Having the ability and choosing the most effective business strategies is the intelligence. That's a good example of a "real world" intelligence. Similarly, having a high social intelligence is made up of a certain set of abilities and skills, but might be evidenced by having many friends.

**B** So much testing in schools is being mandated by law today. What about the issue of culture bias? Are you concerned about assuring culture-free tests?

**S** There's no such thing. One always measures intelligence in a cultural context.

**B** For a couple of years at MWERA we've discussed the relative merits of qualitative and quantitative research. How do you respond to the ongoing debate about qualitative and quantitative research methods?

**S** I don't think there's one right answer or one right way to conduct research. Qualitative and quantitative research strategies are convergent operations. You need to go where your skills and interests take you. In our profession we have people who I think are exemplary in each strategy.

For a long time we've assumed quantitative data had a higher priority. In IQ testing, for years, we've had all the data in the world. That didn't prevent us from misinterpreting what it measured and misapplying it. We've basically been deceiving ourselves. Hard numbers don't tell you enough. We need both qualitative and quantitative, actually. I think the recent moves by the Educational Testing Service toward expanding the National Teacher Examination to include performance and portfolio components in addition to the traditional paper-and-pencil tests is a very good idea.

**B** What's currently needed in intelligence testing?

**S** I'd say what's most important is our need for measures that assess real-world intelligence, as well as academic intelligence.