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# RATIONALITY IS INTELLIGENT

## Reply to Rickert on Krueger on Social-Bias

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## Abstract

Rickert (1998a) argues that intelligent behavior ought to be the primary object of interest in psychological studies. Because, by his definition, creative behavior is far closer than rational behavior to the core of intelligence, little can be learned from studies of rationality. I argue instead that rational behavior is an important component of intelligence. Moreover, this component is easier to identify and more tractable than its creative cousin. Hence, I remain hopeful that the study of (ir)rationality in social contexts can be improved along the methodological lines suggested (Krueger 1998a).

## Keywords

*creativity, intelligence, norm, rationality*

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1. Why study rationality? Not every mental activity leading to good things is rational (Rickert 1998ab). Much of the behavior that we recognize as being intelligent is ARATIONAL, which means that it is not bound by the requirements of rationality as commonly understood (e.g., coherence and optimality). Creativity in particular is a salient and widely admired subclass of intelligence. And indeed, creative behaviors need not obey the rules of rationality. Although I agree with this portrayal of creativity, I do not share Rickert's conclusion that the study of rationality has no bearing on our understanding of intelligence.

2. In my critique of contemporary research on the (ir)rationality of human perception and judgment (Krueger, 1998), I suggested ways in which research on rationality could be improved. These suggestions were grounded in the conviction that rationality is both important and good. Trying to understand and improve rationality seems a worthy goal. In contrast, Rickert doubts that rationality matters at all. He claims that (a) intelligence is the key psychological capacity to be understood, (b) intelligence is unrelated to rationality, (c) intelligence IS related creativity, and that therefore (d) the study of creativity should supplant the study of rationality. I review these three ideas and their implied consequence in the above order.
3. The claim that intelligence is paramount is understandable considering that this construct has captured the fancy of psychologists and other cognitive scientists for decades. The fact that intelligence lies at the conceptual core of the field obscures the equally important fact that no one has managed to define it satisfactorily. Even the early debate between Spearman, who spoke of one intelligence, and Thurstone, who spoke of many, has never been resolved. The pragmatists measure and predict, rather than define and worry. And in the domain of human intelligence they continually measure more and more varied things, among which is creativity. Because of the protean nature of intelligence, the range of possibly intelligent behaviors far exceeds the range of rational behaviors.
4. But rational behavior remains one important subset of intelligent behavior. I used various forms of inductive reasoning (e.g., predicting the behavior of others or understanding their causes) to illustrate that social perception can be more or less rational. I see no reason why the more rational reasoning should not also be more intelligent. Consider social projection: When construed as a form of inductive reasoning, projection has tremendous implications for intelligence. An intelligent organism must generalize from the limited experiences it has had to the universe of possible experiences that may lie ahead. The essence of knowledge is GENERALIZATION (Reichenbach 1951, p. 5, emphasis in the original). To ignore one's own experiences is to lock the door and throw away the key. It is neither rational nor intelligent (although it may be creative).
5. The confusion of inverse conditional probabilities is perhaps the most familiar form of irrationality in the domain of inductive reasoning. Recently I took a blood test to find out whether I was one of the one in 3,000 individuals in my segment of the population that carry a recessive gene which is potentially lethal when passed on. A few days after the test, a genetic counselor called me with "good news." When informed that I tested negative, I asked just how good the news was. I needed to know what my chances were of having the gene, given that I tested negative. The counselor said the test was "98% accurate." By that she meant that 98% of gene carriers are identified by the test. This is the probability that the test result is negative, given that the gene is present; in other words, the inverse of what I wanted to know. This situation is not uncommon in medical diagnosis (Dawes 1988). Many clients submit to costly and time consuming exams, only to come away with misleading information that is often not even recognized as such by its providers. This is neither rational, intelligent, creative, nor good. But it IS rational, intelligent, and good (though not necessarily creative) to do the simple math and provide the relevant information (and to know which piece of information is missing; here: the probability that a random person would test negative).
6. Creativity is not rational because it is not bound by rules or norms. The idea that there is a relationship between creativity and intelligence simply means that the latter subsumes the former. It does NOT mean that intelligence as such is not bound by rules or norms. The idea that rule-free (unruly, as it were) creativity is a subset (THE subset, according to Rickert) of intelligence, must also confront the problem of retrospective definitions of creativity. Rickert's examples of creative and intelligent behaviors (e.g., Einstein's solution to problems in Maxwell's electrodynamics) are examples of SUCCESSFUL creative acts. Creative behaviors are easily classified as intelligent when they work. Creative behaviors that are merely surprising but that lead nowhere have little appeal as demonstrations

of intelligence. Some students find creative ways of cheating on exams. Those who are caught did not, by definition, act intelligently. Those who are not caught remain anonymous and their genius goes unrecognized. In other words, a selection of creative behaviors that are EFFECTIVE AND KNOWN as examples of intelligence is subject to OUTCOME BIAS (Allison, Mackie & Messick 1996). The identification of rational behaviors does not face this problem because the criteria of rationality are laid down BEFORE relevant behaviors are selected. Hence it is much easier to claim that most (or all) rational behaviors are intelligent than it is to claim that most (or all) creative behaviors are intelligent.

6. None of this means, of course, that the study of creative problem solving cannot improve our understanding of intelligence or human welfare (see also Margolis 1998). As presented by Rickert, creativity is reminiscent of those aspects of mental life that are variously labeled associative (Sloman 1997), automatic (Wegner & Bargh 1998), implicit (Greenwald & Banaji 1995), or intuitive (Eisenstadt & Simon 1998). All of these address the ability of the mental apparatus to operate rapidly and efficiently. Often these processes yield surprising and useful results, and sometimes they even map onto the precepts of some rational calculus (e.g., Krueger 1998b).

7. What this DOES mean, however, is that because of the breadth and slipperiness of intelligence as a construct, little progress is made by ruling in or ruling out certain aspects of human performance merely because they can or cannot be held up against formal norms.

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