

THE ANDRESKI EFFECT – ANSWERING QUESTIONS THAT HAVE NO ANSWER: SMART STRATEGY OR BS?

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In the theory of test creation and analysis, there is a long history questioning the effects of guessing (Cronbach, 1942), and how to statistically control for it (Aiken, 1979). Less has been written about test takers who would be most likely to guess. It has been shown that men guess on exams more than woman (Ben-Shakhar & Sinai, 1991), and that personality plays a role (Casey, Nutall, & Pezaris, 1997; Cureton, 1971; Slakter, 1969). However, there is one area that has not been investigated: what would the testing implication be of an exam with questions that had no correct answers?

Asking a question for which there is no answer has several advantages. First, one of the primary purposes of testing is to discover what a student “knows.” It generally takes an advanced understanding of a topic and a certain amount of knowledge confidence to state that a question has no answer, or to admit that you know nothing that would allow you to answer the question. Second, if the students do answer the question, even if the answer is far afield, the responses give an instructor information about what students have learned. Third, it highlights several issues generally ignored, or even stated to be impossible. For example: 1) Mondak and Davis (2001) introduced a term called “blind guessing.” This occurs when a test taker does not know the answer, but there are hints to choose from. Because of this definition, they maintain that open-ended questions are not susceptible to guessing. And they further state that, “Propensity to guess is eliminated if all respondents answer every item, meaning that the sole remaining systematic source of variance is knowledge” [p. 207].

This simply is not true. First, an opened-ended question with no correct answer gets around this issue, and second, respondents could theoretically answer every open-ended question by guessing, and would probably do so if the respondent thought that such an action would increase their score on the exam.

Second, students are generally encouraged to guess on exams, and many students appear to believe, probably because of past experience, that guessing on open-ended questions may actually increase their score. However, this is a type of deception for gain, and such deception is considered to be unethical.

Pilot Study

A researcher named Andreski¹ was created for exams. This person was never discussed in class, lectures, or in the text; for the purposes of this class, the person did not exist. On a previous quiz, Andreski was used as an option on a multiple-choice quiz, and students were informed afterward that the name was a fabrication. On the second comprehensive exam just prior to midterm, an opened-ended question was asked that read: “*What is the major distinction between the theory proposed by Andreski and the findings of Piaget?*” Students had previously taken a battery of personality and lifestyle inventories as parts of class assignments.

Only 30% of the 44 students who took the exam indicated that they did not know the answer by leaving the question blank or by stating that they did not know. Some of the responses are given in Table 1. A preliminary analysis found that males were more likely to attempt to answer the question than females, but no differences in personality measurements could be found. There was a trend indicating that those willing to guess were doing more poorly in class on other measures.

Table 1
Responses to Unanswerable Open-Ended Question about Andreski and Piaget

Appeared to know something about Piaget

“Piaget believed that we have a certain concept in our minds about the environment which doesn’t change unless external force convinces us. Andreski on the other hand believed that our mindset is primarily shaped by the environment.”

“The major difference is how we work through the stages of knowledge. Based on what age and what stages we stay in or not.”

Appeared to know something about past discussion in class

“Andreski said that a person’s behavior is more based on the external world where as Piaget believe it to be internal & our own thought process.”

“Piaget’s findings show that learning is something that happens over time and it can also disappear, if not used for awhile. Andreski theory states that once you learn it, you don’t forget it.”

“Andreski’s theory said that we do what the environment does. Jean Piaget found that we are more likely to do what we find to be good.”

“Andreski theories were mostly based on genetics. Piaget’s theories were mostly based on our environment.”

“Piaget believed behavior was learned and Andreski thought it was genetic where we were born with it.”

“Major difference was Piaget said a lot of learning was cognitive whereas Andreski said it was mostly genetic.”

“Andreski was centered around nature theories, while Piaget showed nurture plays an important role in upbringing.”

“Andreski theory was more based on nature than nurture.” (*this student was probably cheating*)

Appears to be BS

“Our minds and behaviors can change.”

“The research that Andreski didn’t match up with Piaget’s and he found that Piaget’s research wasn’t that thorough. Piaget’s theory has been found to have many flaws, the difference was that they did not agree that people acted the way Piaget thought.”

“They both have a different outcome or different thoughts in there theories that don’t match up.”

“Andreski believed in one being... all are the same.”

“Classical conditioning is used with another stimulous that doesnt create a classical condition. Cognitive dissonance is a way to balance our tensions created by unwanted decisions.”

Proposal

We propose to discuss and seek direction on four questions and concerns:

- 1) What research methodology would best study this phenomena?
 - 2) Is guessing on an open-ended question a good strategy for students?
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3) Is it an ethical strategy, and do we encourage it? Responding to an open-ended question when you don't know the answer may be seen as a smart tactic, or even as a valiant effort, or it could be seen simply as a way to cheat by bamboozling the test grader.

4) Should instructors ask questions that cannot be answered, and what are the possible consequences for both the learner and the instructor?

Note: The Andreski Effect was named after Stanislov Andreski (1919 – 2007) who wrote a scathing indictment of the modern social sciences. His book was written 42 years ago and is rather obscure. None of the students were aware of it. We know of only one student who searched for the name after the exam.

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