

Chapter 6.

Absence of bias

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A look at assessment bias

Q) What is the color of bananas?

- ① yellow
- ② red
- ③ brown with yellow spot



A look at assessment bias

What is 'bias'?

A preference or inclination that inhibits impartial judgment

The kinds of bias that may be encountered in tests range wide. You can find instances of **gender bias**, **religious bias**, **geographic bias**, **linguistic bias**, and just about any other bias in the ballpark.

A look at assessment bias

◇ **At an obvious level**

unable understand the vocabulary test items will perform less well on the test...

Ex) test item written in English

◇ **At a less obvious level**

think about the subcultural value

Ex) “fight-when attack” value

vs.

“turn-the-other-cheek” response

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A look at assessment bias

Test bias is operative whenever there are qualities in

- (1) a test itself,**
- (2) the way in which test is administered,**
- (3) the manner in which the test results are interpreted**

that unfairly penalize or give an advantage to members of a subgroup because of their membership in that subgroup.

A look at assessment bias

Do you think this item is biased?

Sample Item 1.

With five minutes left in the championship football game, the score was tied at 20. North High School then scored a touch down but missed the extra point. West High School then took the kickoff and scored a field goal just before the game ended.

What was the final score of the game?

A look at assessment bias

Do you think this item is biased?

Sample Item 4.

Carlos needs a new jacket. The jacket he wants costs \$22.50, but he only has \$7.50. To earn the money, Carlos gets a job as a busboy at a local restaurant. If he earns \$2.50 per hour, how many hours will he have to work before he will have enough money to buy the jacket?

- A. 4 hours
- B. 6 hours
- C. 9 hours
- D. 10 hours

Assessment bias vs. Instructional shortcomings

Every time that members of a minority group score lower on a test item than members of the majority group, **does that mean the test item is biased?**

absolutely not!

such a test item may be biased.

may merely be detecting deficits in the instruction received by minority children.

Minority
group

Vs.

Majority
group

Assessment bias vs. Instructional shortcomings

When the tests were administered on a state wide basis, it was often discovered that a sizably larger proportion of minority students failed the tests than was the case with white students. The tests were having a **disparate impact** on certain kinds of students.



Assessment bias vs. Instructional shortcomings

Disparate impact

When the test scores of different groups are decidedly different

That fact **does not** automatically **indicate** that **the competency tests were biased**.

The **instructional program** in that state has **failed to provide** the state's minority children with the kinds of competencies they should have acquired in order to pass the prescribed tests.

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Culture-fair test

About Culture-fair test

- ◇ Assessment devices designed to eliminate bias by employing only stimulus materials common to all cultures.
- ◇ largely nonverbal
- ◇ Cattell's Culture-fair intelligence tests
 - Raven's progressive matrices
 - the Leiter international performance scale
 - the Davis-Eells test of general intelligence

Culture-fair test

Davis-Eells test

- ◇ The test consists of problems thought to be common to the experience of all **urban children**.
- ◇ **Pictorial**, except for the directions, which are read aloud by the test administrator.
- ◇ The test was designed for children in **grades 1 through 6**.

Culture-fair test : Davis-Eells test

probabilities

to pick the most likely explanation

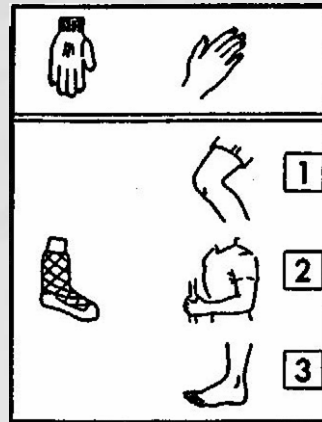


- ① The woman will be hit the boy with a ball.
- ② The man will be received treatment by the woman.
- ③ The boy will be sing a song.

Culture-fair test : Davis-Eells test

analogies

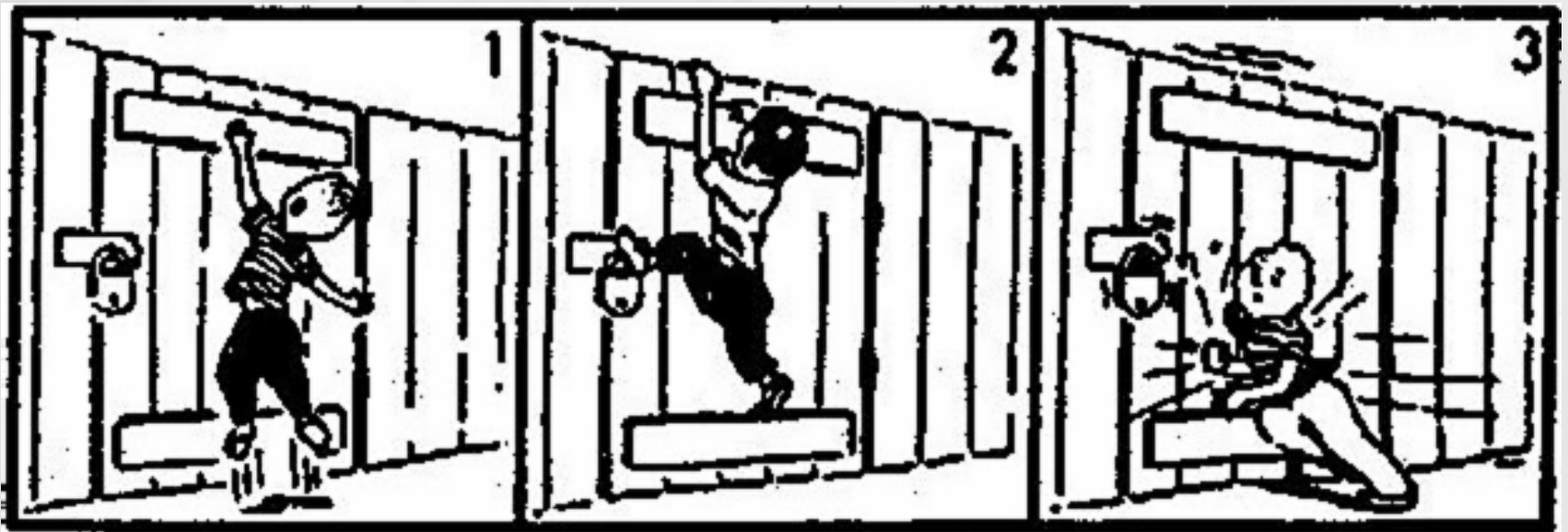
to choose the appropriate analogue for the new object from the three options



Culture-fair test : Davis-Eells test

best ways

to select the picture that shows the best way to solve the problem



Culture-fair test

Cattell's Culture-fair intelligence tests

- ◇ Aimed at ages 4 to 8, 8 to 13, and 10 to 16
- ◇ **perceptual** and **nonverbal**, because directions are **read aloud** to students so that they understand the task.

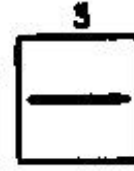
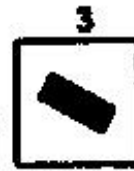
Culture-fair test : Cattells test

Series

to select a choice that completes a series

Which of the five choices would complete series?

SERIES



ANSWERS

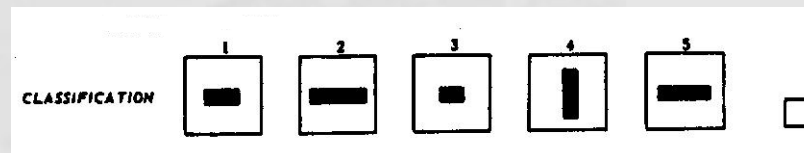


Culture-fair test : Cattells test

Classification

to choose something that does not belong in a set

Which one is different?



Culture-fair test : Cattells test

Matrices

to find a choice that completes a pattern

Which of the five choices would look right in the empty box?

MATRICES

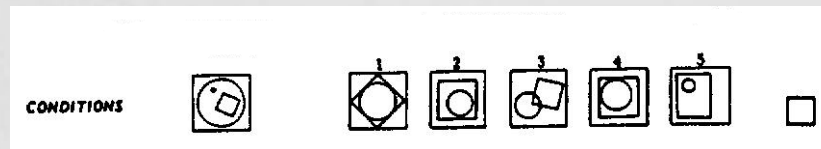


Culture-fair test : Cattells test

conditions

a dot must be placed in one of the choices that coincide with the conditions present in a boxed figure

Which of the five numbered boxes could a dot be put inside the circle but outside the square, as in the box at the left?



Culture-fair test

A test that mimics Raven's Advanced Progressive

Matrices  http://en.wikipedia.org/wiki/Raven%27s_Progressive_Matrices

Evaluating for test bias

If users of educational tests become so **sensitized to the perils of biased tests** that they **demand full-scale bias-reduction operations** prior to purchasing a test, all test publishers would soon comply with these demands.

The background features a faint, light-colored illustration of a mountain range. On the right side, a person is depicted climbing a steep, rocky peak. The overall style is minimalist and artistic, with a soft, muted color palette. A solid blue horizontal bar is at the top, and a solid orange horizontal bar is at the bottom.

Thank you.