

INTELLIGENCE TESTS

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INTRODUCTION

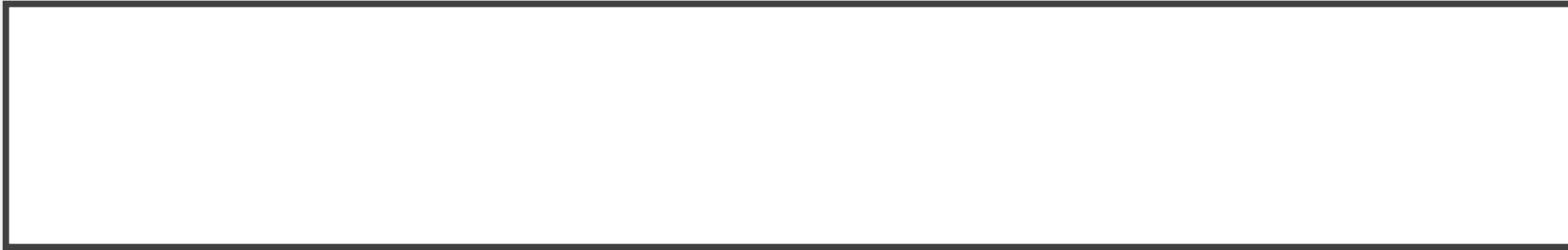
- Intelligence Tests measure a person's cognitive capabilities independent of experience.
- Scholastic Assessment Test – Achievement Test – crystallized knowledge
- Modern Intelligence Test – Aptitude Test – fluid intelligence

WHY ARE INTELLIGENCE TESTS IMPORTANT?

- How well one will do in an educational program?
- Select people for specific jobs
- If we base our public policies on the idea that intelligence is to significant extent shaped by environmental experiences, then intelligence tests can be used to help decide how scarce resources are allocated. This makes intelligence tests controversial.
- During World War I, in United States, intelligence tests affected the immigration policy.

WHAT ARE THE CONTRIBUTIONS OF NATURE AND NURTURE TO INTELLIGENCE?

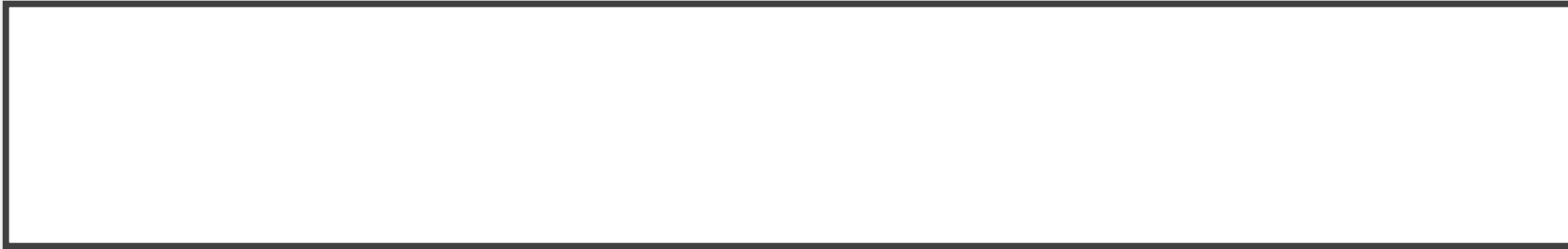
- Social Darwinists interpreted Darwin's evolutionary theory to mean that intelligence is basically inherited.
- Francis Galton, who was influenced by Darwin's theory of evolution, made 2 important innovations in methodology:
 - a) He standardized procedures for intelligence testing, that measured reaction time, auditory perception and other aspects of sensory capacity.
 - b) Galton had the brilliant insight of using twins to try to tease apart the contributions of heredity and environment to intelligence. He compared twins and ordinary siblings reared apart and reared together.



- Galton proposed the controversial idea of Eugenics: selective breeding of humans to increase or at least maintain the intelligence level of human population.
- Plato said that just because some individuals rank among the “gold” category in intelligence does not mean that their offspring will necessarily rise to the top.
- *The Bell Curve* (Herrnstein & Murray, 1994) assumes that United States is a meritocracy and in a meritocracy, it is argued, more intelligent people rise to the top and marry others like themselves, and their children also inherit higher intelligence and succeed and remain at the top.

IS THERE ONE OR MULTIPLE TYPES OF INTELLIGENCE?

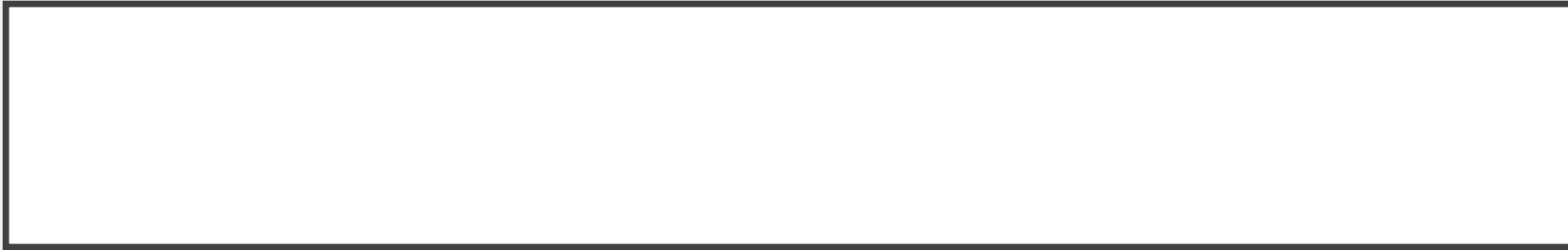
- Alfred Binet revolutionized intelligence tests by designing them to assess comprehension, attention, and other aspects of “higher mental capacities”.
- Charles Spearman demonstrated a positive correlation between different measures of intellectual performance.



- The general association between different types of abilities was interpreted by Spearman as indicating “general intelligence”.
- There are issues raised by critics about the need for a much broader definition of intelligence and the advantages of testing in more naturalistic settings.

THE CRITICS AND THE IDEA OF “MULTIPLE” INTELLIGENCE TESTS

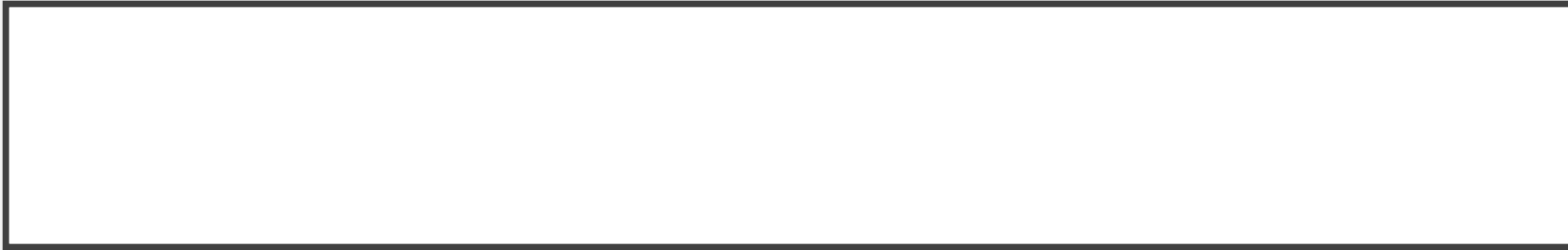
- During the political activism of the 1960s, there were cultural biases in traditional intelligence tests.
- Traditional tests assume that all the important aspects of intelligence are highly associated with one another.



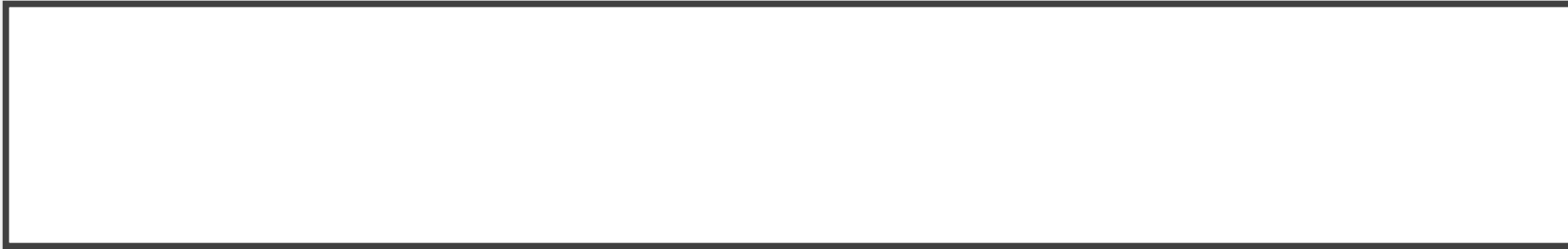
- Howard Gardner proposes that there are “multiple” intelligences, not necessarily related to one another.
- For example: logic, spacial and mathematical reasoning, language abilities, bodily movement skills, musical ability, sensitivity to other people, sensitivity to similarities and differences among non-human living things, ability to deal with the biological world, self-understanding, and self-control.



- The multiple intelligences approach is associated with more attention to cultural diversity.
- Everyone is intelligent in their own way.



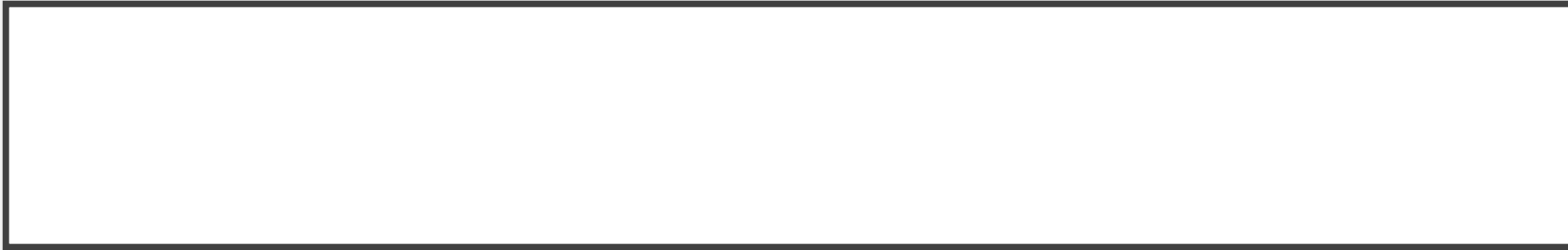
- Other types of Intelligence:
 - a) Emotional Intelligence – the ability to effectively regulate one's own emotions and interpret the emotions of other
 - b) Machiavellian Intelligence – strategies for manipulating others for personal gain, even at times against the other's self interest
 - c) Practical Intelligence – problem –solving common sense strategies that are not taught but are based on tacit knowledge



- The definition of intelligence is a controversial topic.
- In defense of traditional intelligence tests, it could be argued that such tests should be biased to reflect the culture of the world in which people have to work and compete.

AT WHAT AGE, IF EVER, DOES INTELLIGENCE BECOME FIXED?

- In England after World War II, there was an “eleven-plus test”. According to this test, the kinds of jobs people end up being trained to do will be determined by how they score on intelligence tests at the age of eleven.
- “Burt affair” underlines the strong and direct link between research on intelligence and political ideology and policy.



- Major types of Intelligence: Mathematical Intelligence, Verbal Intelligence, Fluid Intelligence, Crystallized Intelligence
- Traditional Intelligence Tests fail to reject how context impacts on the development of intelligence (“use it or lose it”).
- When teachers expect higher performance on the part of particular students, those particular students do perform better.

CONCLUSION

- Question – Do intelligence tests measure ability independent of past training?
- Answer – Intelligence test scores are very dependent on past experience.

THANK YOU