

Before we get started....

REIFICATION

Remember reification from the perception chapter? What was it?

- The addition of things which are not in the original image. We may even 'see' the details that are not really there.

Example:

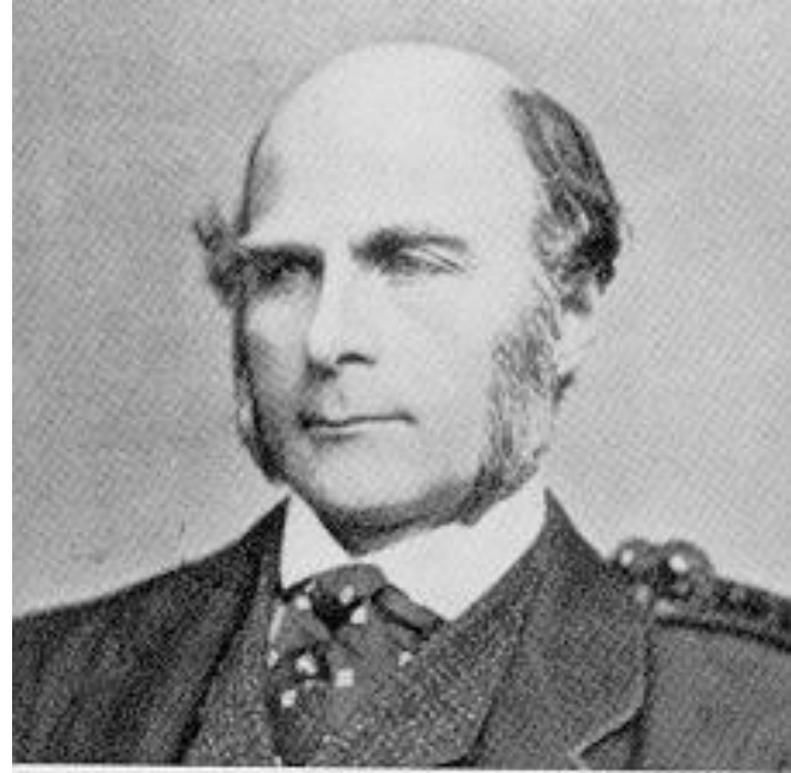
Reification occurs when *an abstract belief or concept is treated as if it was tangible or real.* (#concretetfallacy)

- Intelligence is an abstract "thing."
- We, however, talk about it as if it is concrete.
- "She has a lot of intelligence."
- or -
- "We are going to measure your intelligence." (As if we were going to measure your height or weigh your pancreas.)



Sir Francis Galton

- First to posit that intelligence could be quantified and measured objectively. (Reify intelligence)
- Cousin of Charles Darwin
- Posited that the size of a person's head related to intelligence
- Used the term "mental test"
- Elitist - sought to demonstrate the natural superiority of the high social class.

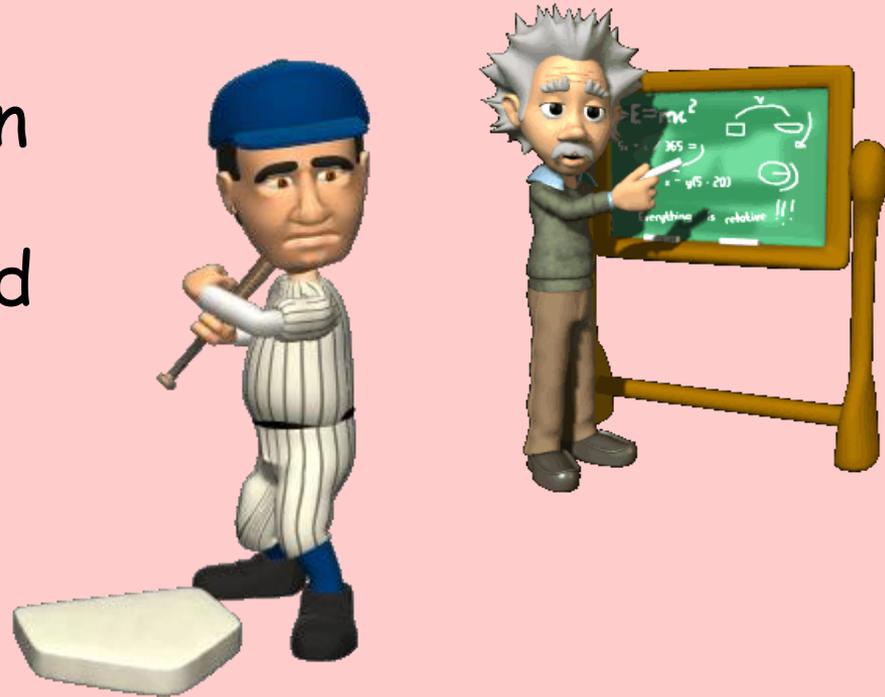


Sorry Francis, your ideas have been proven wrong on virtually ever count.



Intelligence

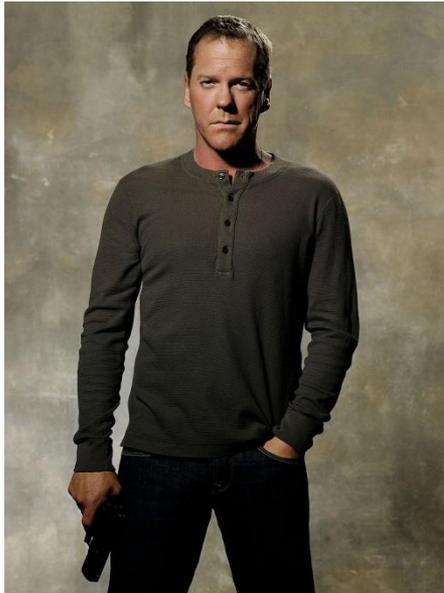
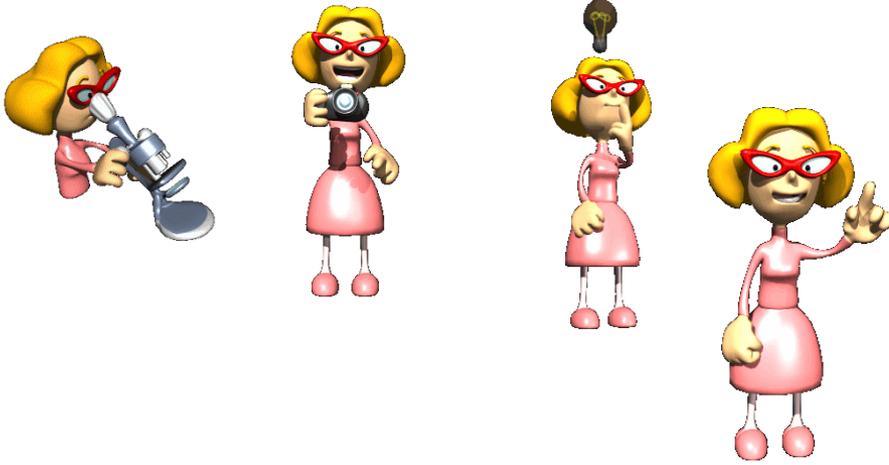
- The ability to learn from experience, solve problems, and use knowledge to adapt to new situations.
- Is socially constructed thus...
Can be culturally specific.



Controversies we will address:

1. Is intelligence a single overall ability or several specific abilities.
2. Can we locate and measure intelligence within the brain?

Charles Spearman and his *g* factor



Jack Bauer is good at torturing, bomb defusing, shooting, figuring out evil plots and saving the country (and he is good looking). Is there anything he cannot do?

- Used factor analysis and discovered that what we see as many different skills is actually one **General Intelligence (g)**.
- If you are good at one subject you are usually good at many others. (Clusters)

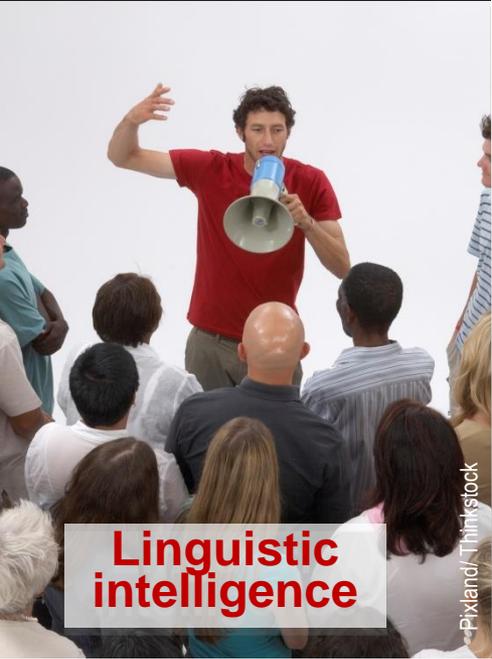
Kanazowa (2004) - novel or evolutionary familiar problems

- "g" evolved from a form of intelligence that helped solve novel problems.
- More common problems require a different type of intelligence.
- General intelligence scores DO correlate with ability to solve novel problems (academic and vocational situations.)
- Scores DO NOT correlate with evolutionary, common problems.

Multiple Intelligences

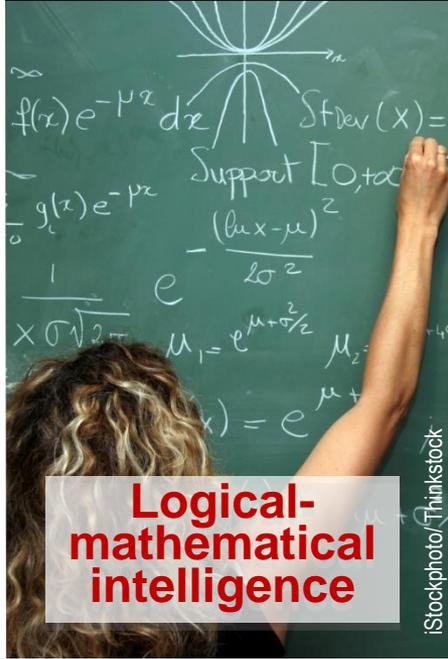


- Howard Gardner disagreed with Spearman's g and instead came up with the concept of multiple intelligences.
- He came up with the idea by studying savants (a condition where a person has limited mental ability but is exceptional in one area).



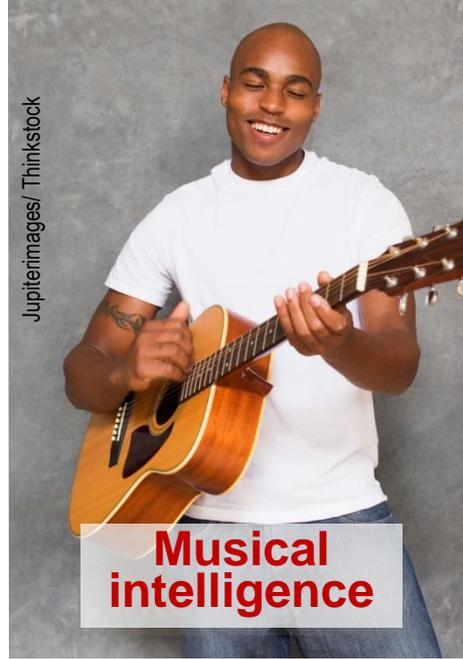
Linguistic intelligence

Pixland/Thinkstock



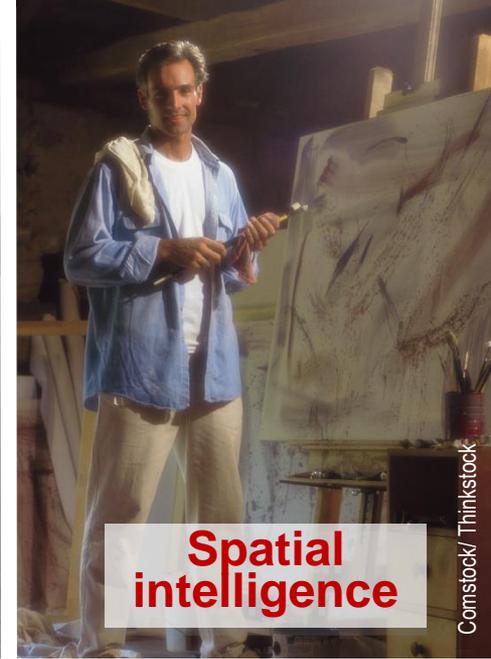
Logical-mathematical intelligence

iStockphoto/Thinkstock



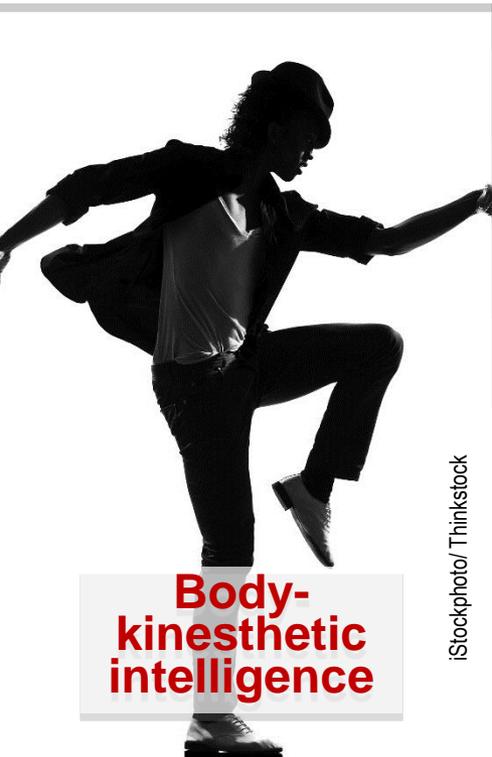
Musical intelligence

Jupiterimages/Thinkstock



Spatial intelligence

Comstock/Thinkstock



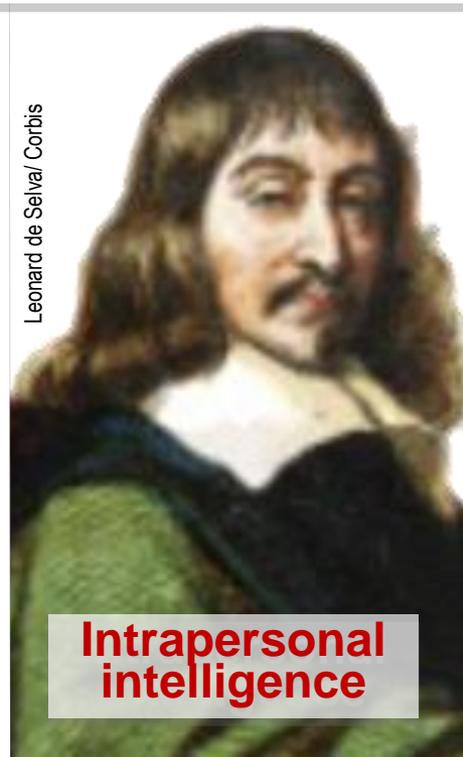
Body-kinesthetic intelligence

iStockphoto/Thinkstock



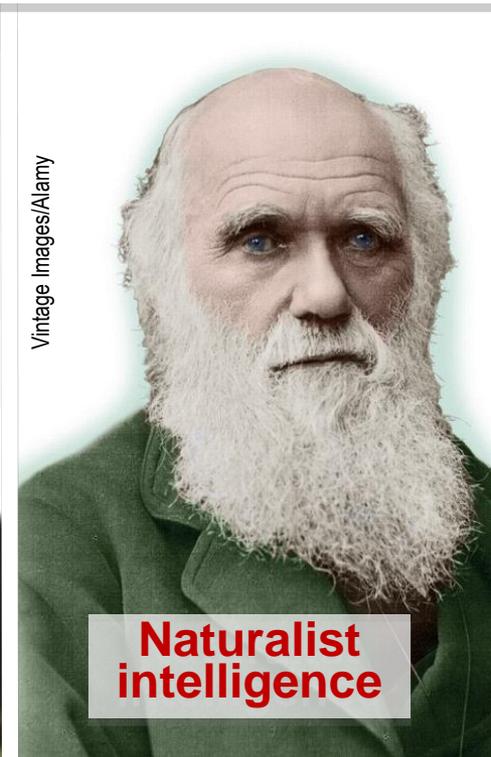
Interpersonal intelligence

iStockphoto/Thinkstock



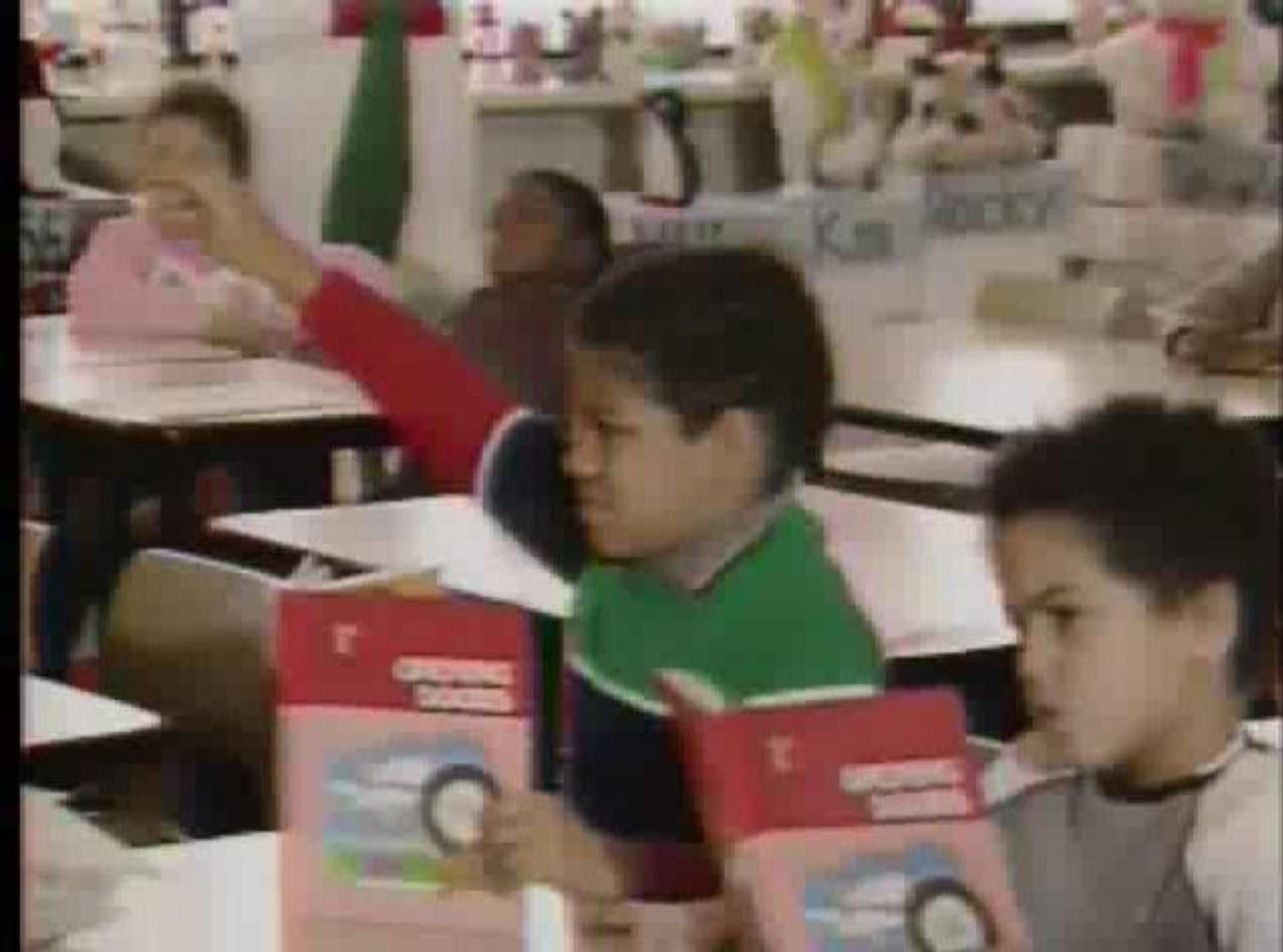
Intrapersonal intelligence

Leonard de Selva/Corbis



Naturalist intelligence

Vintage Images/Alamy



Savants

- Savant Syndrome: Individuals with remarkable, but rare talent, even though they are mentally deficient in other areas.
 - 4 in 5 are male, and many have autism
 - Skills are in many ways similar to experts without a disability



Excerpts from

Beautiful Minds
Voyage into the Brain

used with permission from
Colourfield Productions
Dortmund Germany

Savant Syndrome

Source:

UCLA Neuropsychiatric Institute
& Hospital

1. Patrick is a smoker. He doesn't believe that smoking increases his risk of developing cancer. He searches for evidence on the Internet and in books that supports this belief and ignores evidence that does not support his belief. Patrick is exhibiting
 - a. a mental set
 - b. Representativeness heuristic
 - c. confirmation bias
 - d. functional fixedness

2. The linguistic symbols and the order in which they are used within a sentence is referred to as
 - a. deep structure
 - b. semantics
 - c. surface structure
 - d. language

3. Human languages have a hierarchical structure. The smallest units of sound that are recognized as separate in a given language are called _____, while the smallest units of meaning in a language are called _____.

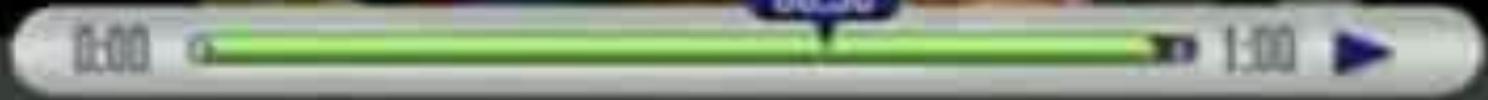
4. Which of the following is something that Kanazawa might say is an example of a “novel problem”?
 - a. stopping a fire from spreading
 - b. recognizing that a friend is feeling depressed
 - c. Spending within your budget on a shopping trip
 - d. Removing yourself from friends that are committing theft

- "The line between profound talent and profound disability is a thin one."

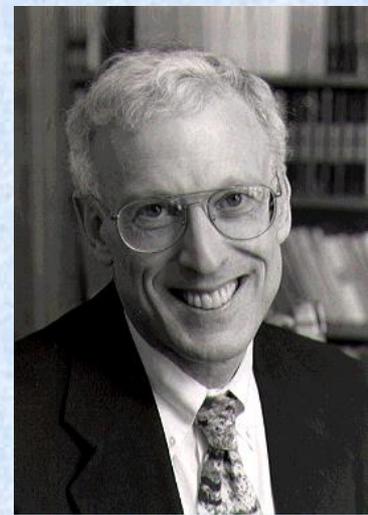
- Daniel Tammet, Savant



Use the information you have garnered through the powerpoint and videos to explain what Daniel Tammet means. Use details and examples to support your answer

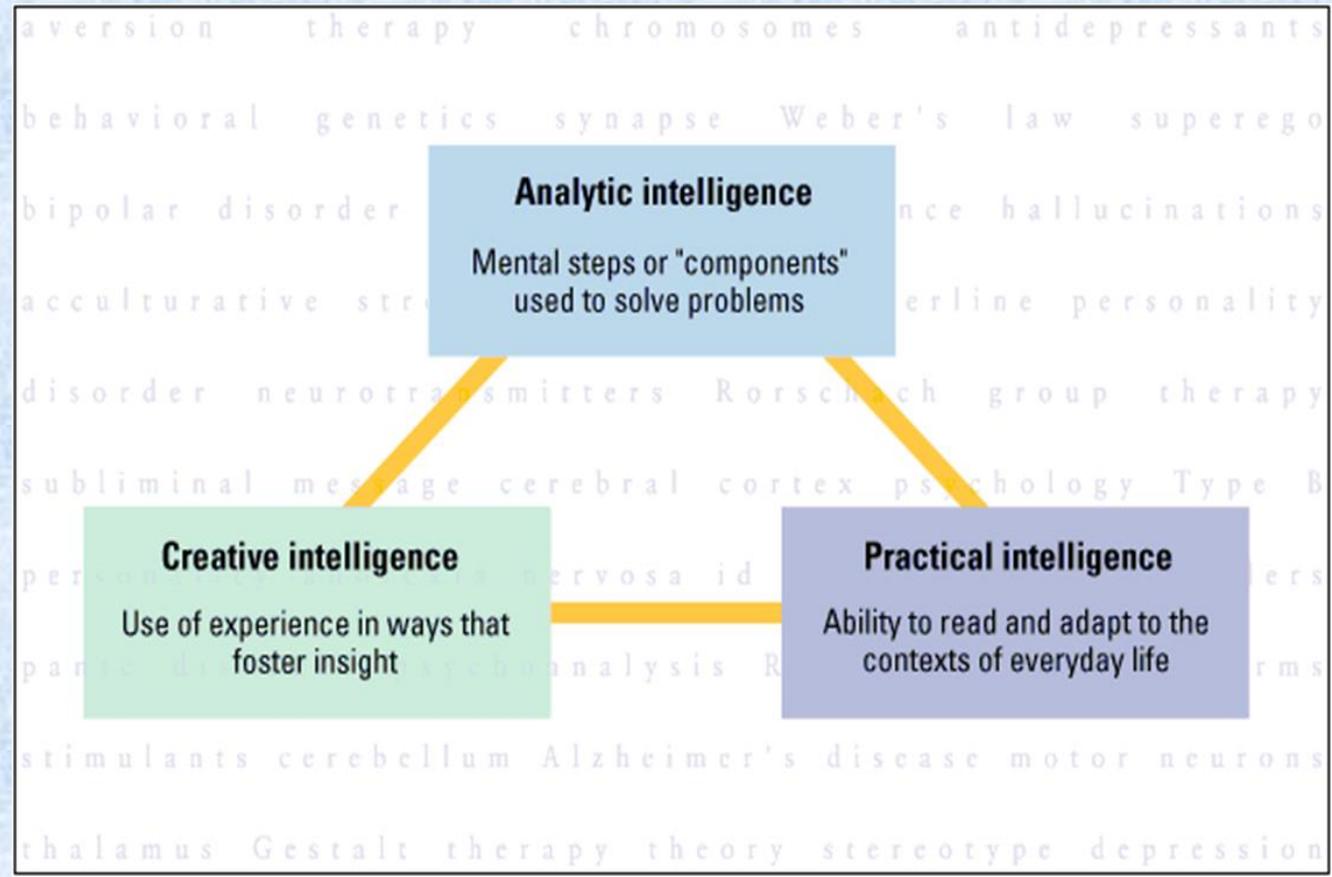


Sternberg's Three Aspects of Intelligence



Gardner Simplified

- **Analytical**
(academic problem solving).
- **Creative**
(generating novel ideas)
- **Practical**
(required for everyday tasks where multiple solutions exist).





To illustrate his different aspects of intelligence, Sternberg used three graduate students:

- *Alice is a good student, always getting good grades until she reached graduate school. Required to come up with original ideas, Alice began to fall behind.*
- *Barbara is not such a good student, but she's brimming over with ideas for research.*
- *Celia is neither a good nor a creative student, but she's street smart; she knows how to play the game—how to get things done.*