

Chapter 1: Introduction

51

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Copyright © 2024 Michael Diehr
All Rights Reserved
For use only by students enrolled
in my sections of Psyc 402
through the end of the semester.
May not be posted, shared or uploaded
online without permission.

52

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Basic Concepts

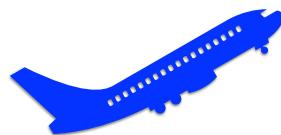
- What is a psychological test?
 - measurement device or technique
 - quantifies behavior
 - overt vs. covert
 - used to make predictions
 - (often) composed of individual items
 - (often) scored against normative data

53

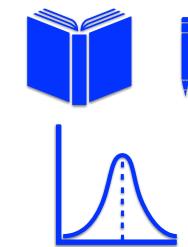
Psychology 402 - Fall 2024 - Dr. Michael Diehr

Why use tests?

Goal: measure Piloting Skills



Test Flight:
Does the pilot crash?



Paper & Pencil Test:
Highest Score?

54

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Why use tests?

- Why use tests? vs. the alternative -- just measure the thing directly
 - faster - saves time
 - more convenient, portable, virtual
 - standardize across space & time
 - less dangerous (e.g. brain surgeon)
 - more accurate(?)
 - \$\$\$\$ profit

55

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Arguments against testing

- UnReliable -- inconsistent results
- InValid -- doesn't measure what it claims
- Biased -- treats sub groups differently
- Enforced conformity -- punishes creativity
- People & Institutions adapt -- "study for the test", specialized tutoring
- Expensive -- few large private companies hold most of the business
- Privacy & Security & Cheating

56

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Test types: administration

- Types of tests:
 - Individually-administered Tests
 - Group-administered Tests
 - Computerized (?)

57

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Test types: domains

- Ability, Capacity or Potential
- **Achievement**
 - learned skills or knowledge in specific area
- **Aptitude**
 - ability to learn new skills / knowledge in specific area
- **Intelligence**
 - general ability

58

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Test types: Personality

- Personality
 - Structured (“Objective”)
 - Unstructured (“Projective”)

59

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Test types: more domains

- Military & Civil Service
- Vocational Counseling
- Industry / Business
- Clinical Psychology / Psychiatry
- Health Psychology
- Neuropsychology
- Research

60

Psychology 402 - Fall 2024 - Dr. Michael Diehr

History - Antiquity

- Han Dynasty (206 BCE thru 220 CE) had test batteries for law, military, agriculture, geography, etc.
- The “Imperial Examination”
- *Standardized* (but not *Psychological*)
- In mid 1800s, British contact with China led to UK developing similar testing
- Spreads to USA in late 1800s.

61

Psychology 402 - Fall 2024 - Dr. Michael Diehr

History : China

Gold, silver, brass & iron

“Citizens, we shall say to them in our tale, you are brothers, yet God has framed you differently. Some of you have the power of command, and in the composition of these he has mingled gold, wherefore also they have the greatest honor; others he has made of silver, to be auxiliaries; others again who are to be husbandmen and craftsmen he has composed of brass and iron; and the species will generally be preserved in the children. But as all are of the same original stock, a golden parent will sometimes have a silver son, or a silver parent a golden son.”

-- Plato, *The Republic*, circa 380 BC

65

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Ch. 1 - Part 2

History : 18th - 19th Century

- The zeitgeist : colonialism, independence, contact between new races & ethnicities. Slavery.
- The needs: justify slavery, inequality.
- The techniques: very crude statistics, physical measurements
- Evolution vs. Creationism

78

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Racial Attitudes of the 1800s

“[...]There is a physical difference between the white and black races which I believe will forever forbid the two races living together on terms of social and political equality. And inasmuch as they cannot so live, while they do remain together there must be the position of superior and inferior, and I as much as any other man am in favor of having the superior position assigned to the white race.”

-- 1858, in a debate with Stephen Douglas
Abraham Lincoln

79

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Louis Agassiz

- Swiss-born, European-trained biologist / geologist
- Came to Harvard in 1847
- Creationist -> Polygenist
- Taxonomist
- Resisted Darwin's theory of Evolution
- d. 1873



83

Psychology 402 - Fall 2024 - Dr. Michael Diehr

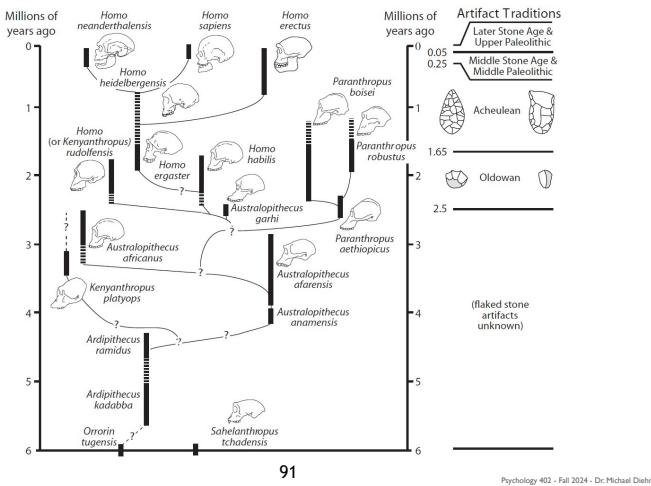
Dichotomous variables

- True/False
- Black/White
- Smart/Dumb
- ...
- Simple vs. Simplistic

89

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Taxonomy



Species

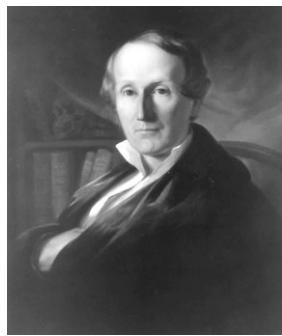
- Old definition:
 - group of organisms that can breed
- Modern definition:
 - “Species are actual or potential interbreeding populations sharing common gene pool, reproductively isolated from other groups.”
- Example:
 - male donkey + female horse = mule (sterile)
 - female donkey + male horse = hinny

92

Psychology 402 - Fall 2024 - Dr. Michael Dierh

Samuel George Morton

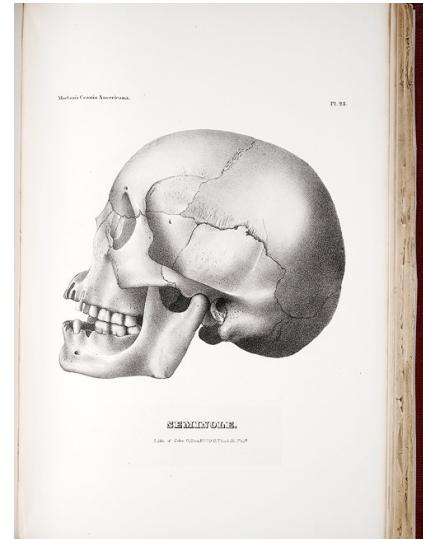
- Theory of Polygenism
 - Humans are composed of different species, created by god
- Craniometry
- Biological Determinism
- “Scientific Racism”
- The “American School”
- d. 1851



94

Psychology 402 - Fall 2024 - Dr. Michael Dierh

Crania Americana



Visible differences?

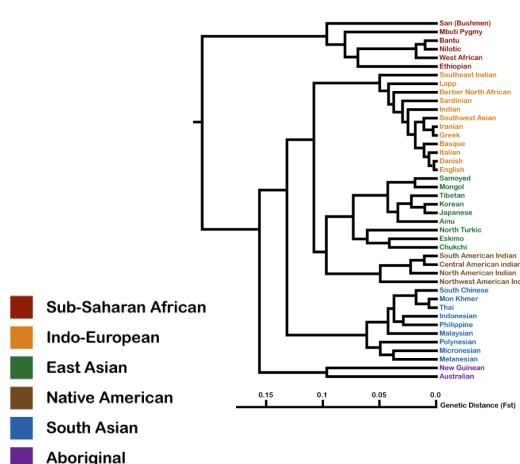
Indigenous
Australian
Melanesia
African
European



98

Psychology 402 - Fall 2024 - Dr. Michael Dierh

Genetic Differences

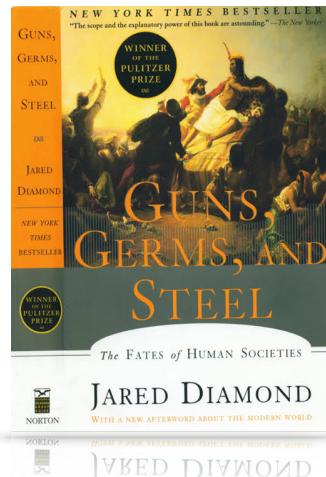


Psychology 402 - Fall 2024 - Dr. Michael Dierh

99

100 Why did Europeans conquer many native peoples instead of vice-versa?

- Guns
- Germs
- Steel



Psychology 402 - Fall 2024 - Dr. Michael Diehr

Early 20th century

- Notable events in history:
 - Binet-Simon Scale
 - introduced idea of IQ as ratio of mental age to actual age
 - use of standardization sample
 - Army tests -- WWI
 - Alpha -- literate
 - Beta -- illiterate

105

Psychology 402 - Fall 2024 - Dr. Michael Diehr

History : 19th - 20th Century

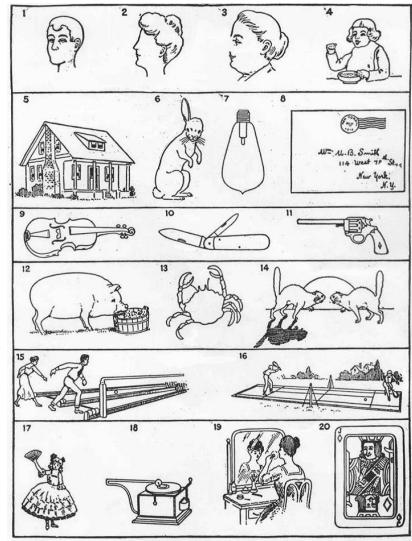
- The zeitgeist : Industrialism, world conflict, communism, capitalism
- The needs: healthcare, war, government -- desire to identify unusually high & low functioning people
- The techniques: Advanced statistics, measurement theory
- Theories of psychological development, intelligence, genetics.
- Early IQ tests (group and individual)

104

Psychology 402 - Fall 2024 - Dr. Michael Diehr

106

Test 6 from the Army Beta (1918 IQ test)



Psychology 402 - Fall 2024 - Dr. Michael Diehr

History: IQ tests

- Charles Spearman : "g" -- theory of general intelligence factor underlying all other special abilities.
- David Wechsler: WAIS and WISC tests
 - Subtests - Verbal vs. Performance Scales
 - Large normative group -- IQ = performance as related to peers
- Thurstone, Cattell, Gardner, others: further theories of intelligence (covered later)

107

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Summary

- History of testing... "A long past but a short history"
- America as newly independent colony
 - → independent science
- Slavery
- Theories of human development
 - Creationism (mono / poly-genism)
 - Evolution
 - Species
- Scientific Racism

109

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Freudian Defense Mechanisms

- Level 1 - Pathological
 - Denial, Distortion, Splitting
- Level 2 - Immature
 - Acting out, Fantasy, Idealization, Passive aggression, Projection, Somatization
- Level 3 - Neurotic
 - Displacement, Dissociation, Hypochondriasis, Intellectualization, Rationalization, Reaction Formation, Regression, Repression, Undoing
- Level 4 - Mature
 - Altruism, Anticipation, Humor, Identification, Introjection, Sublimation, thought suppression

111

Psychology 402 - Fall 2024 - Dr. Michael Diehr

History: Personality Tests

- Traits vs. States
- Structured / “objective”:
 - WPDS (early)
 - MMPI, CPI (modern)
 - 16PF (modern, based on factor analysis)
 - NEO (NEO-FFI: NEOAC aka OCEAN)
- Unstructured / “projective”:
 - Rorschach (inkblot test)
 - TAT (Thematic Apperception Test)

112

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Structured Tests: Criticism

- “Correct” answers are obvious
- lack of psychological theory?
- → Structured tests: improved designs (MMPI)
- → Projective testing: new theory

	Yes	No
1. I wet the bed.	<input type="checkbox"/>	<input type="checkbox"/>
2. I drink a quart of whiskey each day.	<input type="checkbox"/>	<input type="checkbox"/>
3. I am afraid of closed spaces.	<input type="checkbox"/>	<input type="checkbox"/>
4. I believe I am being followed.	<input type="checkbox"/>	<input type="checkbox"/>
5. People are out to get me.	<input type="checkbox"/>	<input type="checkbox"/>
6. Sometimes I see or hear things that other people do not hear or see.	<input type="checkbox"/>	<input type="checkbox"/>

Psychology 402 - Fall 2024 - Dr. Michael Diehr

MMPI

1. I like mechanics magazines
2. I have a good appetite
3. I wake up fresh & rested most mornings
4. I think I would like the work of a librarian
5. I am easily awakened by noise
6. I like to read newspaper articles on crime
7. My hands and feet are usually warm enough
8. My daily life is full of things that keep me interested
9. I am about as able to work as I ever was
10. There seems to be a lump in my throat much of the time

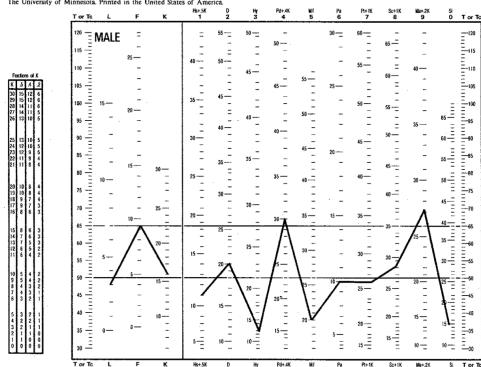
114

Psychology 402 - Fall 2024 - Dr. Michael Diehr

MMPI-2

Minnesota Multiphasic Personality Inventory-2
S. R. Hathaway and J. C. McKinley
Copyright © by THE REGENTS OF THE UNIVERSITY OF MINNESOTA
1943, 1943 (renewed 1970), 1989. This Profile Form 1989
All rights reserved. MMPI-2 is a trademark of NATIONAL COMPUTER SYSTEMS, INC.
under license from The University of Minnesota.

*MMPI-2 and *Minnesota Multiphasic Personality Inventory-2 are trademarks owned by
The University of Minnesota. Profile is the United States of America.



115

Psychology 402 - Fall 2024 - Dr. Michael Diehr

116

TAT



Psychology 402 - Fall 2024 - Dr. Michael Diehr

Rorschach 1



117

Psychology 402 - Fall 2024 - Dr. Michael Diehr

MMoM - Themes

- Biological Determinism - a theory of limits
- Measuring intelligence as a single quantity...
- Plato: dialectic. Church: dogma. Now: science.
- “Book is about the scientific version of Plato’s tale”
- “Socrates knew that he was telling a lie”
- Science (and scientists) are not objective
 - social endeavor
 - fraud, but also (and worse) unconscious bias

118

Psychology 402 - Fall 2024 - Dr. Michael Diehr

MMoM - Fallacies

- Reification
 - naming a thing gives it disproportionate power
- Ranking
 - over-simplifying complexity by ordering on a single scale

119

Psychology 402 - Fall 2024 - Dr. Michael Diehr