Individual Differences

PSY 395

Why are they important?
- People react differently in the same situation
  - To understand differences in behavior, must understand individual differences
- People react differently to experimental manipulations
  - Example: Finding a dime as a mood manipulation

Outline
- Intelligence
- Vocational/Career Interests
- Personality/Motivation
Intelligence

All of the “Experts”

- Problem-solving
- Expert reasoning
- The capacity to acquire knowledge


Theories of Intelligence

- **Psychometric approach** - Intelligence is defined by tests
- **Multiple intelligences** - intelligence defined very broadly (H. Gardner)
- **Practical intelligence or tacit knowledge** (R. Sternberg)
- **Developmental approach** (Piaget)
- **Biological approach** - brain imaging studies, broad vs. specialized brain areas, hemisphericity

Intelligence

- Distribution of Intelligence
  - Fluid intelligence peaks around age 22 and declines across the lifespan
  - Positive manifold across ability tests
  - Scores on intelligence are rising quickly over time - Flynn Effect
  - Gravitation Hypothesis
Psychometric Approach: 
Hierarchy of Intellectual Abilities

- **General Intelligence, G**
  - Fluid Intelligence, Gf
    - Working Memory (words, numbers)
    - Spatial Ability
    - e.g., Raven’s
  - Crystallized Intelligence, Gc
    - General/Verbal Ability (knowledge)
    - e.g., WAIS

Multiple Intelligences - Gardner

- Howard Gardner, modern-day splitter
- *Multiple Intelligences Theory* posits 7 components (linguistic, musical, logical, spatial, body-kinesthetic, interpersonal, intrapersonal)
- Traditional intelligence tests don’t cover all 7; implications for tests and for education
- Criticized for calling everything intelligence

Sternberg
Practical Intelligence

*Practical intelligence* - sizes up situations well, plans ahead to achieve goals, is aware of and interested in the world around him/her (a.k.a. tacit knowledge) - practical orientation (response to situations)
Vocational/Career Interests

- Holland model of interests is most common (RIASEC)

- **Realistic** - People who have athletic or mechanical ability, prefer to work with objects, machines, tools, plants or animals, or to be outdoors.

- **Investigative** - People who like to observe, learn, investigate, analyze, evaluate or solve problems.

- **Artistic** - People who have artistic, innovating or intuitive abilities and like to work in unstructured situations using their imagination and creativity.

Interests

- **Social** - People who like to work with people to enlighten, inform, help, train, or cure them, or are skilled with words.

- **Enterprising** - People who like to work with people, influencing, persuading, performing, leading or managing for organizational goals or economic gain.

- **Conventional** - People who like to work with data, have clerical or numerical ability, carry out tasks in detail or follow through on others' instructions.

Holland’s Hexagon

- Hexagon shows which constructs are most closely related:
  - Conventional and Artistic are opposites
  - Investigative and Artistic are similar
  - Social and Conventional are nearby

- Often used for career or vocational counseling: RIASEC
Dimensions of the Hexagon

Prediger: Data(CE)/Ideas(IA) & People(S)/Things(R)

Dimensions of the Hexagon

Hogan: Conformity (C vs. A) & Sociability (ES vs. RI)

What is personality?: States vs. Traits

1. TRAITS
2. (MID-LEVEL TRAITS)
3. STATES

...when does a state become a trait?
Big Five and the Lexical Hypothesis

More words in the lexicon for a personality trait → more important in describing others

Sample words from the dictionary
Rate oneself or other people on these words

Factor analyze the data - factors will contain words that are similar within, and distinct from other factors

Personality (Big 5 Traits)

<table>
<thead>
<tr>
<th>Characteristics of High Scorers</th>
<th>Nature of Factor</th>
<th>Characteristics of Low Scorers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism (N)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>worrying, insecure, emotional, nervous</td>
<td>Prone to psychological distress, excessive carvings or urges, unrealistic ideas</td>
<td>calm, secure, unmotional, relaxed</td>
</tr>
<tr>
<td>Extraversion (E)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>talkative, optimistic, sociable, affectionate</td>
<td>Capacity for joy, need for stimulation</td>
<td>Unartistic, conventional</td>
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Personality (Big 5)

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<td>Openness (O)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>creative, original, curious, imaginative</td>
<td>Tolerance for &amp; exploration of the unfamiliar</td>
<td>Un-artistic, conventional</td>
</tr>
<tr>
<td>Agreeableness (A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>good-natured, trusting, helpful</td>
<td>One's orientation along a continuum from compassion to antagonism in thoughts, feelings, and actions</td>
<td>rude, uncooperative, irritable</td>
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<td>Conscientiousness (C)</td>
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<td></td>
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<tr>
<td>organized, reliable, neat, ambitious</td>
<td>Individual has degree of organization, persistence, and motivation in goal-directed behavior</td>
<td>unreliable, lazy, careless, negligent</td>
</tr>
</tbody>
</table>

Personality and Employment Testing

- What personality constructs are useful for prediction?
  Shift in U.S. work: (a) service-oriented, (b) teamwork-oriented
- Private/Intrapersonal (conscientiousness)
- Public/Interpersonal (extraversion, customer-service orientation, teamwork)

Curvilinear Relationships?

- Consider anxiety and conscientiousness, for example
- Maybe there's a curvilinear relationship with certain outcomes like job performance:

  ![Graph](image)

  A 'middle' amount may be better than being too low or too high on the construct