Some early personality taxonomies

William Revelle, September 22, 2021
Early Personality Research

I. Gideon
II. Plato
III. Theophrastus
IV. Hippocrates/Galen
V. Galton/Wundt/Heymans
Gideon, master methodologist

I. introduced the within subjects design
II. recognized the power of cross over interactions
III. was not afraid of asking hard questions
Gideon's tests for God are an early example of a double dissociation and probably the first published example of a cross over interaction. On the first night, the wool was wet but the floor was dry. On the second night, the floor was wet but the wool was dry (Judges 6:36-40)
Gideon and assessment

I. The problem: 32,000 volunteers were too many for purpose

II. Solution: Sequential Affective and Cognitive Assessment

A) 10,000 passed the affective test (step back if you are afraid)

B) 300 passed the cognitive assessment (lapping water like a dog showing battlefield skill)
Gideon’s assessment technique
Plato’s contribution to psychometrics and personality assessment
Plato’s contribution to psychometrics and assessment

I. True Score theory

II. The Allegory of the Cave and latent variable analysis

III. The Republic: leadership effectiveness and the Giant 3: the role of intelligence, anxiety and impulsivity
Plato and latent variables: The allegory of the cave

Suppose that there is a group of human beings who have lived their entire lives trapped in a subterranean chamber lit by a large fire behind them. Chained in place, these cave-dwellers can see nothing but shadows (of their own bodies and of other things) projected on a flat wall in front of them. Some of these people will be content to do no more than notice the play of light and shadow, while the more clever among them will become highly skilled observers of the patterns that most regularly occur. In both cases, however, they cannot truly comprehend what they see, since they are prevented from grasping its true source and nature. (Republic 514a)
Plato and leadership

“... quick intelligence, memory, sagacity, cleverness, and similar qualities, do not often grow together, and that persons who possess them and are at the same time high-spirited and magnanimous are not so constituted by nature as to live orderly and in a peaceful and settled manner; they are driven any way by their impulses, and all solid principle goes out of them.

On the other hand, those steadfast natures which can better be depended upon, which in a battle are impregnable to fear and immovable, are equally immovable when there is anything to be learned; they are always in a torpid state, and are apt to yawn and go to sleep over any intellectual toil.

And yet we were saying that both qualities were necessary in those to whom the higher education is to be imparted, and who are to share in any office or command.

And will they be a class which is rarely found?

Then the aspirant must not only be tested in those labours and dangers and pleasures which we mentioned before, but there is another kind of probation which we did not mention--he must be exercised also in many kinds of knowledge, to see whether the soul will be able to endure the highest of all, or will faint under them, as in any other studies and exercises.”
Tyrtamus of Lesbos (Theophrastus) biological taxonomist and taxonomist of character
Theophrastus: behavior genetics and taxonomic theory

“Often before now have I applied my thoughts to the puzzling question -- one, probably, which will puzzle me for ever -- why it is that, while all Greece lies under the same sky and all the Greeks are educated alike, it has befallen us to have characters so variously constituted.”
Theophrastus, Chaucer and personality taxonomy

I. Theophrastus and the characters
II. Chaucer and the Canterbury Tales
Theophrastus meets Goldberg

<table>
<thead>
<tr>
<th>Extraversion</th>
<th>Agreeableness</th>
<th>Conscientious</th>
<th>Neuroticism</th>
<th>Openness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talkative</td>
<td>Sympathetic</td>
<td>Organized</td>
<td>Tense</td>
<td>Wide Interests</td>
</tr>
<tr>
<td>Assertive</td>
<td>Kind</td>
<td>Thorough</td>
<td>Anxious</td>
<td>Imaginative</td>
</tr>
<tr>
<td>Active</td>
<td>Appreciative</td>
<td>Planful</td>
<td>Nervous</td>
<td>Intelligent</td>
</tr>
<tr>
<td>Energetic</td>
<td>Affectionate</td>
<td>Efficient</td>
<td>Moody</td>
<td>Original</td>
</tr>
<tr>
<td>-Quiet</td>
<td>-Cold</td>
<td>-Careless</td>
<td>-Stable</td>
<td>-Commonplace</td>
</tr>
<tr>
<td>-Reserved</td>
<td>-Unfriendly</td>
<td>-Disorderly</td>
<td>-Calm</td>
<td>-Simple</td>
</tr>
<tr>
<td>Talker</td>
<td>Anxious to please</td>
<td>-Hostile</td>
<td>Coward</td>
<td>-Stupid</td>
</tr>
<tr>
<td>Chatty</td>
<td>Flatterer</td>
<td>-Shameless</td>
<td>Grumbler</td>
<td>-Superstitious</td>
</tr>
<tr>
<td>Boastful</td>
<td>-Unpleasant</td>
<td>-Distrustful</td>
<td>Mean</td>
<td>-Boor</td>
</tr>
<tr>
<td>Arrogant</td>
<td>-Outcast</td>
<td>-Avaricious</td>
<td>Unseasonable</td>
<td>-Gross</td>
</tr>
</tbody>
</table>

Goldberg, L. (1990); John, O. (1990); Theophrastus (372-287 BCE)
The biological basis of individual differences

I. Plato and the 3 domains of psychological research
   A) Reason and the brain
   B) Emotion and the heart
   C) Desire and the liver

II. Hippocrates/Galen and theories of temperament
Galen of Pergamum
4 temperaments of Galen/Kant—a recurring taxonomy

<table>
<thead>
<tr>
<th>&quot;element&quot;</th>
<th>Physiological basis</th>
<th>Temperament</th>
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<tbody>
<tr>
<td>Fire</td>
<td>Yellow Bile</td>
<td>Choleric</td>
</tr>
<tr>
<td>Water</td>
<td>Phlegm</td>
<td>Phlegmatic</td>
</tr>
<tr>
<td>Air</td>
<td>Blood</td>
<td>Sanguine</td>
</tr>
<tr>
<td>Earth</td>
<td>Black Bile</td>
<td>Melancholic</td>
</tr>
</tbody>
</table>
Multiple representations of the 4 temperaments
Astrology and the four temperaments

Dry  Hot
Wet  Cold

Season

Autumn  Summer  Winter  Spring

Temperament
Humour
Element
Humour

Phlegmatic  Phlegm  Water  Earth
Sanguine  Blood  Air  Fire

Yellow Bile  Black Bile
Interest in the 4 temperaments continues today (c.f. wiki)
Wundt’s dimensional analysis

<table>
<thead>
<tr>
<th>Exciteability</th>
<th>Changeability</th>
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<tr>
<td>Melancholic</td>
<td>Choleric</td>
</tr>
<tr>
<td>Phlegmatic</td>
<td>Sanguine</td>
</tr>
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</table>
Eysenck’s dimensional organization

Melancholic  Choleric

Phlegmatic  Sanguine
Individual differences come of age:
Measurement and experiments

I. Francis Galton and regression
II. Wilhelm Wundt and experimental methods
Francis Galton
1822-1911

- Study of Hereditary Genius
- Regression
- Individual Differences
Galton and Regression
Galton and Regression

**Diagram Based on Table 1**

(all female heights are multiplied by 108)

<table>
<thead>
<tr>
<th>MID-PIRANTS</th>
<th>ADULT CHILDREN</th>
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<tbody>
<tr>
<td>Heights in inches</td>
<td>66</td>
</tr>
<tr>
<td>Deviates in inches</td>
<td>-4</td>
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**Fig. (a)**

Axis of Ellipse
Wilhelm Wundt 1832-1920

- Basic Experimental Paradigm
- 3 factor theory of emotion
- Hedonic theory
Gerard Heymans (1857-1930)

- Empirically based research
- 3 dimensions of personality
Gerard Heymans (1857-1930)

- Empirically based research
  - 3000 (Dutch) doctors were asked to rate all members of a family on a large number of traits
  - ≈ 400 responded with ratings on 2,523 subjects

- Three dimensions
  - Emotionality or Emotional Instability
  - Activity or general drive
  - Dominance of primary or secondary functioning
Heymanstaxonomy
(fromEysenck1992)

<table>
<thead>
<tr>
<th></th>
<th>Emotionality</th>
<th>Activity</th>
<th>P/S</th>
<th>Jung</th>
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<tbody>
<tr>
<td>Apathetic</td>
<td>-</td>
<td>-</td>
<td>S</td>
<td>Sensitive</td>
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<tr>
<td>Amorphous</td>
<td>-</td>
<td>-</td>
<td>P</td>
<td>Intuitive</td>
</tr>
<tr>
<td>Phlegmatic</td>
<td>-</td>
<td>+</td>
<td>S</td>
<td>Intuitive</td>
</tr>
<tr>
<td>Sanguine</td>
<td>-</td>
<td>+</td>
<td>P</td>
<td>Sensitive</td>
</tr>
<tr>
<td>Passionate</td>
<td>+</td>
<td>+</td>
<td>S</td>
<td>Thinking</td>
</tr>
<tr>
<td>Choleric</td>
<td>+</td>
<td>+</td>
<td>P</td>
<td>Feeling</td>
</tr>
<tr>
<td>Sentimental</td>
<td>+</td>
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<td>Feeling</td>
</tr>
<tr>
<td>Nervous</td>
<td>+</td>
<td>-</td>
<td>P</td>
<td>Thinking</td>
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Mid - late 20th Century
Measurement and theory testing

I. John Atkinson
II. Donald Broadbent
III. Raymond Cattell
IV. Hans Eysenck
V. Jeffrey Gray
John Atkinson
1924-2003

I. Theory of Achievement Motivation
   A) Individual differences and general laws
   B) Theory testing through experimentation

II. Theory of the Dynamics of Action
   C) Inertial properties of motivations and desires
   D) Introduced the concept of personality traits as rates of change in psychological states
Donald E. Broadbent
1926-1993

I. Cognitive experiments showed individual differences interacting with situational determinants of attention and performance

II. Experimental work on arousal theory inspired work by Eysenck and others
Raymond Cattell
1905-1998

Founding President: Society for Multivariate Experimental Psychology

• Primarily multivariate, little “experimental”
Hans J. Eysenck
1916-1997
Founding President: International Society for the Study of Individual Differences
Cronbach, Eysenck and the two disciplines of scientific psychology

I. Cronbach (1957, 1975) and Eysenck (1966, 1983, 1997) argued for the unification of the two disciplines of experimental and correlational approaches

II. Is it possible?

III. Are we doing it?
Is it possible to do Experimental Personality?

I. Individuals can not be assigned to personality conditions

II. Experimental designs test person x condition interactions

III. Can combine general laws with theories of individual differences
Few studies with experimental techniques or that study IQ are reported in our journals

<table>
<thead>
<tr>
<th>Journal</th>
<th>Total</th>
<th>Exper.</th>
<th>IQ</th>
<th>Exp%</th>
<th>IQ%</th>
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<tbody>
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