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

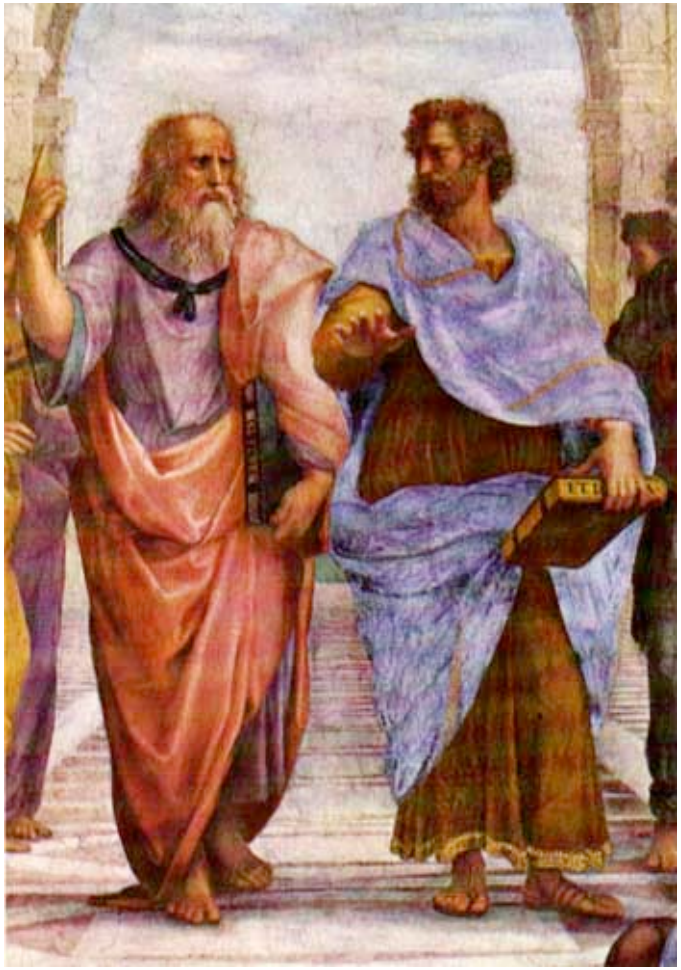
I. The problem: 32,000 volunteers were too many for purpose

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

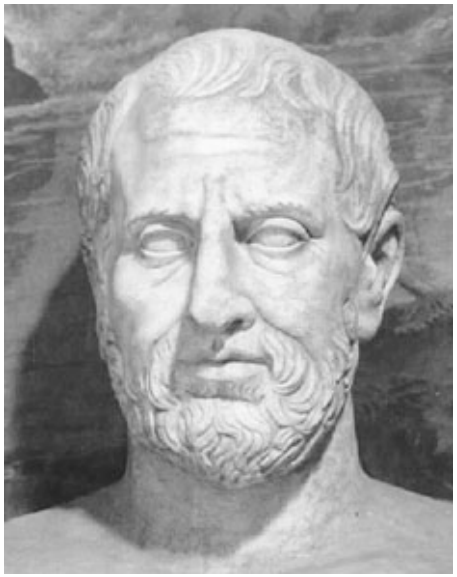
"... quick **intelligence**, **memory**, sagacity, **cleverness**, and similar qualities, do not often grow together, and that persons who possess them and are at the same time high-spirited and magnanimous are not so constituted by nature as to live orderly and in a peaceful and settled manner; they 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 Cantebury Tales

Theophrastus meets Goldberg

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

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

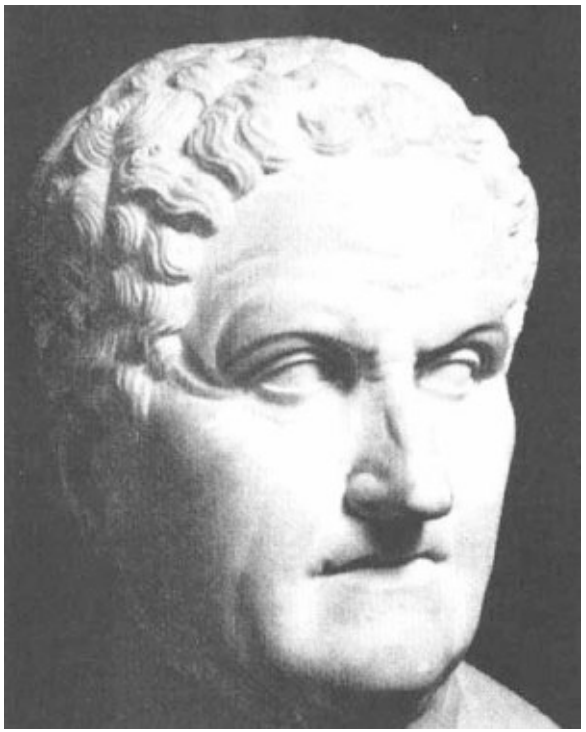
A) Reason and the brain

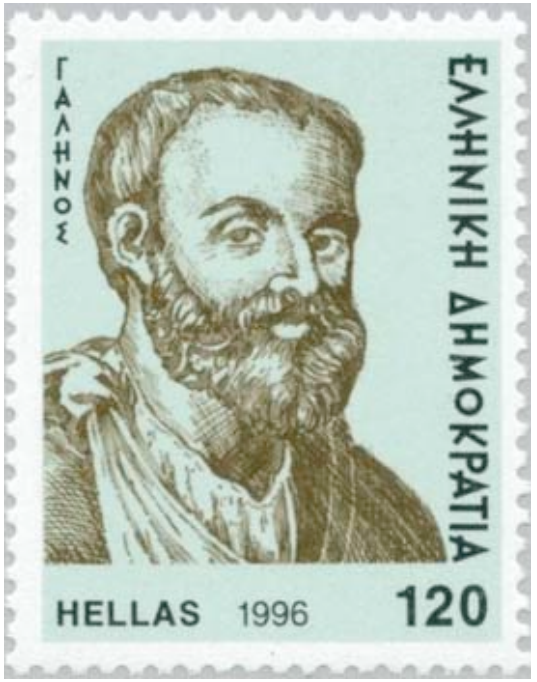
B) Emotion and the heart

C) Desire and the liver

II. Hippocrates/Galen and theories of temperament

Galen of Pergamum

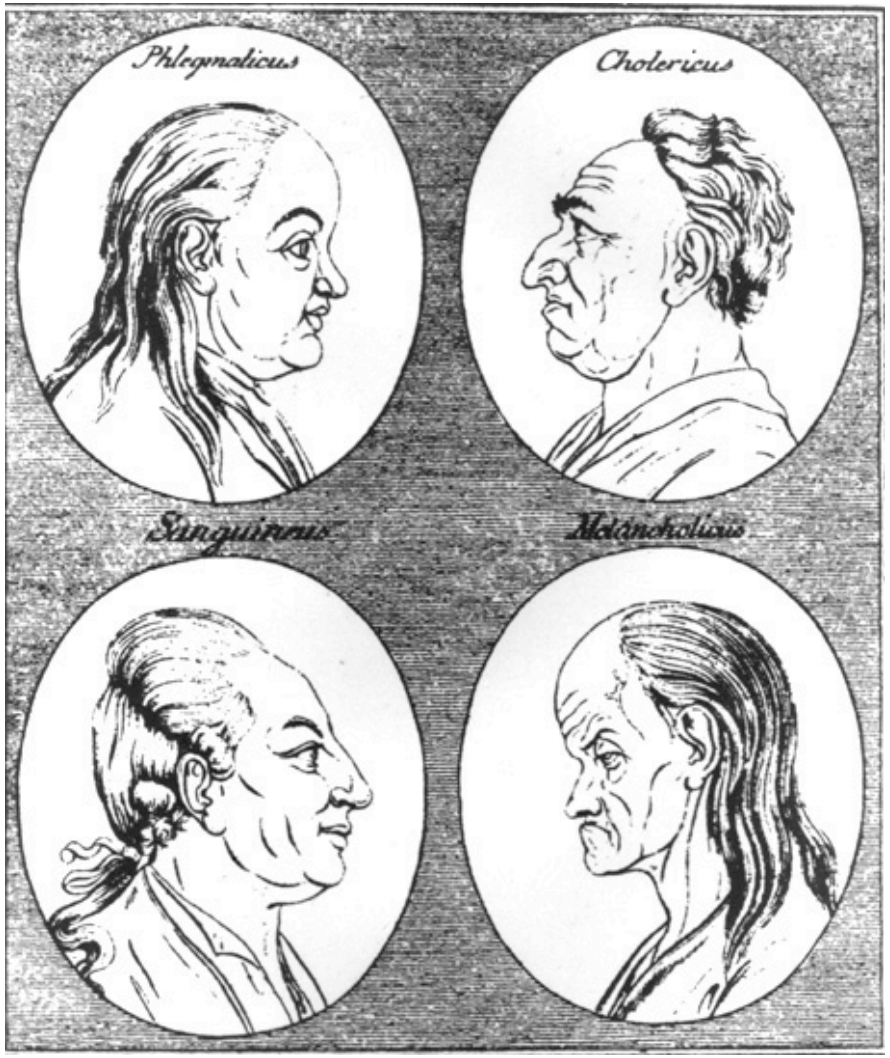


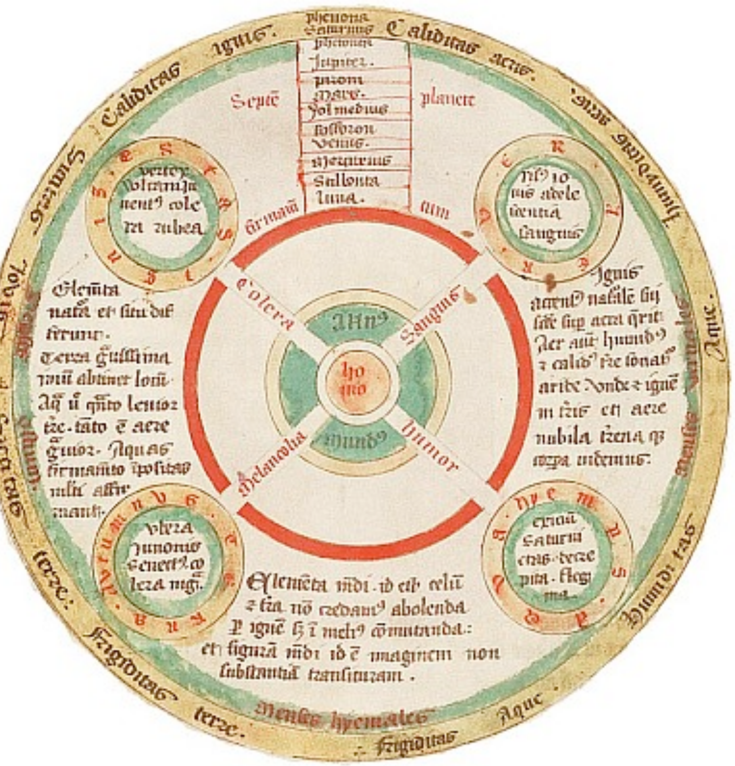


4 temperaments of Galen/Kant
a recurring taxonomy

"element"	Physiological basis	Temperament
Fire	Yellow Bile	Choleric
Water	Phlegm	Phlegmatic
Air	Blood	Sanguine
Earth	Black Bile	Melancholic

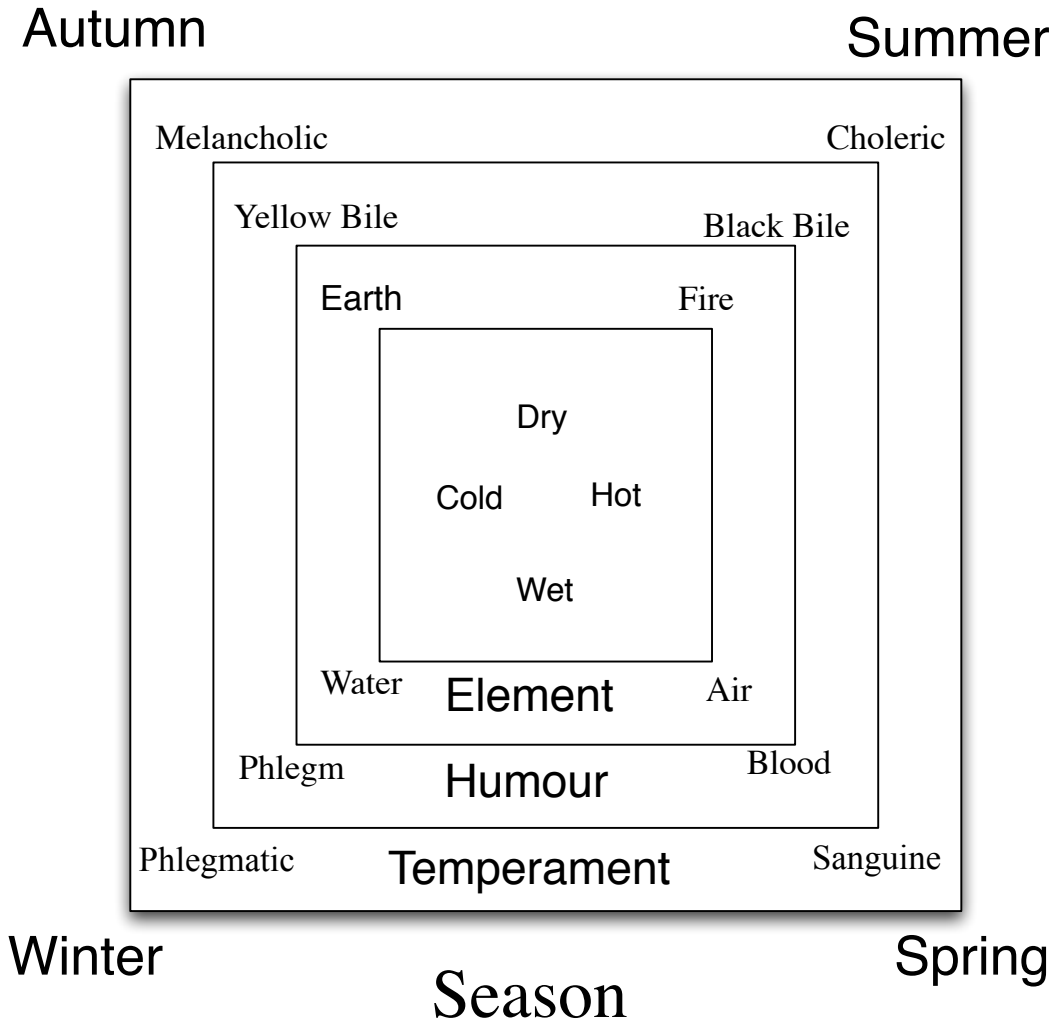
Multiple representations of the 4 temperaments


Phlegmaticus
Cholericus
Sanguineus
Melancholicus

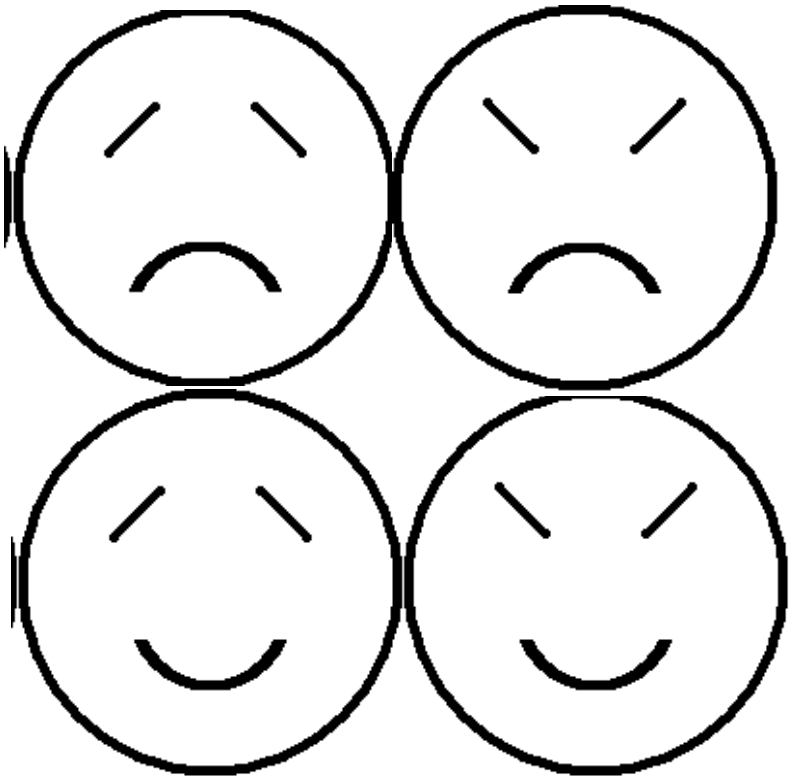


Caliditas ignis.
Caliditas aeris.
Humiditas aeris.
Aque.
Humiditas
Aque.
Frigiditas
terre.
Frigiditas
terre.
Siccitas
ignis.
Colera
Sanguis
Humor
Melancolia
Mundus
ho
mo
planete
Saturnus
Jupiter.
Mars.
Sol medius
Venus.
Mercurius
luna.
Sanguis

Astrology and the four temperaments



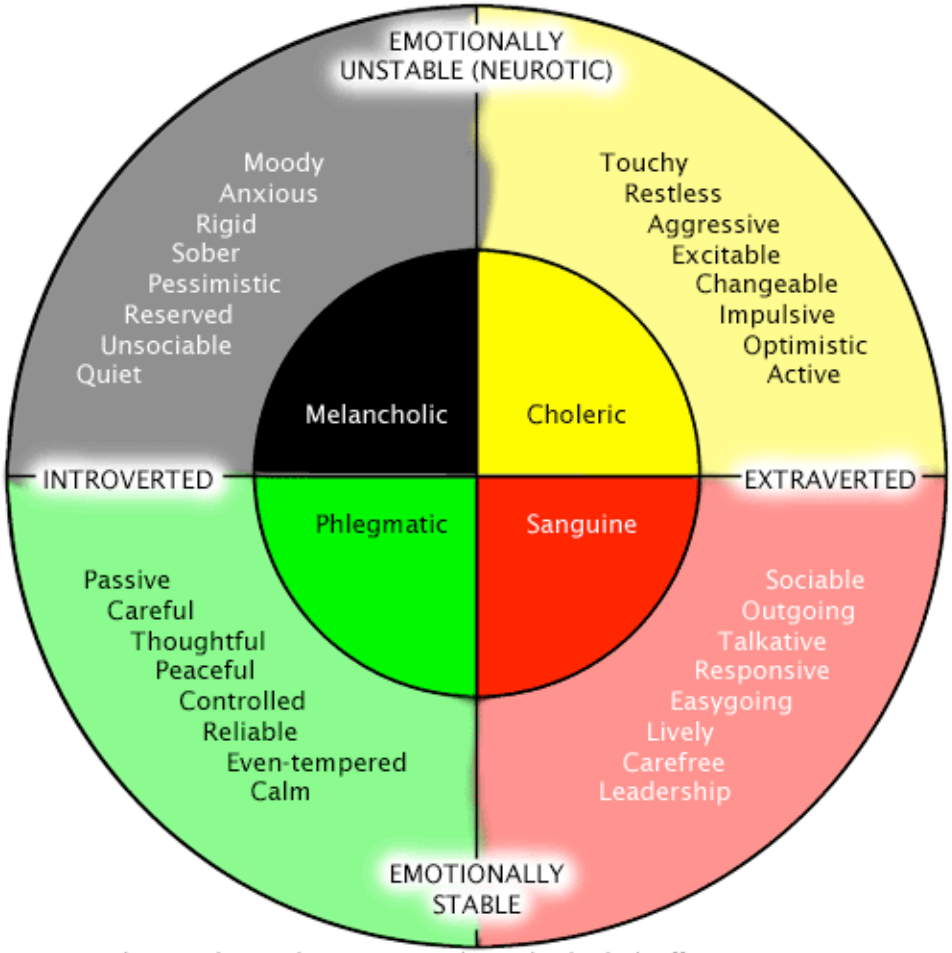
Interest in the 4 temperaments continues today (c.f. wiki)



Wundt's dimensionsal analysis

	Changeability	
Exciteability	Melancholic	Choleric
	Phlegmatic	Sanguine

Eysenck's dimensional organization



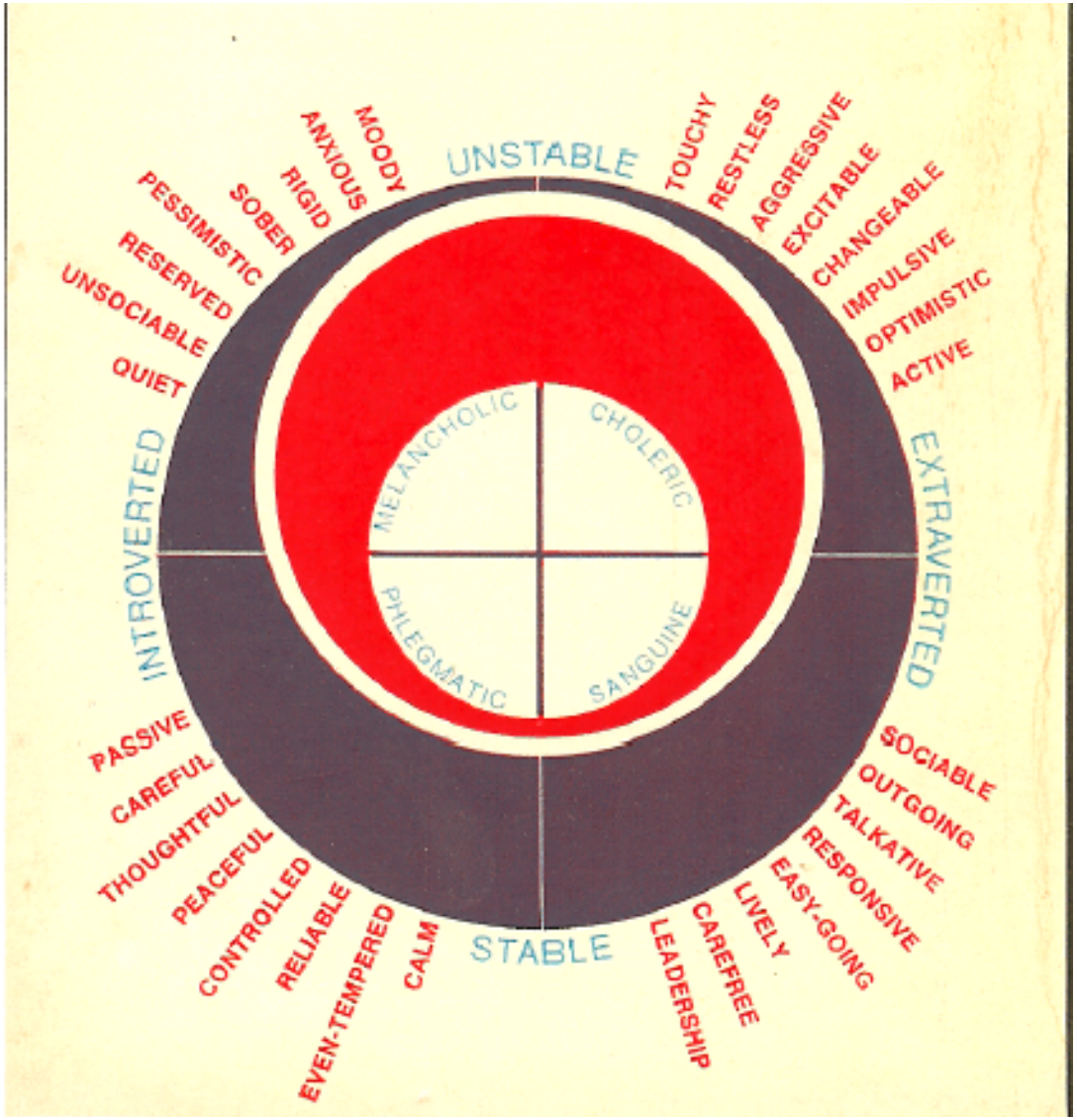
Eysenck, H.J and Eysenck, M.W. *Personality and Individual Differences.*

Melancholic

Choleric

Phlegmatic

Sanguine


UNSTABLE
TOUCHY
RESTLESS
AGGRESSIVE
EXCITABLE
CHANGEABLE
IMPULSIVE
OPTIMISTIC
ACTIVE
EXTRAVERTED
SOCIABLE
OUTGOING
TALKATIVE
RESPONSIVE
EASY-GOING
LIVELY
CAREFREE
LEADERSHIP
STABLE
CALM
EVEN-TEMPERED
RELIABLE
CONTROLLED
PEACEFUL
THOUGHTFUL
CAREFUL
PASSIVE
INTROVERTED
QUIET
UNSOCIABLE
RESERVED
PESSIMISTIC
SOBER
RIGID
ANXIOUS
MOODY
MELANCHOLIC
CHOLERIC
PHLEGMATIC
SANGUINE

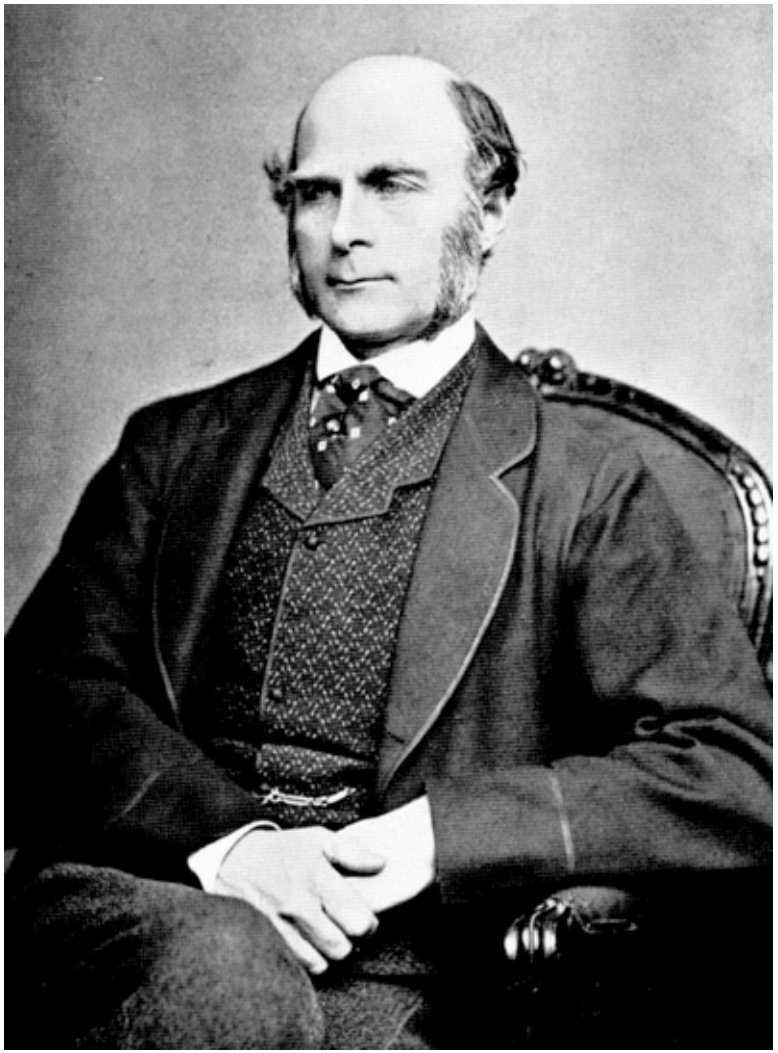
Individual differences come of age: Measurement and experiments

I. Francis Galton and regression

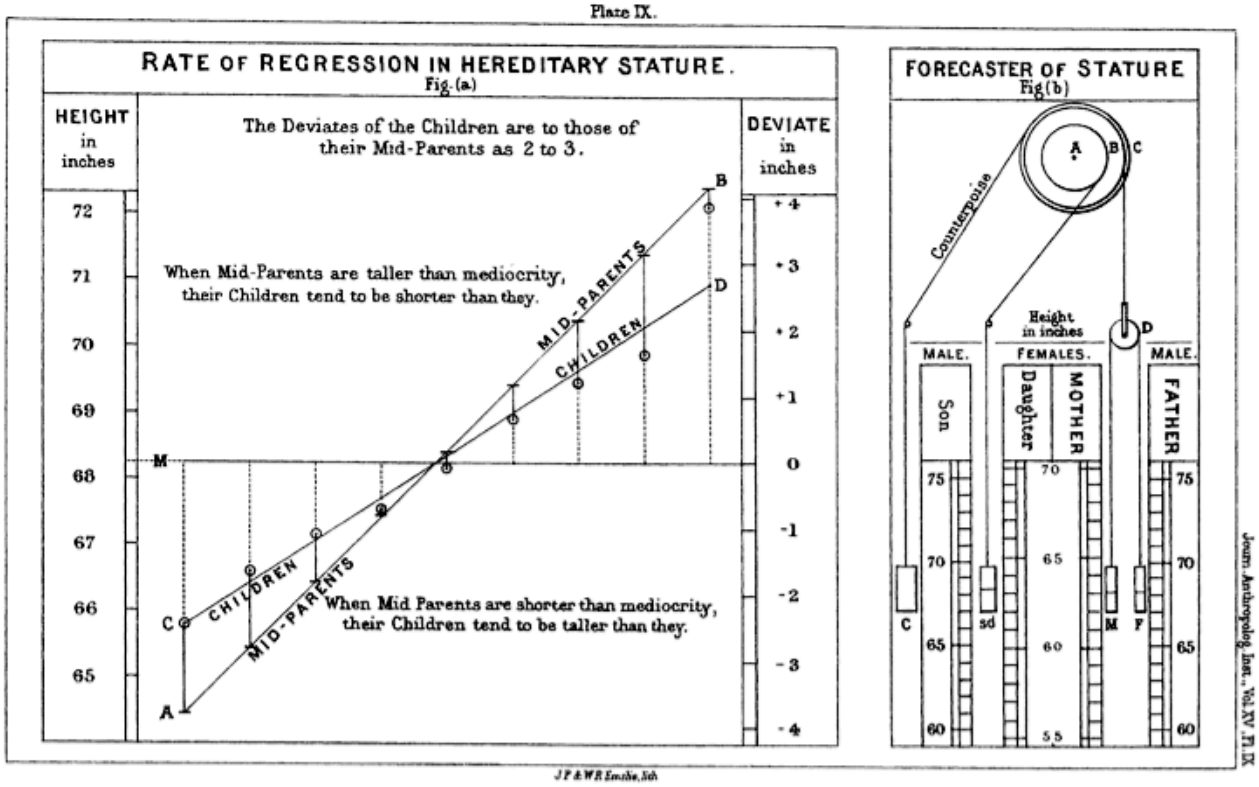
II. Wilhelm Wundt and experimental methods

Francis Galton 1822-1911

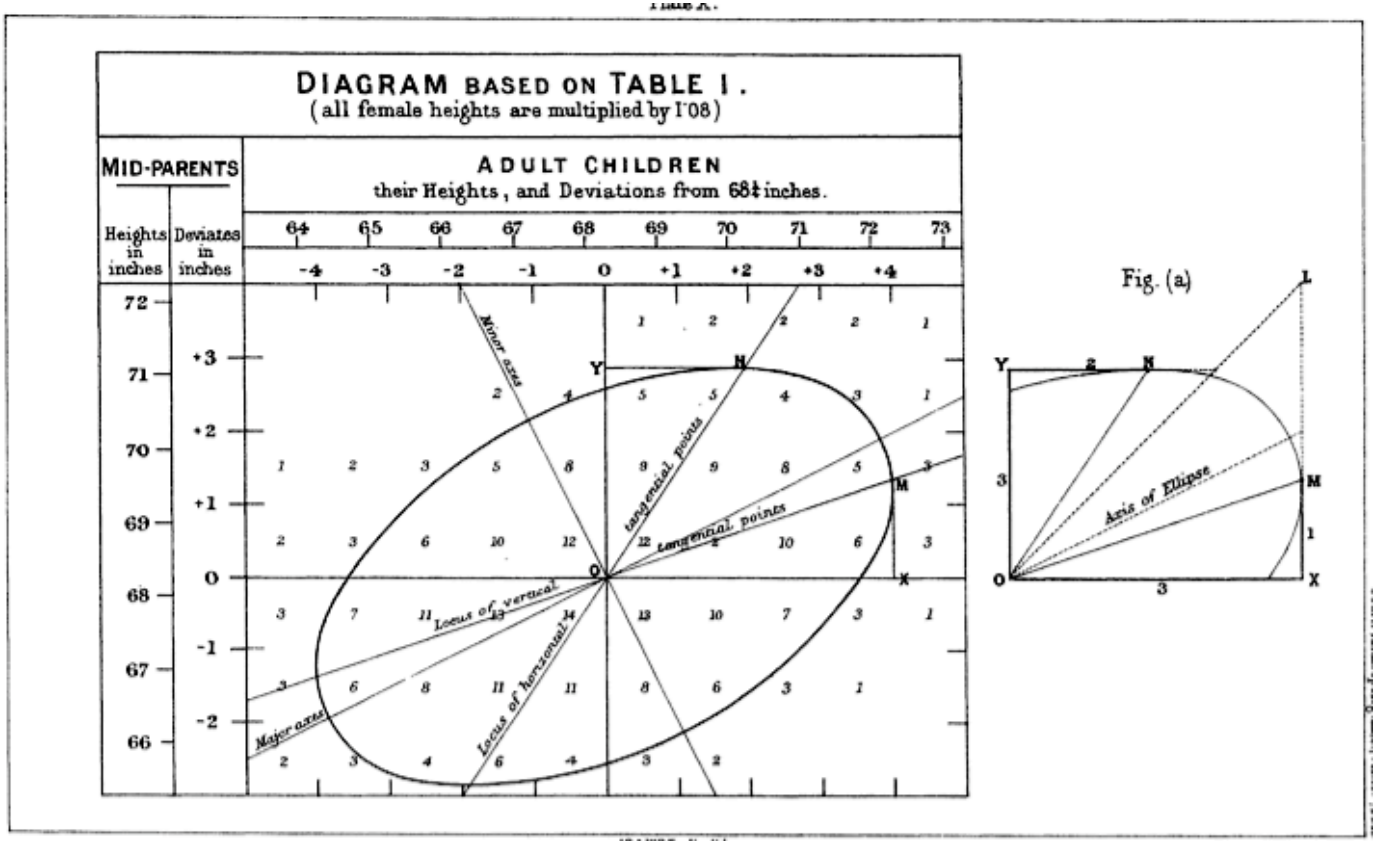
- Study of Hereditary Genius
- Regression
- Individual Differences



Galton and Regression



Galton and Regression

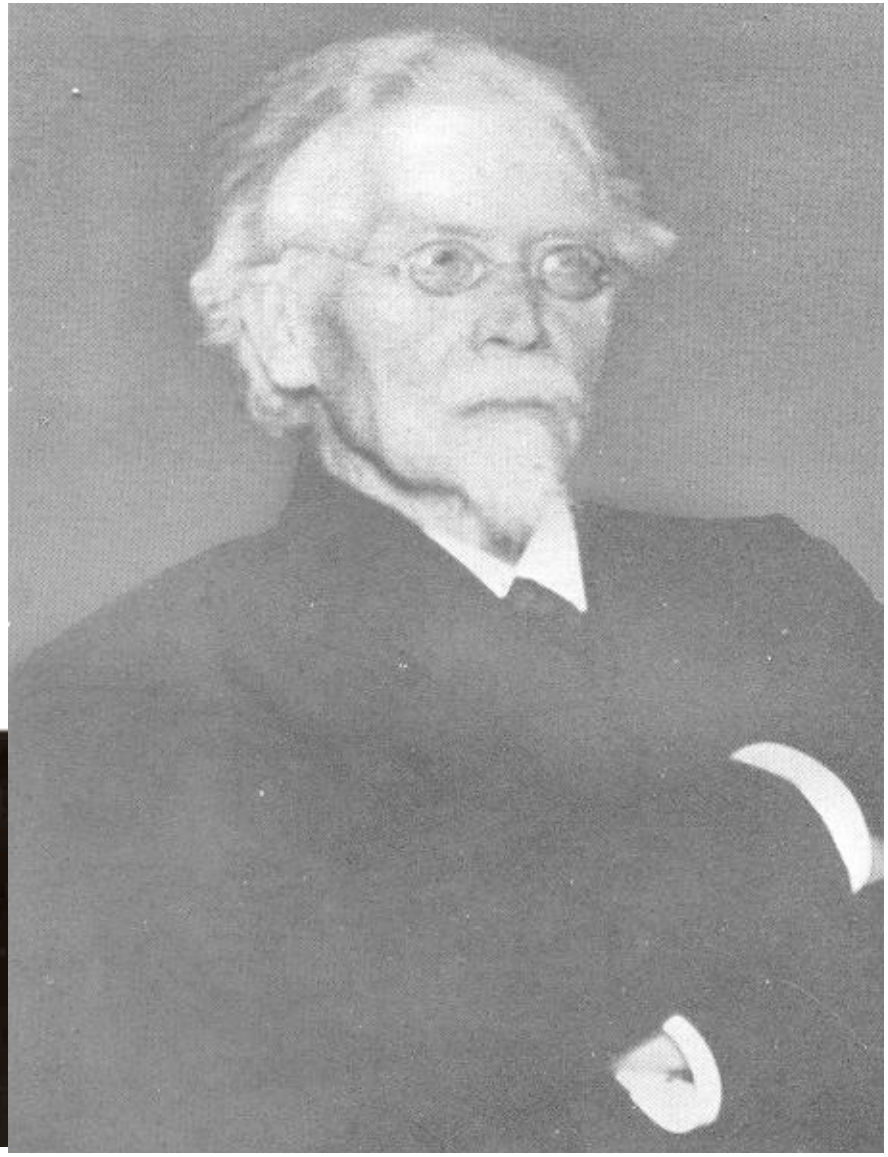


Wilhelm Wundt 1832-1920

- 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

Heymans' Taxonomy

(from Eysenck, 1992)

	Emotionality	Activity	P/S	Jung
Apathetic	-	-	S	Sensitive I
Amorphous	-	-	P	Intuitive I
Phlegmatic	-	+	S	Intuitive E
Sanguine	-	+	P	Sensitive E
Passionate	+	+	S	Thinking E
Choleric	+	+	P	Feeling E
Sentimental	+	-	S	Feeling I
Nervous	+	-	P	Thinking I

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

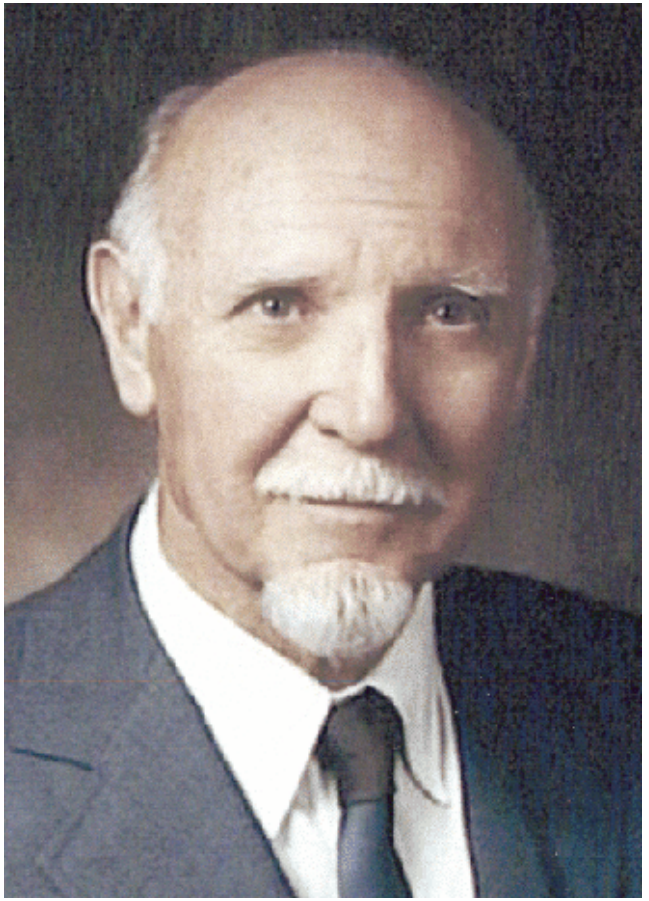
I. Cognitive experiments showed individual differences interacting with situational determinants of attention and performance

II. Experimental work on arousal theory inspired work by Eysenck and others

Raymond Cattell

1905- 1998

Founding President: Society for Multivariate Experimental Psychology

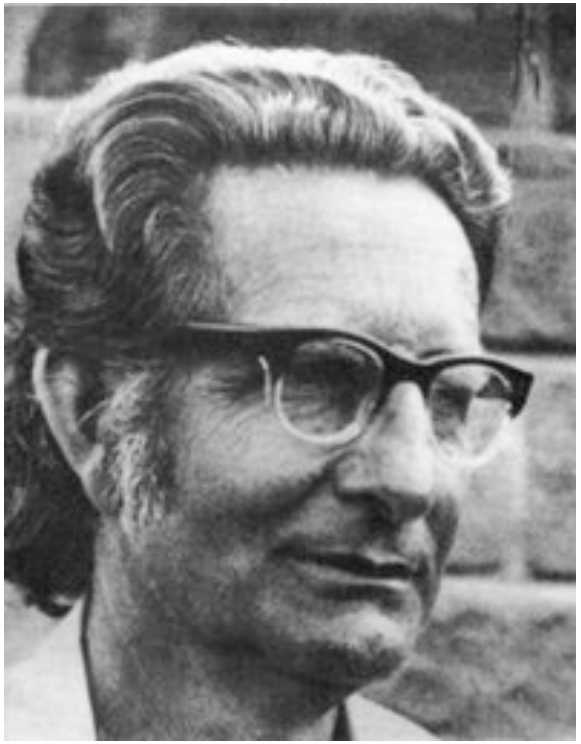


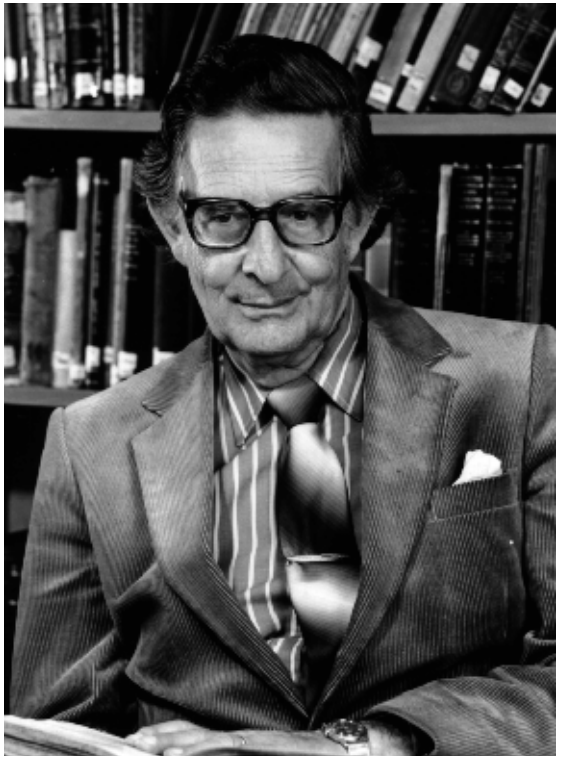
- Primarily multivariate, little "experimental"

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

Journal	Total	Exper.	IQ	Exp%	IQ%
EJP	68	0	2	0	3
JoP	125	7	1	6	1
JPSP	280	26	3	9	1
PaID	586	73	47	12	8
JRP	102	16	1	16	1
JPSP-PID	92	26	3	28	3

Revelle, W. and Oehlberg, K. (in press) Integrating experimental and observational personality research: the contribution of Hans Eysenck , Journal of Personality.