## Individual Differences

- Up to this point we have been looking at general characteristics of human behavior that apply pretty much to everyone
- Now we want to look at how individuals differ from one another in their characteristics and behavior
- Individual differences are commonly broken down into two categories
  - Abilities
  - Personality
- Both kinds of individual differences are often studied by making use of psychological tests

## What is Personality?

 People differ from each other in meaningful ways  People seem to show some consistency in behavior

*Personality* is defined as distinctive and relatively enduring ways of thinking, feeling, and acting

# Galen's Theory of Temperament

<u>MELANCHOLIC</u> Excess of Black Bile Sad, Depressed, Anxious <u>CHOLERIC</u> Excess of Yellow Bile Angry, Assertive, Quick to Action

#### PHLEGMATIC

Excess of Phlegm Calm, Lethargic, Slow to Action <u>SANGUINE</u> Excess of Blood Warm, Optimistic, Easy-Going

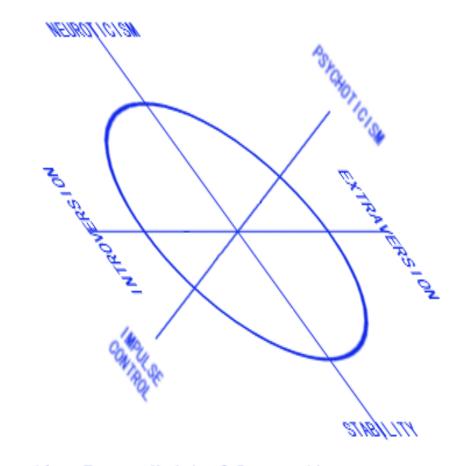
## The 4 Basic Personality Types



## Eysenck Personality Questionnaire (EPQ-R Short)

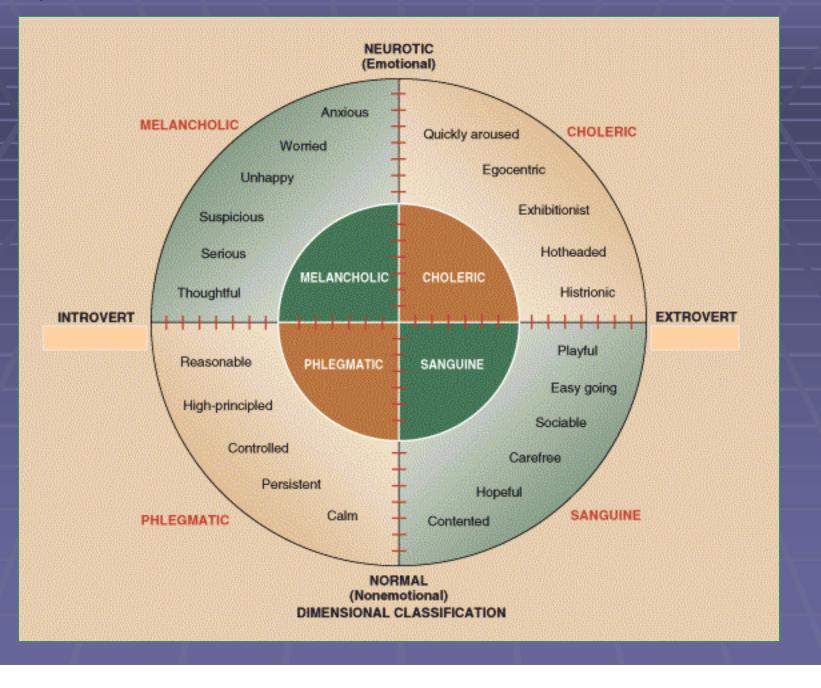
- EPQ Classroom exercise
- EPQ-R Short Form scales
  - E: Extraversion
  - N: Neuroticism
  - P: Psychoticism
    - Possibly a measure more of psychopathy or lack of empathy than psychotic propensity, though Eysenck insists they are on the same continuum
  - L: Lie
- Much more research has been carried out on E and N than on P
- <u>110 Fall 02 EPQ IPIP Summary</u>

## Eysenck's PEN model



Eysenck's Factor Model of Personality

#### Eysenck's Model of Extraversion & Neuroticism



## Eysenck's Description of Differences Between Extraverts & Introverts

- The typical extravert is sociable, likes parties, has many friends, needs to have people to talk to, and does not like reading or studying by himself. He craves excitement, takes chances, often sticks his neck out, acts on the spur of the moment, and is generally an impulsive individual. He is fond of practical jokes, always has a ready answer, and generally likes change; he is carefree, easy-going, optimistic, and likes to 'laugh and be merry'. He prefers to keep moving and doing things, tends to be aggressive and lose his temper quickly; altogether his feelings are not kept under tight control, and he is not always a reliable person.
- The typical introvert is a quiet, retiring sort of person, introspective, fond of books rather than people; he is reserved and distant except to intimate friends. He tends to plan ahead, 'looks before he leaps' and distrusts the impulse of the moment. He does not like excitement, takes matters of everyday life with proper seriousness, and likes a well ordered mode of life. He keeps his feelings under close control, seldom behaves in an aggressive manner, and does not lose his temper easily. He is reliable, somewhat pessimistic, and places great value on ethical standards.
- From Eysenck, H.J. & Eysenck, S.B.G. (1975). Manual of the Eysenck Personality Questionnaire. EdITS/Educational and Industrial Testing Service, San Diego, CA 92107.

## Eysenck's Description of Differences Between Neurotics & Stables

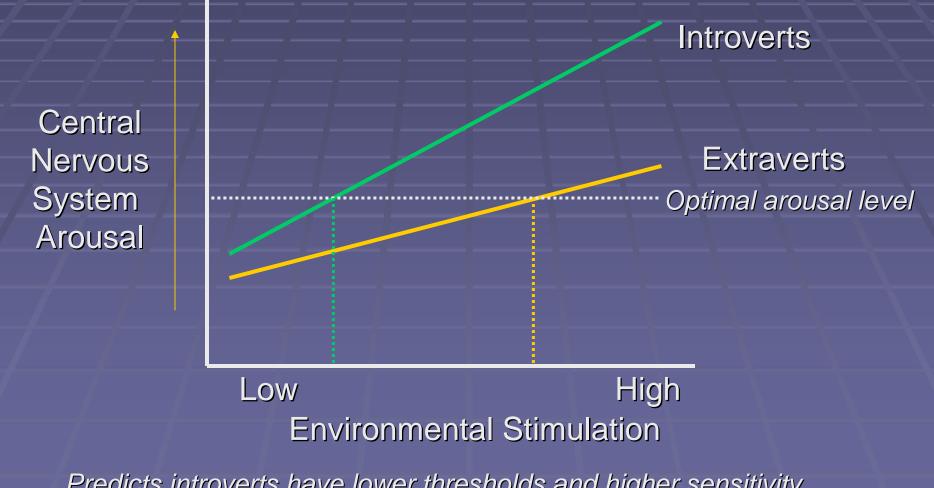
We may describe the typical high N scorer as being an anxious, worrying individual, moody and frequently depressed. He is likely to sleep badly, and to suffer from various psychosomatic disorders. He is overly emotional, reacting too strongly to all sorts of stimuli, and finds it difficult to get back on an even keel after each emotionally arousing experience. His strong emotional reactions interfere with his proper adjustment, making him react in irrational, sometimes rigid ways. When combined with extraversion, such an individual is likely to be touchy and restless, to become excitable and even aggressive. If the high N individual has to be described in one word, one might say that he is a worrier; his main characteristic is a constant preoccupation with things that might go wrong, and a strong emotional reaction of anxiety to these thoughts. The stable individual, on the other hand, tends to respond emotionally only slowly and generally weakly, and to return to baseline quickly after emotional arousal; he is usually calm, eventempered, controlled and unworried.

From Eysenck, H.J. & Eysenck, S.B.G. (1975). *Manual of the Eysenck Personality Questionnaire*. EdITS/Educational and Industrial Testing Service, San Diego, CA 92107.

### Eysenck's Theory of the Biological Basis for Extraversion & Neuroticism Differences

- Eysenck sees introverts and extraverts as differing in tonic arousal levels and arousability of the central nervous system (CNS), in particular the ascending reticular activating system (ARAS)
- He believes introverts are chronically more aroused and more easily aroused, extraverts chronically less aroused and less arousable
- Eysenck sees differences in neuroticism as reflecting biologically wired in differences in the reactivity of the limbic system in the brain with neurotics reacting more strongly to emotional stimuli

#### Eysenck's Model of Differences **Between Introverts & Extraverts**



Predicts introverts have lower thresholds and higher sensitivity

# Evidence for Physiological Basis of Extraversion

- Differences between introverts and extraverts
  - Extraverts prefer higher levels of stimulation Geen experiment on volume preference
  - Introverts have lower pain and auditory thresholds (Kohn, 1987; see Stelmack, 1990; Stelmack & Campbell, 1974)
  - Introverts have higher sedation thresholds
  - Spiral aftereffect lasts longer for introverts
  - Lemon test
  - EEG and skin conductance response to stimuli show introverts more reactive under conditions of moderate stimulation

#### Effects of different drugs on the central nervous system (CNS)

- CNS depressants more extraverting
  - e.g., alcohol
- CNS stimulants more introverting
  - e.g., caffeine, amphetamines, Ritalin
- Stelmack's (1990) summary of experimental evidence: 'There is a good deal of evidence ... that introverts exhibit greater reactivity to sensory stimulation than extraverts. There is little evidence that introverts and extraverts differ in base level of arousal in neutral conditions.'