"Cattell's theory and the more recent Big Five model both have implications for major theoretical questions … (the) major strength of these approaches is their sophisticated description of personality through clearly defined factors that are assessed through questionnaires."

Table 8.1  Preview of Factor Analytic Theories

[Page 222]
"Factor analysis, the essential tool of factor analytic trait theories, is a statistical procedure that is based on the concept of correlation."

**Question:** What is a correlation coefficient? (222)

**Question:** What is the range of a correlation coefficient? (223)

"Several correlation coefficients are computed during the course of a factor analysis. The correlations among all pairs of variables are computed to form a correlation matrix."

"**Factor analysis** then provides a way of more simply describing large numbers of variables by identifying a smaller number of dimensions (factors)."

[Illustration] Factor analysis.
Personality: Prediction of Behavior

"Cattell's definition of personality neatly summarizes his entire theoretical and empirical approach."

"Personality is that which permits a prediction of what a person will do in a given situation."

"Traits are the units of personality that have predictive value."

**Question:** What are Raymond Cattell's notions about traits? (226)
**Personality Tests**

"Cattell's most important contribution to personality is his systematic description of personality."

Complete the following:

"To assess personality differences in the population at large, Cattell developed his best known and most widely used test, the …

**Beyond Personality Tests**

**Question:** What did Raymond Cattell identify as **Q-data**?

**Question:** What did Raymond Cattell identify as **T-data**?

**Question:** What did Raymond Cattell identify as **L-data**?
Because Personality Is Complex: A Multivariate Approach

Question: What is meant by the following statement?

"Life, of course, is multivariate."

Surface Traits and Source Traits

Surface Traits

Question: What is Raymond Cattell's description of surface traits?
Source Traits

Question: What is Raymond Cattell's description of source traits?

Measurement of Source Traits: The 16PF

"Cattell's best-known personality test, the 16PF, has sixteen multiple-choice scales, each measuring one underlying source trait of normal personality."
"The set of scores on all factors is the **profile** of an individual … "  (228)
Five Second-Order Factors

"It is possible to reduce further the number of factors by factor-analyzing scores on the sixteen personality factors themselves."

"This is a second-order factor analysis."

"The results of the second order factor analysis include two particularly interesting dimensions of personality, extraversion and anxiety."

**Extraversion**

**Question:** What is Raymond Cattell's description of extraversion? (231)

**Question:** What is meant by the following statement?

"… extraversion has a genetic basis."

**Anxiety**

**Question:** What is Raymond Cattell's description of anxiety?
"Some of the traits that Cattell measured contribute to a person's psychological adjustment."

Question: What is Raymond Cattell's description of neurosis? (231)

Question: What is Raymond Cattell's description of psychosis?

Three Types of Traits

"It is customary in personality theory to distinguish various types of traits, including dynamic traits (motives), temperament, and ability."

"Cattell adopted these concepts as well."

Ability Traits

"Ability traits define various types of intelligence and determine how effectively a person works toward a desired goal."

Question: What did Raymond Cattell believe was wrong with most intelligence tests? (232)

Question: How does Raymond Cattell distinguish between what he called fluid intelligence and crystallized intelligence?
Ability Traits

Question: What is the aim of Raymond Cattell's Culture Fair Intelligence Test?

Question: What is Raymond Cattell's perspective of the relationship between heredity and intelligence?

Temperament Traits

"Temperament traits are largely constitutional (inherited) source traits that determine the 'general style and tempo with which [a person] carries out whatever he [or she] does."

[Examples] Temperament Traits.

Dynamic Traits

"Dynamic traits are motivational; they provide the energy and direction to action."

Ergs

Question: What is Raymond Cattell's description of ergs?
**Ergs**
(Continued)

[Examples]  Ergs. (233)

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**Metaergs**

**Question:** What is Raymond Cattell's description of **metaergs**?

[Examples]  Metaergs. (233-234)

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**Sentiments**

**Question:** What is Raymond Cattell's description of sentiments? (234)

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Complete the following:

"The most important sentiment is the *self-sentiment*, which Cattell referred to as a …

---
**Attitudes**

Question: What is Raymond Cattell's description of attitudes?

**Subsidiation**

Question: What is Raymond Cattell's concept of subsidiation?

**The Dynamic Lattice**

"Cattell diagrammed (the) subsidiation relationships in the dynamic lattice."

"Metaergs (attitudes and sentiments) are learned. Their connections with one another and with the ergs are affected by learning. Sentiments may be connected to many ergs, and through development these connections change."

"Ergs are generally satisfied indirectly through metaergs." This indirect satisfaction of ergs is called long-circuiting."
Question: What is Raymond Cattell's concept of *confluence learning*? (235)
The Specification Equation

"Various traits are combined in a predictive mathematical equation, called the specification equation. In principle, all behavior can be predicted from such equations. The specific terms … would vary depending on the application."

"The full specification equation is:

\[ \text{Performance of individual } i \text{ in situation } j \text{ is referred to as } P_{ij}. \]

"Each predictive trait is referred to as a } T."

"The letter } S \text{ refers to a situational index, that is, the extent to which the trait } T \text{ is relevant in predicting the performance } P \text{ in this situation.}"
Nomothetic and Idiographic Approaches: R-Technique and P-Technique

Question: What is Raymond Cattell's description of the R-technique?

Question: What is Raymond Cattell's description of the P-technique?

Figure 8.3  Illustration of P-Technique

[Page 238]
Syntality

Question: What is Raymond Cattell's concept of syntality? 

[Examples] Syntality.

Determinants of Personality: Heredity and Environment

"Where do traits, so useful for prediction, originate? Cattell distinguishes between constitutional traits, which originate in biological causes (especially genetics), and environmental-mold traits, which are the result of learning and social experience."

Complete the following:

"Cattell developed a statistical technique, the Multiple Abstract Variance Analysis (MAVA), to analyze the effects of …

Question: What is Raymond Cattell's concept of heritability traits?"
The Role of Theory in Cattell's Empirical Approach

Question: What is meant by the following statement?

"Cattell has been accused of being atheoretical … " (240)

The Five Factor Theory: McCrae and Costa

"The grand scope of Cattell's vision — that of proposing an empirically supported model of traits that could encompass the full spectrum of personality — has been captured in a recent model: the Big Five.

Question: What is meant by the following statement?

"The five factors originally were developed from … the lexical approach to personality."

Complete the following:

"The Big Five consist of five broad personality traits: …"
Table 8.3  The Big Five Factors of Personality

Extraversion

Question: What is the Extraversion factor of personality? (241)

Examples] Extraversion. (242-243)
Agreeableness

Question: What is the Agreeableness factor of personality?

Examples: Agreeableness.

Neuroticism

Question: What is the Neuroticism factor of personality?

Examples: Neuroticism.
Conscientiousness

**Question:** What is the **Conscientiousness** factor of personality? (244)

[Examples] Conscientiousness.

Openness

**Question:** What is the **Openness** factor of personality? (244)

[Examples] Openness.
More about These Five Factors

"The five factors each consist of components, called facets, that can be measured separately. Each facet is a somewhat more precise and focused trait of personality that the larger factor to which it belongs, yet all the facets that belong to one factor are positively correlated with one another."

Question: Why choose these particular factors? (245)

Table 8.3 Specific Facets of the Big Factors of Personality

[Page 246]