



MAJOR *Theories* OF
INTELLIGENCE

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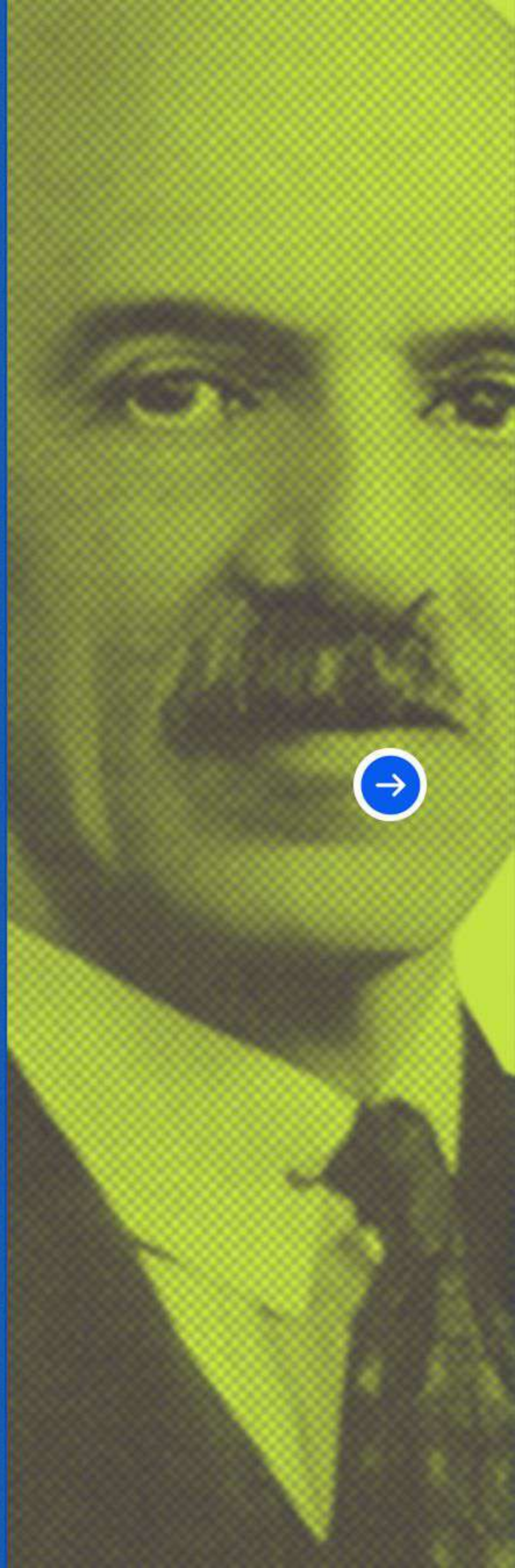
Spearman's

Two-Factor Theory

Charles Spearman proposed that intelligence consists of:

- General factor (g): common to all tasks
- Specific factors (s): unique to each task

The g factor explains why individuals who perform well in one cognitive task tend to perform well in others. This concept is foundational and frequently tested in exams.



Thurstone's

Primary Mental Abilities

L. L. Thurstone challenged Spearman and proposed that intelligence is not a single factor.



He identified seven Primary Mental Abilities (PMAs), such as verbal comprehension, word fluency, numerical ability, spatial visualization, associative memory, perceptual speed, and reasoning.

These suggest intelligence is multi-dimensional rather than dominated by a single general factor.

Cattell's

Fluid & Crystallized Intelligence

Raymond Cattell divided intelligence into:



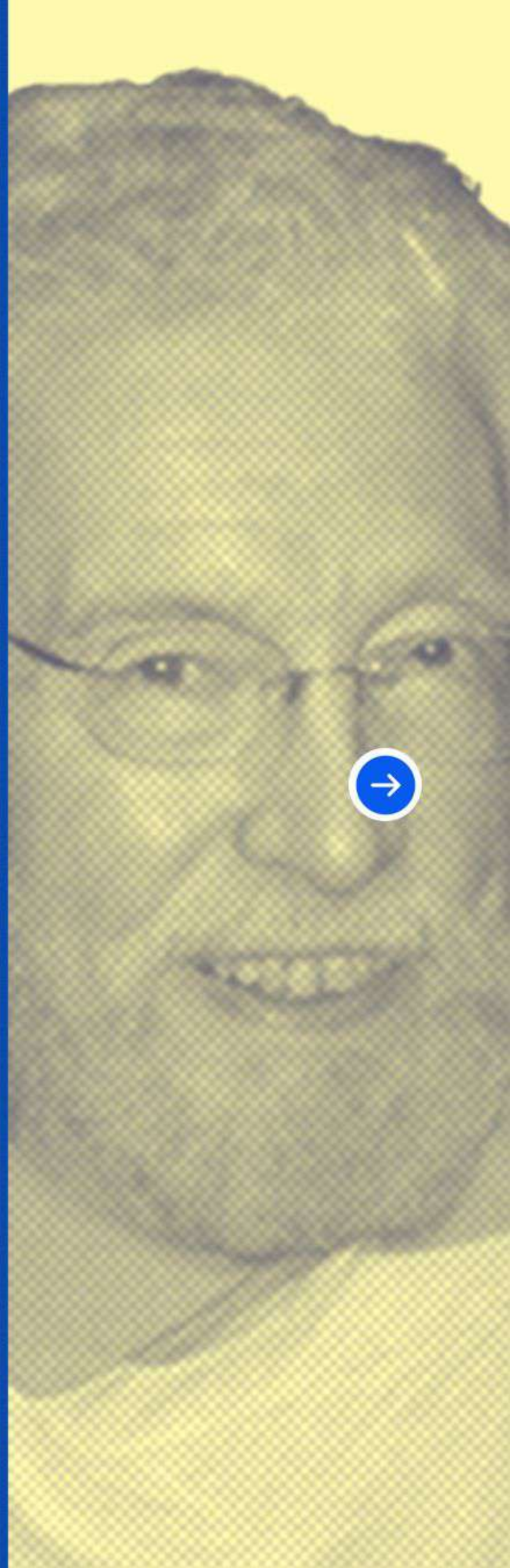
- Fluid Intelligence (Gf): innate ability to solve new problems, peaks in early adulthood
- Crystallized Intelligence (Gc): knowledge gained through experience and education

Horn

and Expansion of Cattell's Theory

John Horn expanded Cattell's model by adding more broad abilities like visual processing and short-term memory.

Unlike Spearman, Horn rejected the idea of a single g factor. This theory contributed to later hierarchical models, although Horn himself rejected the idea of a single general factor.



Guilford's

Structure of Intellect Model

J. P. Guilford proposed a three-dimensional model:

- Operations (mental processes)
- Contents (type of information)
- Products (form of information)



This led to 150 intellectual abilities (later expanded from 120).

Though complex, it is important for understanding divergent thinking and creativity.

Carroll's

Three-Stratum Theory

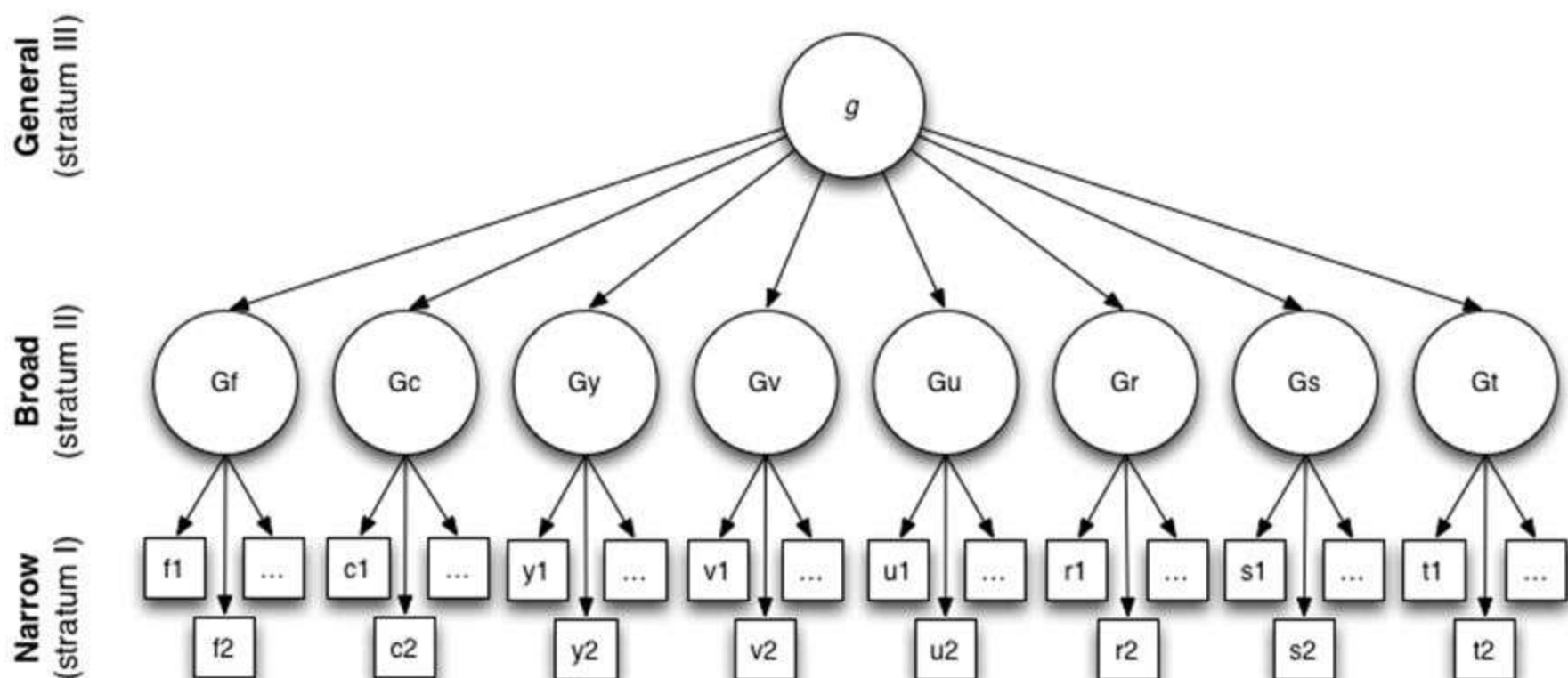
John Carroll integrated earlier theories into a hierarchy:

- Stratum III: General intelligence (g)
- Stratum II: Broad abilities (e.g., Gf, Gc)
- Stratum I: Specific skills

This model is widely accepted today and forms the basis of modern intelligence tests.



It combines both general and multiple ability perspectives.



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