

Functionalism

American Psychology Takes Hold

American functionalism

central interest: how the animal uses its mind to adapt to environment

key tenets:

- **consciousness cannot be meaningfully analyzed in elements**
- **structure and function cannot be meaningfully separated**
- **behavior should be treated in terms of significance to the organism**

“Functionalism” by Titchner

fit with American temperament: individualism, independence, pragmatism

move toward applied psychology embraced



William James

"father of American Psychology"

divisive figure:

heavy focus on mentalistic and psychical
(psychedelic) phenomena

religion, telepathy, seances, mind-altering drugs

trivia: laughing gas & Americanitis

**not an experimentalist by trade (held positions in Psychology in
Philosophy department at Harvard)**

**not the founder of functional psychology *per se*, but ideas had huge
influence on American movement**

James program

in James we see the first clear articulation of views in opposition to European tradition

elemental science v. holistic discipline

pure science v. pragmatic discipline

scientific and philosophic approaches

synthesis of evolutionary ideas

The principles of psychology (1890)

- study of people as they adapt to their environment
- consciousness has a function (enables survival)
- espoused a radical empiricism

use of introspective and comparative methods

on pragmatism

The corpus of the dispute was a squirrel – a live squirrel supposed to be clinging to one side of a tree-trunk; while over against the tree's opposite side a human being was imagined to stand. This human witness tries to get sight of the squirrel by moving rapidly round the tree, but no matter how fast he goes, the squirrel moves as fast in the opposite direction, and always keeps the tree between himself and the man, so that never a glimpse of him is caught. The resultant metaphysical problem now is this: Does the man go round the squirrel or not? He goes round the tree, sure enough, and the squirrel is on the tree; but does he go round the squirrel?

The pragmatic method is primarily a method of settling metaphysical disputes that otherwise might be interminable. Is the world one or many? – fated or free? – material or spiritual? – here are notions either of which may or may not hold good of the world; and disputes over such notions are unending. The pragmatic method in such cases is to try to interpret each notion by tracing its respective practical consequences.

**the validity of an idea must be tested by
looking at its practical consequences**

the stream of consciousness

consciousness is a continuous flow, always changing, never the same twice.

consciousness is:

- **personal**: makes no sense to look for general principles
- **irreducible**: makes no sense to look for elements
- **functional**: serves to aid in survival of organism
- **selective**: certain events entering are attended to and others are not

on emotion

the James-Lange theory of emotion

reverses traditional causal relationship

Tehran (sees spider) → Tehran (knows fear) → Tehran (heart raises) → Tehran (runs)
stimulus **responses**

the physical response precedes emotion

bodily change is the emotion

Embodiment is sexy today

ideo-motor theory: idea and action are one in the same

idea - body - environment are one in the same

bodily events shape thoughts (*see Proffitt)

Müsterberg

James' successor at Harvard



Applied psychology

- study of abnormal behavior and mentally ill
treats addiction, phobia, dysfunction through
Reciprocal antagonism
- forensic psychology: eyewitness testimony / objective test
On the Witness Stand
- industrial psychology
methods of personnel selection, methods of
increasing work efficiency, and marketing and
advertising technique

Whiton Calkins

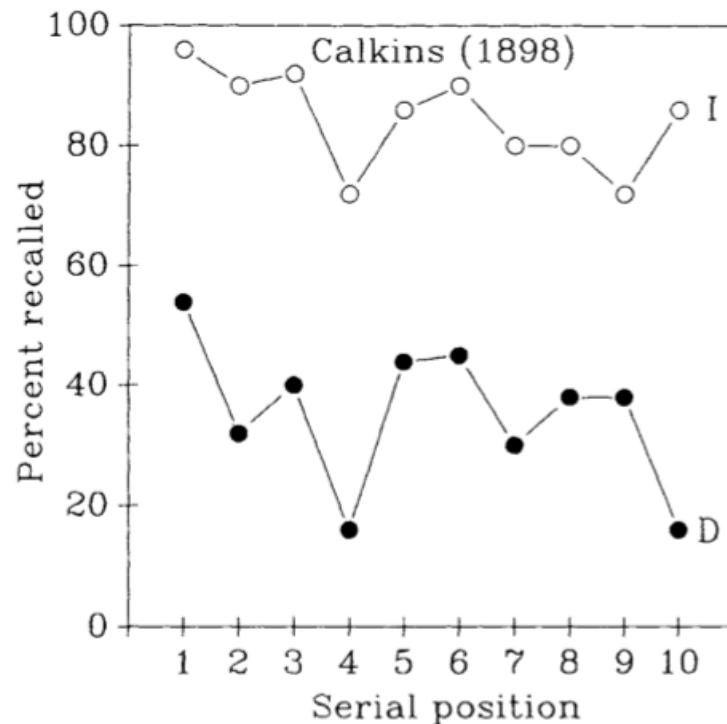
first woman president of APA

**significant contributions to research in: memory
objects v. contents of consciousness**

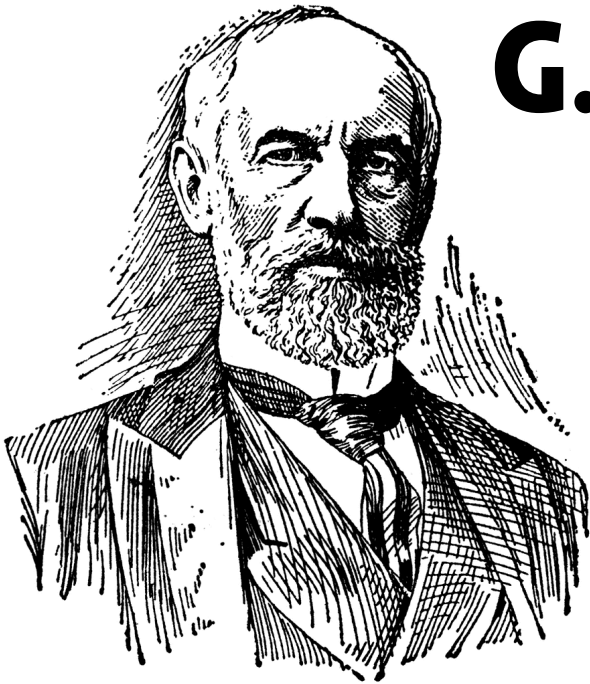
developed paired-associate technique



Figure 1
Serial Position Effects and the Negative Recency Effect in Immediate (I) and Delayed (D) Recall



**importance of recency,
vividness, and frequency**



G. Stanley Hall

Firsts:

- American PhD in psychology
- American lab in psychology
- American journal in psychology
- president of APA

president of Clark University

majority of early American PhDs

interests in human development and **adolescence**

“new habits being formed”

recapitulation theory

moral development

sublimation: tamp down ill sexual desires through work

“I had never chanced again upon a book that seemed to me to degrade me in my womanhood as the seventh and seventeenth chapters on women and women’s education of President G. Stanley Hall’s Adolescence”

Francis Cecil Sumner

first African American PhD

paradoxically advocates for segregated higher-ed



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Inez Beverley Prosser

first African American Woman PhD

Kenneth and Mamie Phipps Clark

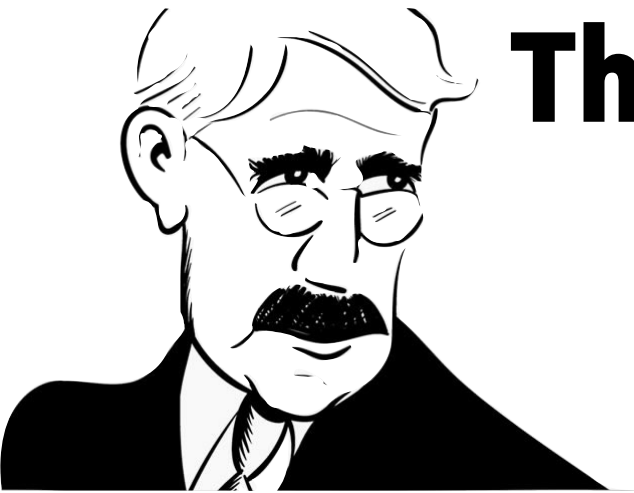
segregation's negative impact of on children (of all races)

major efforts in desegregation

doll studies: black children identify with and prefer white dolls



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John Dewey

The Chicago School

Functionalism's founders

The Reflex Arc Concept in Psychology

There is a stream of behavior...which is coordinated and directed toward a goal

obviate S - R distinctions * ex, child w/ candle

Educational Psychology

***learning by doing* rather than traditional memorization**

facilitate interest and creativity

spawned the development of "experiential education" program

The Chicago School



The Province of Functional Psychology

- **operations rather than elements**
- **functional mental processes mediate between organism and environment**
- **mind and body cannot be separated**

Angell

Psychology: A Study of Mental Activity

"acquisition, fixation, retention, organization, and evaluation of experiences, and their subsequent utilization in the guidance of conduct"

the adaptive act: a motive, a situation, a response

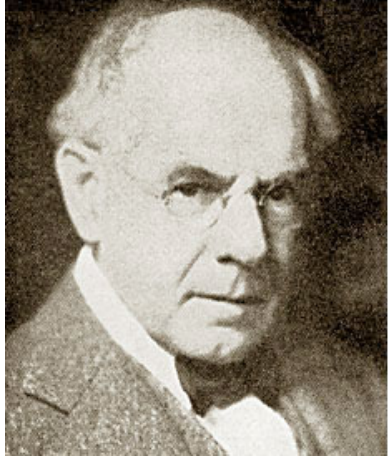
actions adapt to situations



Carr

The Columbia School

application and learning



Apply the principles of psychology to everyday behavior; domestic life, education, work and labor

Science, Psychological Review, Popular Science

anthropometry, thinking, time perception, motor control, and kinesthetic imagery

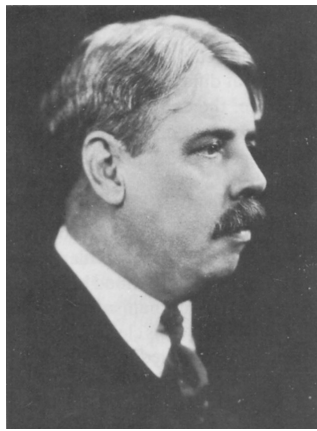
employed a variety of methodologies

We have tried to maintain an eclectic approach throughout the book...our approach should be called "functional," with a definite preference for objective data but no taboo against material obtained through introspection if it helps the psychologist to understand what the organism is doing in relation to the environment.

dynamic psychology: S-O-R



R. S. Woodworth



Thorndike

a bridge to behaviorism

comparative psychology: using animals to gain understanding of the first principles of learning

before Thorndike:

are human and animal intelligence / emotion equivalent?

Morgan's canon: in no case are we to interpret behavior as the result of a higher order process if it can be interpreted at a lower scale

all behavior is purposive

Moved to Columbia (brought his 2 best chickens) and began puzzle box experiments

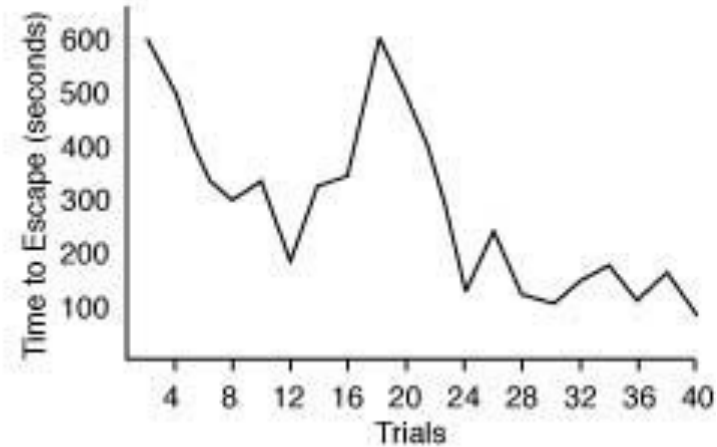
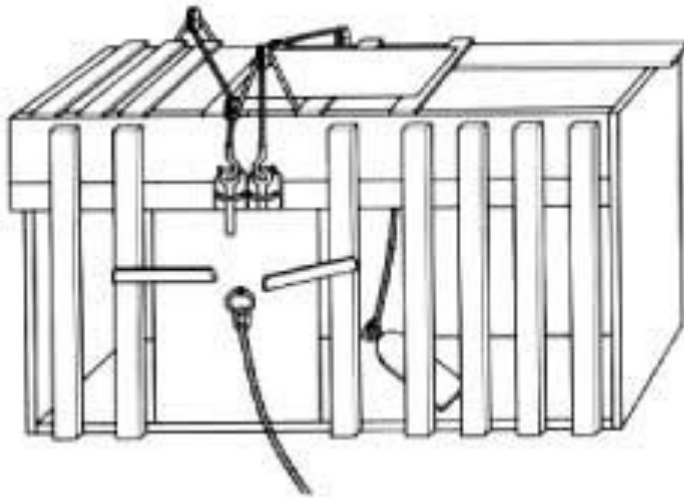
research into trial and error learning

early research with chickens - bitter corn and maze escape

instrumental conditioning

Trial and error turns to organized behavior

Learning is incremental and occurs automatically



Adapted from Domjan, 1993 (modified from Thorndike, 1898 [left] and Imada & Imada, 1983 [right])

FIRST TRIAL

Tendency
to perform

R₁ (bite at the bars)
R₂ (jump up and down)
R₃ (meow)
•
•
etc.
R_{correct} (pull at string) → Reward

LATER TRIAL

Tendency
to perform

R₁ (bite at the bars)
R₂ (jump up and down)
R₃ (meow)
•
•
etc.
R_{correct} (pull at string) → Reward

**The same applies to
ALL animals**

Connectionism

Stimulus and Response are connected by a neural bond

Strength of bond varies and determines $p(R):S$

**Strength of bond determined by Law of Exercise...
laws of use & disuse**

& Law of Effect

response followed by a satisfying state of affairs is strengthened

response followed by an annoying state of affairs is weakened

research only supported the first postulate of the Law of Effect:

- practice or disuse alone has no effect on strength of association**

revised Law of Effect

behaviors followed closely in time by a positive outcome are more likely to be repeated

bridge to behaviorism

a new type of associationism

early advocate of S-R psychology

relationship between sensation and ideas?

relationship between ideas and ideas?

relationship between ideas and behavior?

relationship between stimulus and response

Thorndike is not a behaviorist proper:

included notions such as "satisfactory outcome" (mentalese)

saw some value in introspection