

What is science?

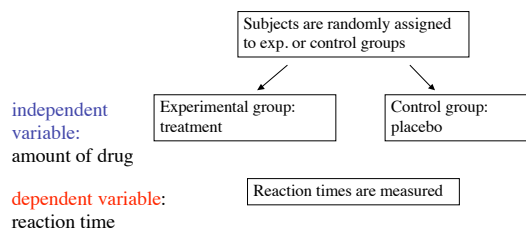
- The empirical data has to be: reproducible
- The theory has to be: falsifiable (sensitive to empirical data)

(Karl Popper)

Hypothesis testing

- A hypothesis is a specific question within a theory
- Scientists use experiments to test hypotheses.
- An experiment must have at least two variables:
 - The *independent variable* is manipulated by the researcher.
 - The *dependent variable* is measured by the researcher.

Experimental design

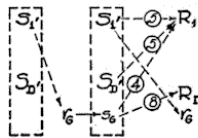


Wilhelm Wundt

- First experimental psychology laboratory in Leipzig, 1879
- Mental atoms combined by will
- Method: introspection

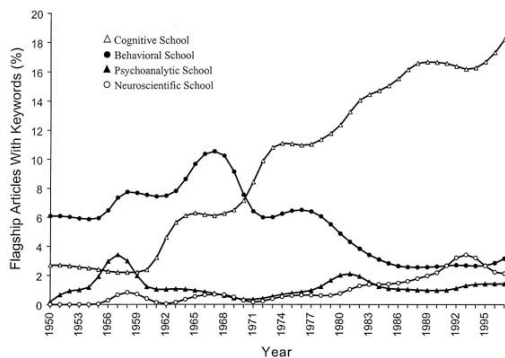
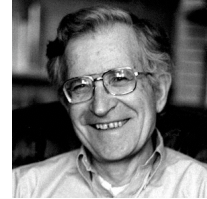
Behaviorism

- Explanation without reference to an inner world, only stimulus and response relations
- Pavlov, Watson, Hull, Skinner
- Late phase: getting baroque
- Peak: Skinner: *Verbal behavior* (1957)



Noam Chomsky (1928-)

- Formal linguistics:
Syntactic structures (1957)
- Review of Skinner's book (1959)



The cognitive revolution in psychology

- 1956
 - Symposium at MIT and Dartmouth
 - G.A. Miller: *7+/-2*, Bruner: *A study of thinking*
- 1960
 - Harvard's Center for Cognitive Studies
- 1967
 - Neisser: *Cognitive Psychology*