# Cognitive Science Approach

Chapter 2

## Transcendental Method

- Immanuel Kant – work backward from observed effects to infer their causes
  - Factory analogy

## Experimental Cognition

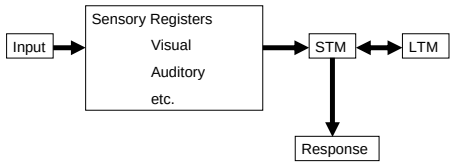
Scientific method requires:

- careful consideration of the research question
- strict use of experimental controls
- pseudo-objective interpretation of data
- external verification:

  i.e., other researchers, openness of methods etc.

## Standard Information Processing Approach

- Atkinson & Shiffrin (1968)



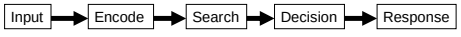

## Sample Question

- What colour is a yield sign?
- What colour is a merge sign?

- What could we measure?
  - Reaction Time (e.g., Donders)
  - Accuracy (e.g., Ebbinghaus)
  - Verbal Protocol – verbalize thoughts
  - Neurocognitive Measures – fMRI, ERP, PET

## Process Model

- a hypothesis about the specific mental processes that take place when a specific task is performed




Sequential non-overlapping stages

## New Informational Processing Approach

- Neisser (1976)