

PSI 428

Attentional Processes

Week 2.2d
Theories of Attention

Learning Objectives

- Understanding the information processing approach in cognitive psychology
- Learning basic theories of attention
- The homonculus problem
- Learning fundamental methods of attention research

Fundamental Methods

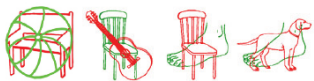
- Taxonomy of the most basic tasks
 - Filtering tasks
 - Monitoring tasks

Filtering Tasks

- There are more than one stimulus
- Participants report certain attribute/feature of the presented stimuli that satisfy a certain selection criterion

A Filtering Task

Steven P. Tipper's (1985) Study:
"Name the red object"



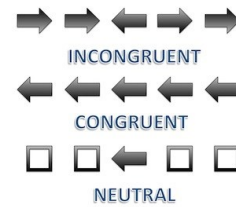
Shadowing



Stroop

Green	Green	Green
Yellow	Yellow	Brown
White	White	Red
Pink	Pink	Orange
Orange	Orange	Pink
Grey	Grey	Green
Red	Red	Red
Brown	Brown	Grey

Flanker



Your task is to circle the number that is *physically* larger in each pair.
Try to judge which list is harder.

List A

61—67 22—28 25—29 47—41

68—64 27—23 43—49 44—48

List B

47—41 61—67 27—23 25—29

22—28 68—64 43—49 44—48

Filtering Tasks

- Selection criterion can be specified
 - shortly before the stimuli (Precue)
 - simultaneous with the stimuli
 - shortly after the stimuli (Postcue)
- «The term filtering task is independent from whether filtering theory is correct or not»

Stroop

Green	Green	Green
Yellow	Yellow	Brown
White	White	Red
Pink	Pink	Orange
Orange	Orange	Pink
Grey	Grey	Green
Red	Red	Red
Brown	Brown	Grey

Monitoring Tasks

- There are. However, the question asked of the subject depends on the categorical identity of more than one of the stimuli.”

Monitoring Tasks

- There are more than one stimulus
- Participants' answer depends on categorical identity of more than one of the stimuli."
- If there are multiple frames in the stimulus
 - monitoring
- If there is a single visual display
 - search

Monitoring Tasks

- Monitoring tasks are usually called divided attention tasks

Reporting Both Channels



Detection Tasks

- There are more than one stimulus
- Participants decide whether certain stimulus was presented

A Detection Task

