

# From lab to life: The effect of cognitive strategy on real-world search

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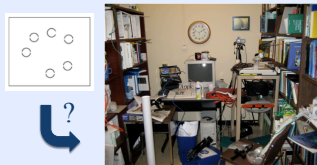


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## Which participant-factors influence real-world search?

- Cognitive strategy (**active** vs. **passive**)?
- Head and eye activity?
- Does strategy influence head/eye activity?



### Background

Past studies explored stimulus factors (clutter, similarity, eccentricity) Rosenholtz et al. (2007); Smilek et al. (In press)

Previous study found passive advantage in computer search Smilek et al. (2006)

### Question

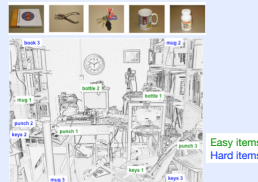
Does real-world search demand more activity?

## Phase 1 - Vary strategy during search → Phase 2 - Measure body activity

24 participants searched for common objects in cluttered office

**Active Instruction** "deliberately direct attention"

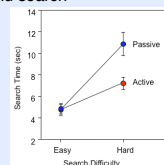
**Passive Instruction** "let target pop into mind"



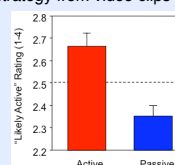
Other participants viewed 5-10 sec video clips and rated eye activity (N = 7), head activity (N = 7), strategy (N = 17) and emotion (N = 7)



### 1. An **active** strategy benefit in real world search

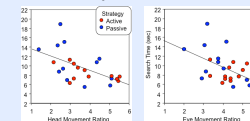


### 2. Raters blind to instruction can infer strategy from video clips

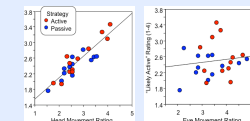


## Detailed Findings

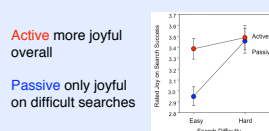
### 3. Search efficiency predicted by both head and eye movements



### 4. Strategy guesses based mainly on head movement



### 5. Cognitive strategy influences reward structure on search success



**Active** more joyful overall

**Passive** only joyful on difficult searches

## Implications

Cognitive strategy influences search differently in lab than life.

**Active** advantage for real-world search vs.

**Passive** advantage for computer search

The **active** advantage emerges when targets are outside the central field of view.

**Active** search involves whole-body behaviors observable to others.

More head and eye activity  
Greater positive emotional response



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