**INTRODUCTION**

**Value Effects on Memory**
Older adults can selectively attend to high-value information, compensating for age-related deficits in memory (Castel, 2008).

**Category Learning Across the Lifespan**
*Dual category learning systems* (Ashby & Maddox, 2011):
- Two competing, neurobiologically-grounded learning systems
- *Rule-based (RB):* Verbalizable, hypothesis-testing, frontally-mediated
- *Information-integration (II):* Non-verbalizable stimulus-response mappings, striatally-mediated

Age-related deficits found in both tasks (Maddox, Pacheco, Reeves, Zhu, & Schnyder, 2010), although evidence is relatively mixed for the II task (Filoteo & Maddox, 2004).

**RESEARCH QUESTIONS**

1. Do value and aging differentially affect rule-based and information-integration category learning?
2. Can value attenuate age-related deficits in category-learning?

**METHODS**

Seventy-eight participants recruited from Amazon Mechanical Turk (51 younger adults, 18-34 years; 27 older adults, 60-78 years)

*Imagine you are training to work in a pharmacy, and your job is to learn to categorize various pills*”

Participants instructed that they would study both medications and supplements (in reality, they participants studied either medications or supplements), but that “it is especially important to learn the medications accurately, as there may be severe consequences of mixing them up!”

**Study:** 8 blocks of feedback training (8 exemplars x 4 categories per block), with aggregate feedback after each block

**Test:** Classify 64 new exemplars, without feedback

**RESULTS**

**Test Performance**

![Graph showing test performance](chart)

**Optimal Strategy Use**

![Graph showing optimal strategy use](chart)

**DISCUSSION**

- Value enhances use of conjunctive rules (greater “effort?”)
- Optimal for rule-based category learning
- Sub-optimal for information-integration category learning
- As a result of greater rule-based strategy use, high value attenuates age-related deficits in rule-based learning, but not in information-integration learning

**CONCLUSION**

Value attenuates age-related deficits for rule-based learning

**REFERENCES**


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