Is Simpler Better?
Testing the Effect of Differential Recognition on Judgment

Zach Basehore
Rich Anderson
Bowling Green State University

Abstract

Three experiments tested the recognition heuristic. Exp. 1 and 2 isolated the role of pure recognition in participants' decisions; the recognized option was selected significantly more often than chance. Exp. 3 demonstrated that immediate feedback on training trials affected participants' performance on subsequent trials with no feedback. Strong negative feedback in the training condition led participants to make significantly fewer RH-consistent choices.

Introduction

For years, researchers have debated the recognition heuristic (RH) as a simple, effective decision-making strategy. RH is defined such that people pick a recognized option as superior on some criterion, compared to an unrecognized option.

In Goldstein & Gigerenzer (2002), participants made RH-consistent decisions on ~90% of city population judgment trials. Pachur & Hertwig (2006) found that people only use RH when recognition is a good predictor of the correct answer. Other researchers like Oppenheimer (2003) found evidence that, contrary to the predictions of RH, decision makers consider more than mere recognition. Disagreement persists in the literature, as all previous research confounded recognition with further knowledge.

Experiments 1 & 2 helped to determine the role of mere recognition in decision-making, and Experiment 3 tested how learning with feedback affects the use of RH.

Method

Procedure (Experiments 1 & 2)
To induce recognition, participants were asked if they had heard of a fictitious city before. After a distractor task, the pre-exposed fictitious city was paired with a novel fictitious city. Participants were then asked to select which city they thought was more populous.

1) *Do you recognize the following city? Weingshe, China (Y/N)*
How confident are you that you recognize this city? (0-100 scale)
2) *Distractor task (60 s to memorize 25 words, 60 s for recall)*
3) *Please indicate which city you think is more populous:*
Meingzhao, China or Weingshe, China

Exp 1 & 2 used the same pairings of fictitious cities in the decision task, but switched which 'cities' were pre-exposed to induce recognition.

Procedure (Experiment 3)
Participants were randomly assigned to one of 3 training conditions (0.8 = high validity; 0.5 = mid validity; 0.2 = low validity) and were asked to select the larger of a pair of real cities. *Accuracy feedback* was immediate. Participants subsequently completed a city population judgment task with *no* feedback. This procedure allowed for an assessment of the effect of training condition on subsequent decisions.

Participants (all were BGSU students)
Exp. 1: N = 26 (24 women) aged 18-23 (*M* = 18.73). Exp. 2: N = 28 (20 women) aged 18-23 (*M* = 18.79). Exp. 3: N = 71 (50 women) aged 18-42 (*M* = 19.49).

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Figure 1

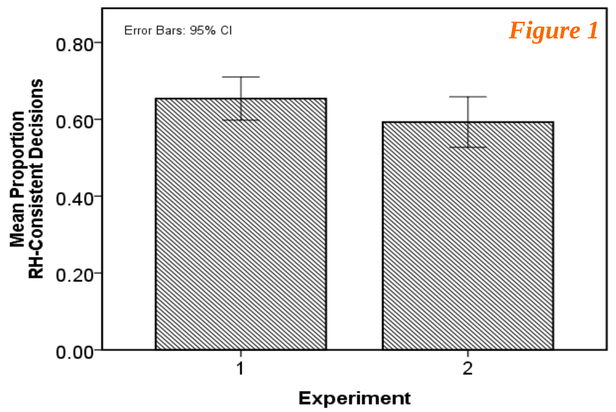


Figure 2

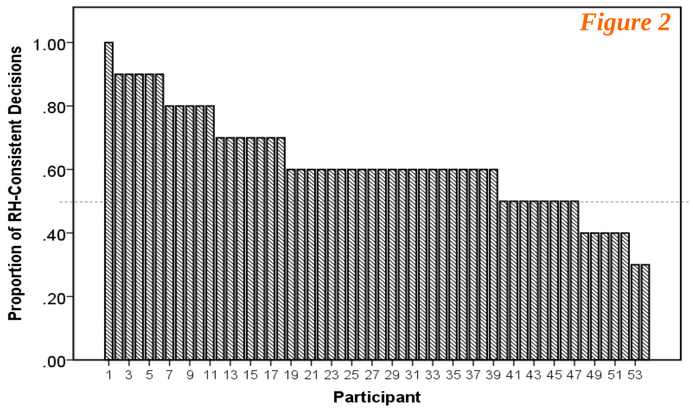
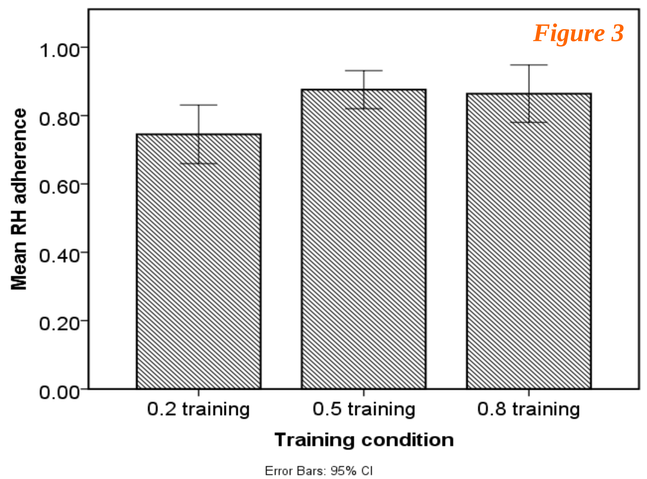


Figure 3



Results

Experiments 1 & 2
Participants picked the pre-exposed 'city' more often than chance (see *Figure 1*).
Exp 1: *M* = 65.4%, *SD* = 1.39, *t*(25) = 5.63, *p* < .001; *d* = 1.11
Exp 2: *M* = 59.3%, *SD* = 1.70, *t*(27) = 2.89, *p* = .007; *d* = 0.55
Combined: *M* = 62.2%, SD = 1.57, *t*(52) = 5.71, *p* < .001; *d* = 0.78

There was no significant difference between the RH accordance rates of participants in Experiments 1 and 2 (*t*(52) = 1.437, *p* = .157). Cohen's *d* showed a small effect of which stimuli were pre-exposed (*d* = .3875).

As seen in *Figure 2*, ~20% of participants made RH-consistent decisions on 80% of trials. Only 1 participant (of 54 total) made RH-consistent decisions on every trial.

Experiment 3
Figure 3 shows that people in the 0.2 training condition subsequently made fewer RH-consistent selections (*M* = 73.4%) than people in either the 0.5 (*M* = 87.1%) or 0.8 (*M* = 86.4%) training conditions. Fisher's LSD showed a significant difference for the 0.2 to 0.5 comparison (*p* = .012, *d* = .80), and the 0.2 to 0.8 comparison (*p* = .016, *d* = .65). No significant difference was found for the 0.5 to 0.8 comparison (*p* = .901, *d* = .04).

Discussion

Recognizing the role of recognition
Goldstein and Gigerenzer (2002) found that people almost always pick the recognized city as being more populous. The present study, however, shows that people make far fewer RH-consistent decisions when recognition is completely isolated. Recognition is therefore not as powerful as originally proposed.

The baby and the bath water
Although RH does not explain behavior as well as originally claimed, recognition alone clearly *does* have a significant impact on the decision-making process.

Two processes, one outcome?
Stanovich, West, and Toplak's (2011) default-interventionist model predicts reliance on a default strategy, unless strong evidence forces a change in strategy. Exp. 3 supported this prediction, showing that people only alter their strategy after receiving strong evidence that the default strategy is a bad one. Exp. 3 also shows that participants tend to use their default strategy, even in the face of very strong feedback.

Conclusion
Recognition alone biases behavior. Implications for fields like marketing are obvious: Products that are recognized (e.g. from a commercial) should be more popular. But further information (like a particular strategy's history of success) also has an impact.

References

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