



A question about **eyelids**.

6 people upvoted this question



A question about **insects**.

12,700 people upvoted this question

Your Liking is My Curiosity

a social popularity intervention to induce curiosity

Hermish Mehta*

Rachit Dubey*

Tania Lombrozo

University of California, Berkeley

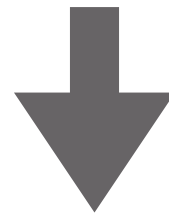
Why Curiosity?



“Curiosity is not only the beginning of all science, but also it’s end as well”

–*Herbert Simon*

Why Curiosity?



decision-making
memory
learning

(Pierce et al., 2005)

(Kang et al., 2009)

(Von Stumm et al., 2011)

Why Social?

environment

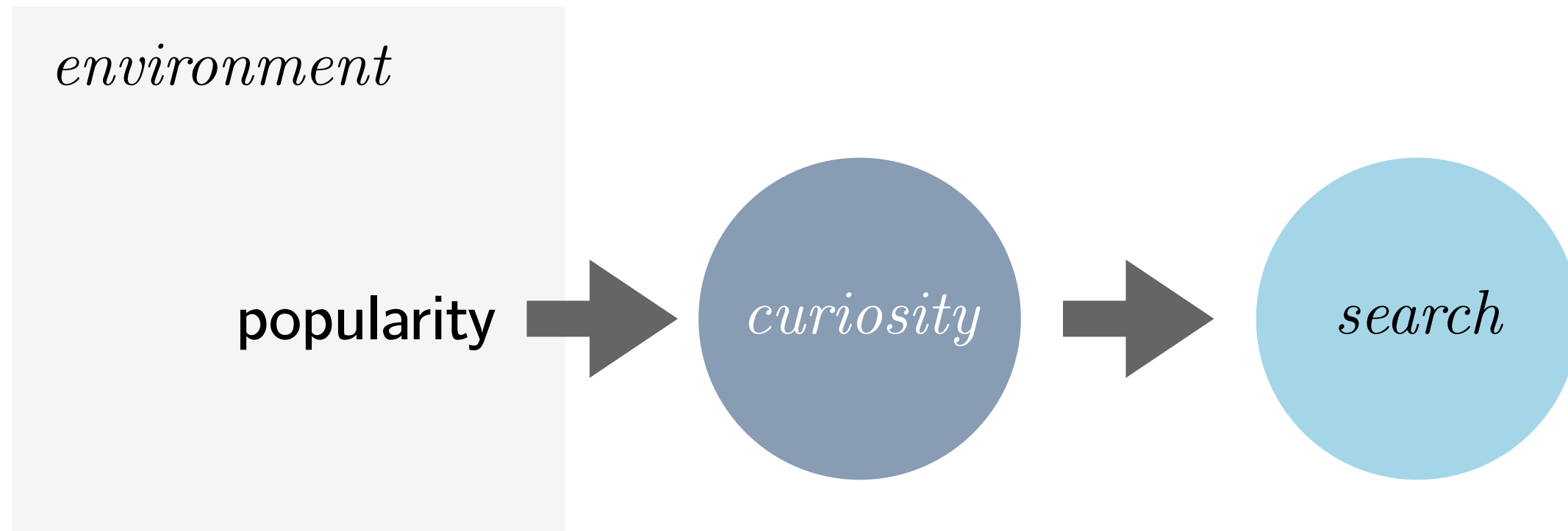
{
decisions
buying behavior
learning

(Cialdini & Trost, 1998)

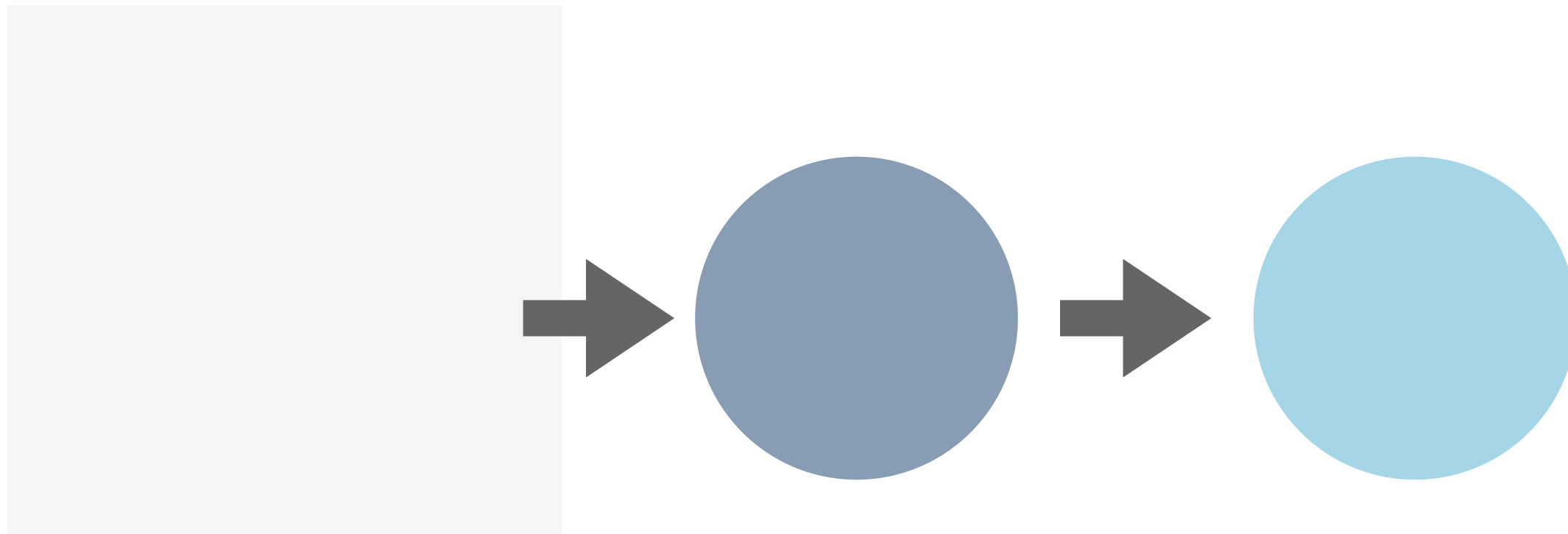
(Becker & Murphy, 2009)

(Parr & Townsend, 2002)

Overarching Question



Experiments



1. *partial-information setting*
2. *full-information setting*

Experiment 1

partial-information setting

sample size: $n = 291$

Stimuli



Why do your eyelids get puffy after crying?



Why aren't other animals as freaked out by bugs and creepy crawlies as humans?

50 *questions from ELI5 subreddit*

Partial-Information Setting



A question about **eyelids**.



A question about **insects**.

50 *questions from ELI5 subreddit*

Method

phase 1

phase 2

phase 3

A question about eyelids.
2407 people upvoted this question

How **popular** do you think this question is in this social forum?

How **curious** are you to know about the question and its answer?

question 1 of 10

Method

phase 1

phase 2

phase 3

Select exactly **five (5)** of ten topics you would like to reveal.

1. A question about eyelids (2407 people upvoted this question)
2. A question about insects (34 people upvoted this question)

...

Method

phase 1

phase 2

phase 3

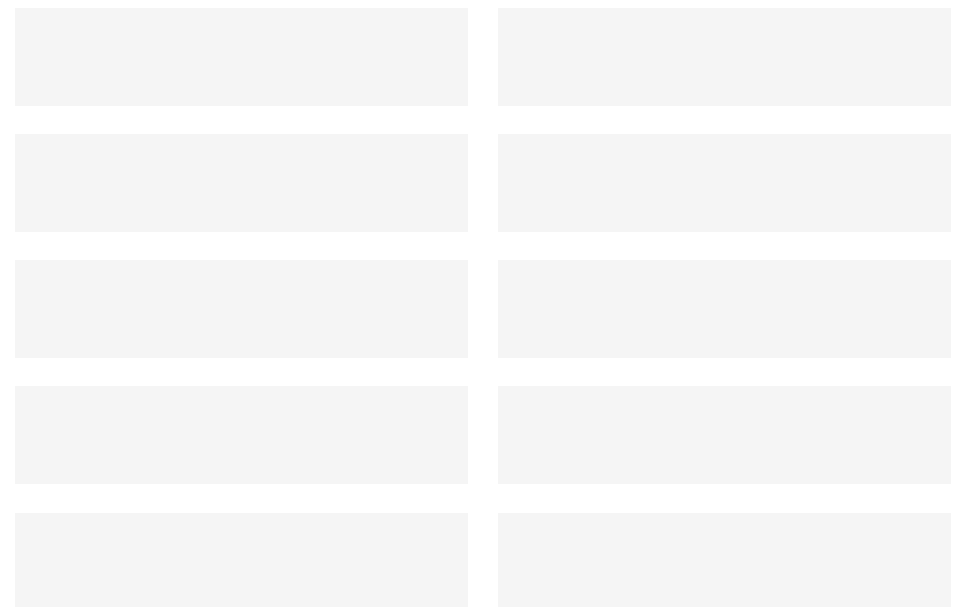
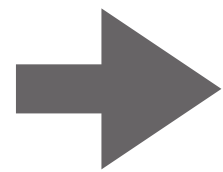
A question about eyelids.
2407 people upvoted this question

Question. Why do your eyelids get puffy after crying?

Answer. There are a number of factors. Tears from strong emotions are less salty than regular tears...

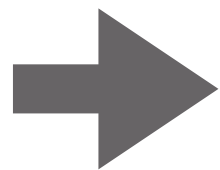
Manipulation

{ 50 }
questions



Manipulation

{ 50 }
questions



high

low

2407 upvotes

34 upvotes

2448 upvotes

31 upvotes

2512 upvotes

42 upvotes

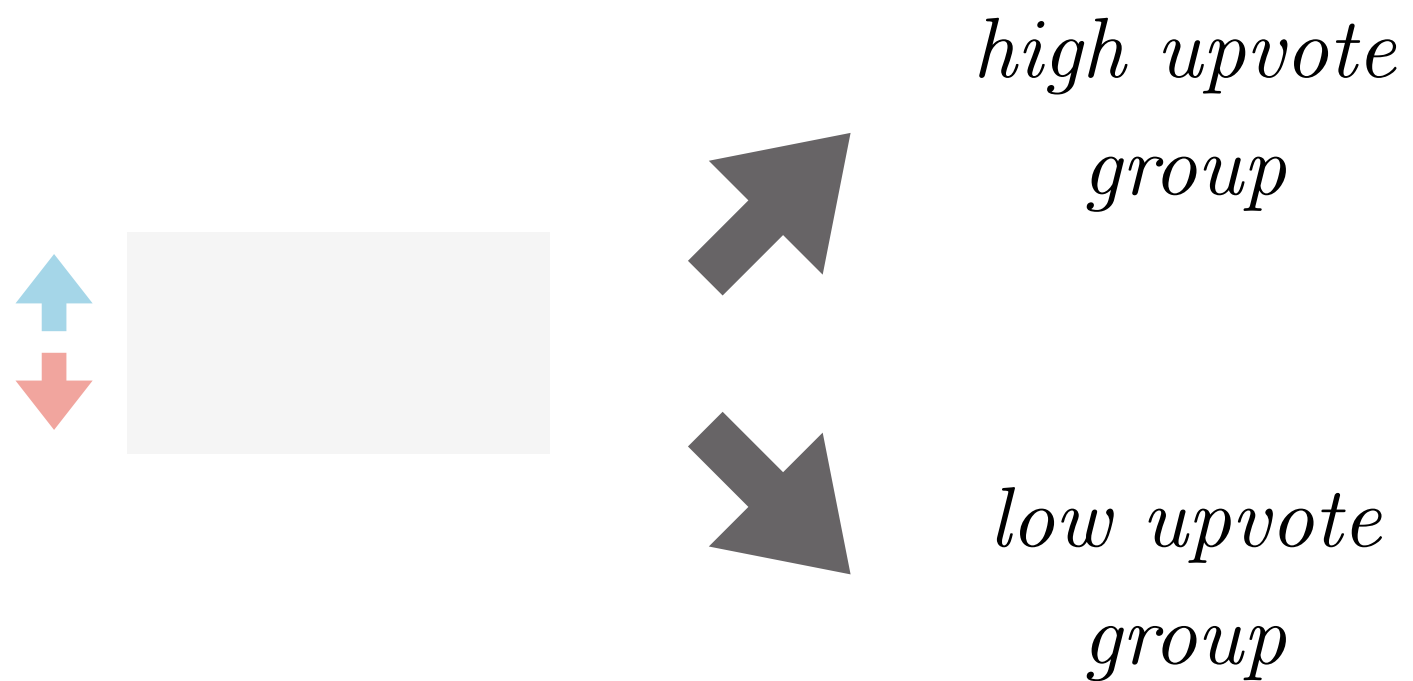
2398 upvotes

39 upvotes

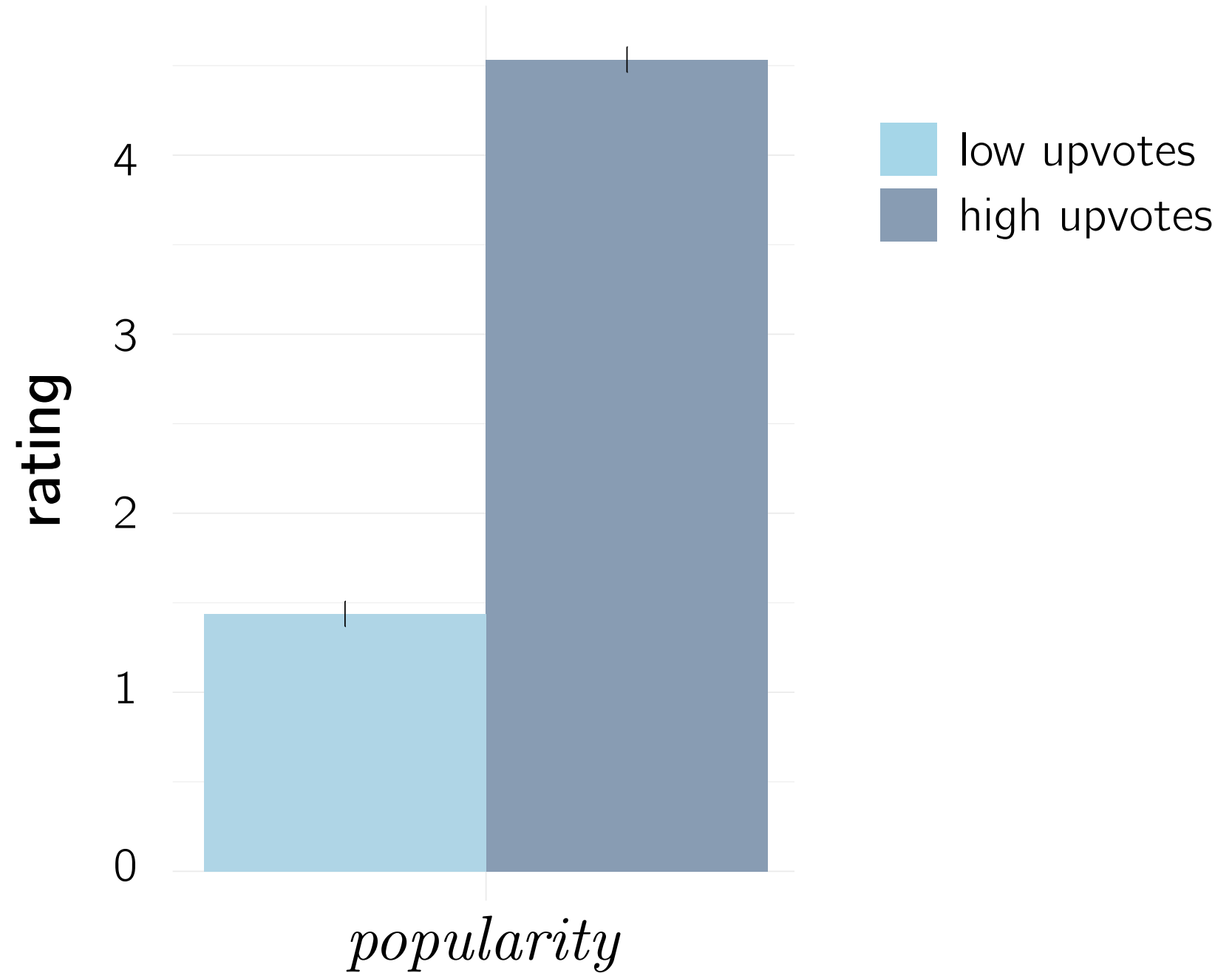
2461 upvotes

45 upvotes

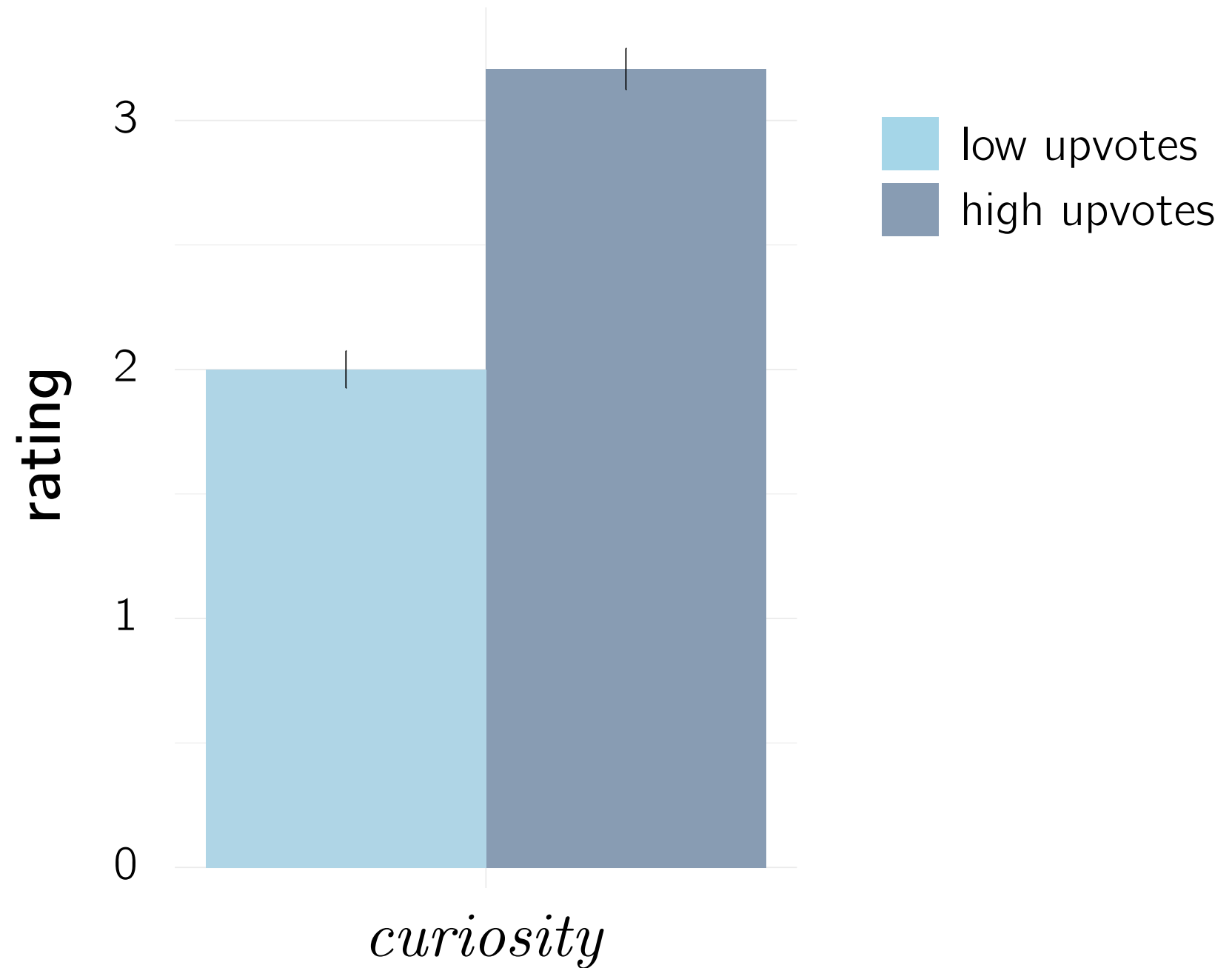
Manipulation



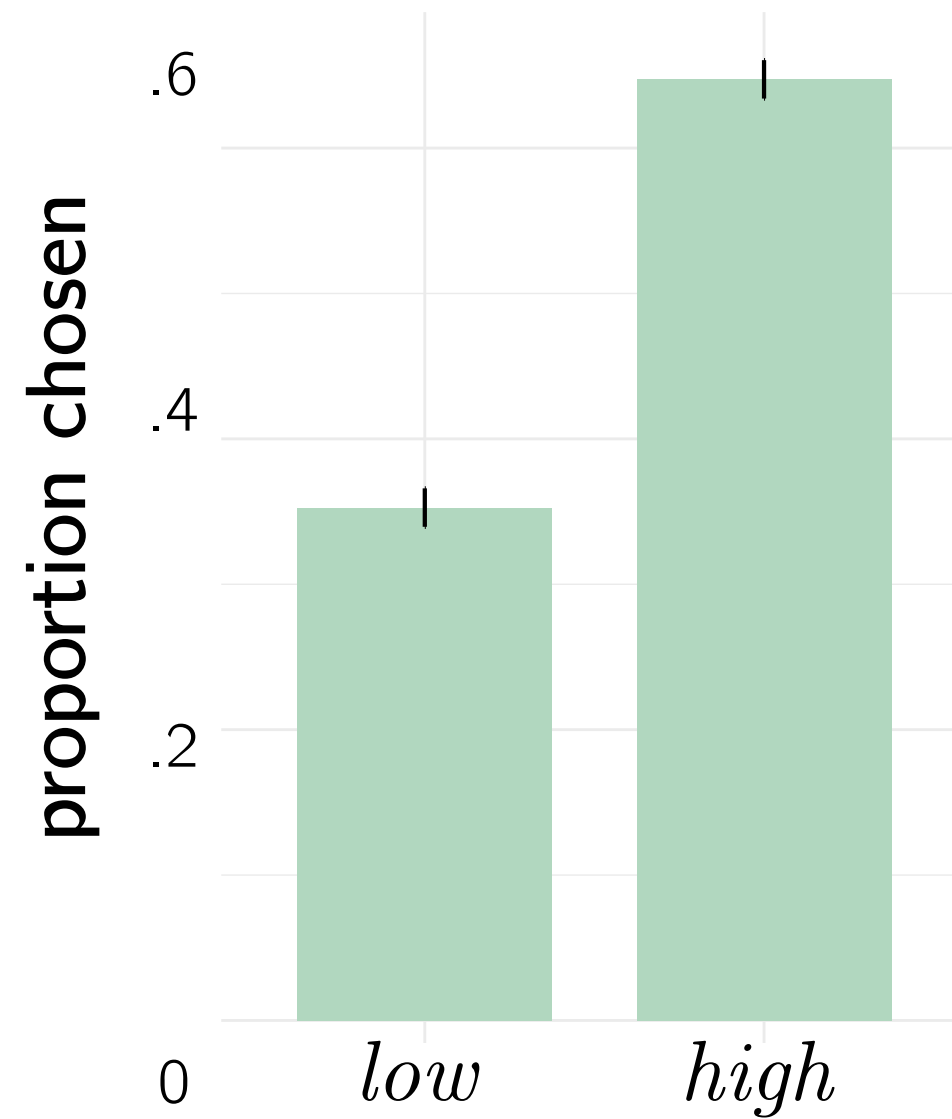
Upvotes are Popularity



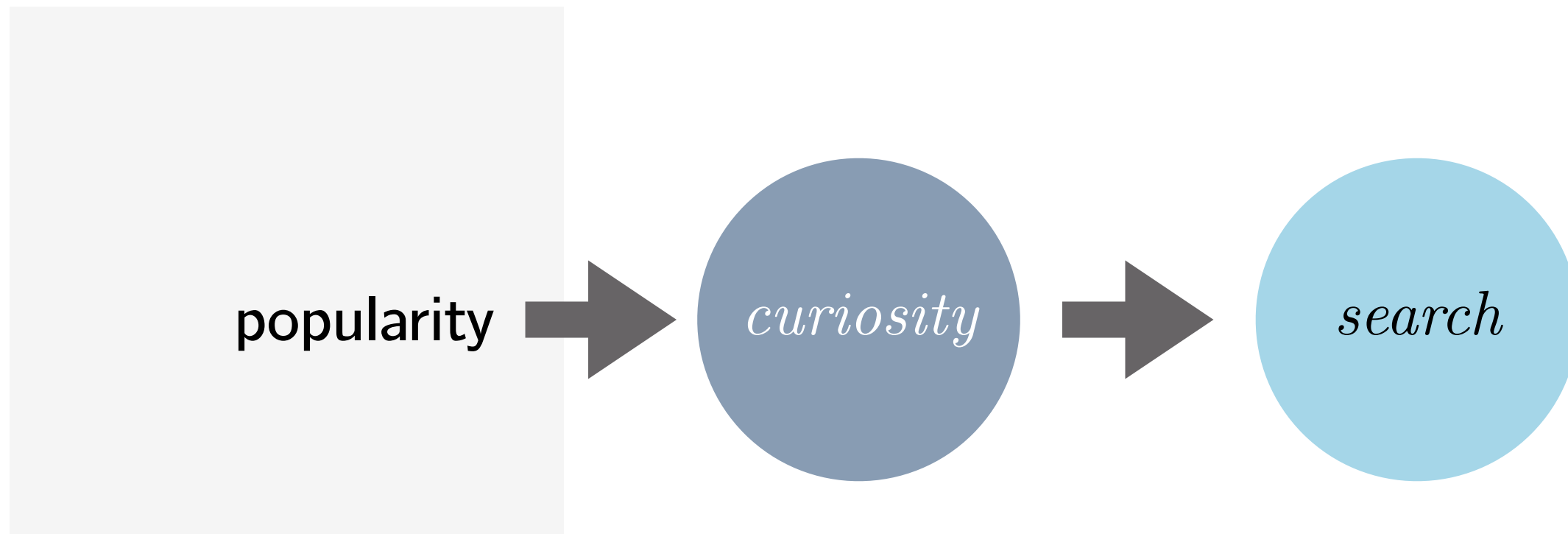
Upvotes Influence Curiosity



Upvotes Influence Search



Summary



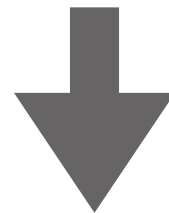
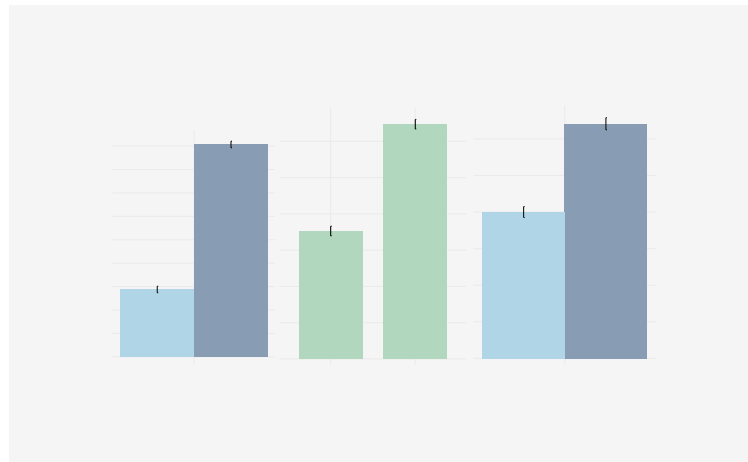
... in a partial-information setting

Experiment 2

full-information setting

sample size: $n = 292$

Goal



1. *would this effect generalize to a full-information setting?*

Method

phase 1

phase 2

phase 3

Why do your eyelids get puffy after crying?
2407 people upvoted this question

How **popular** do you think this question is in this social forum?

How **curious** are you to know about the question and its answer?

question 1 of 10

Method

phase 1

phase 2

phase 3

Select exactly **five (5)** of ten questions you would like to reveal.

1. Why do your eyelids get puffy after crying?
(2407 people upvoted this question)
2. Why aren't other animals as freaked out by bugs and creepy crawlies as humans?
(34 people upvoted this question)

...

Method

phase 1

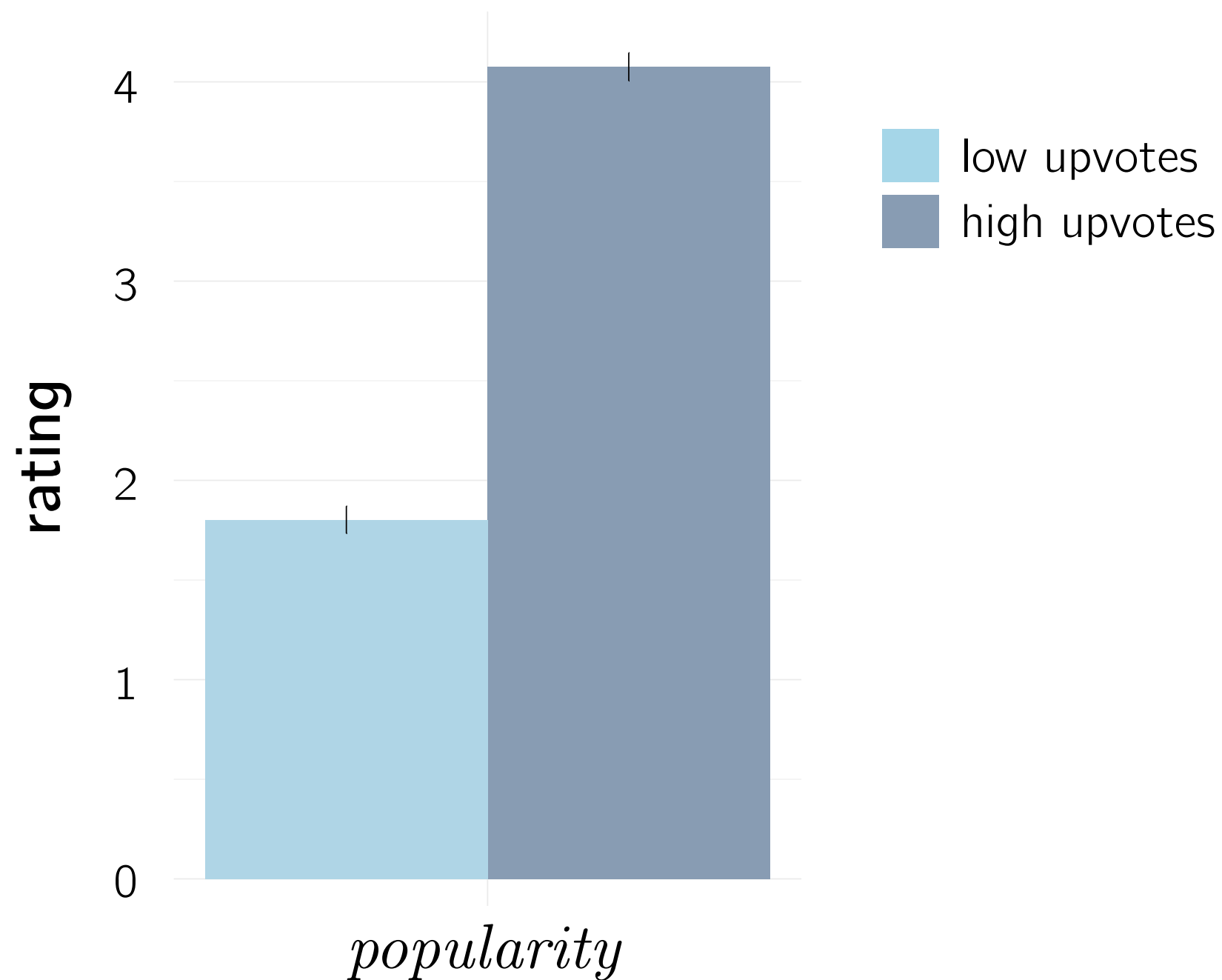
phase 2

phase 3

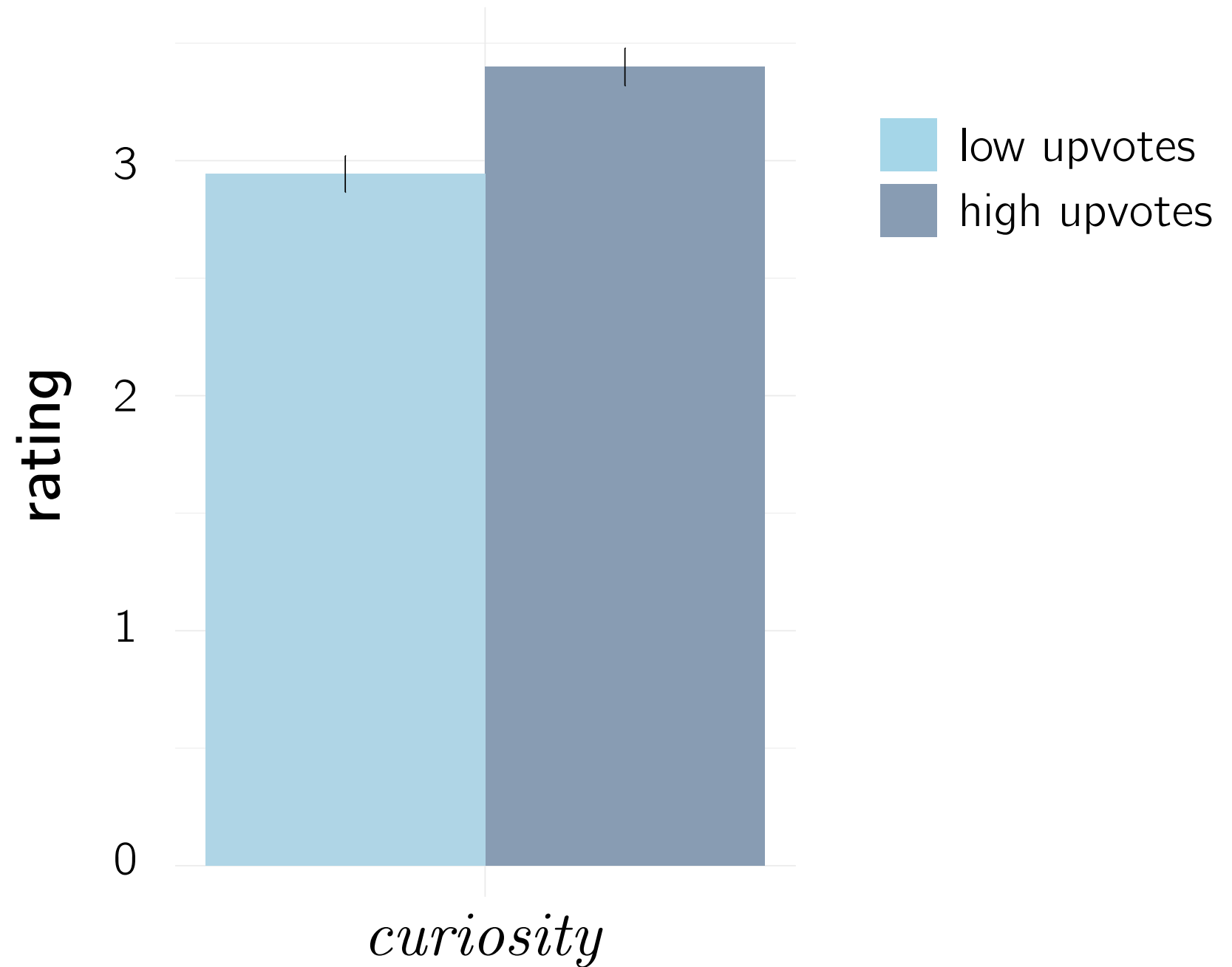
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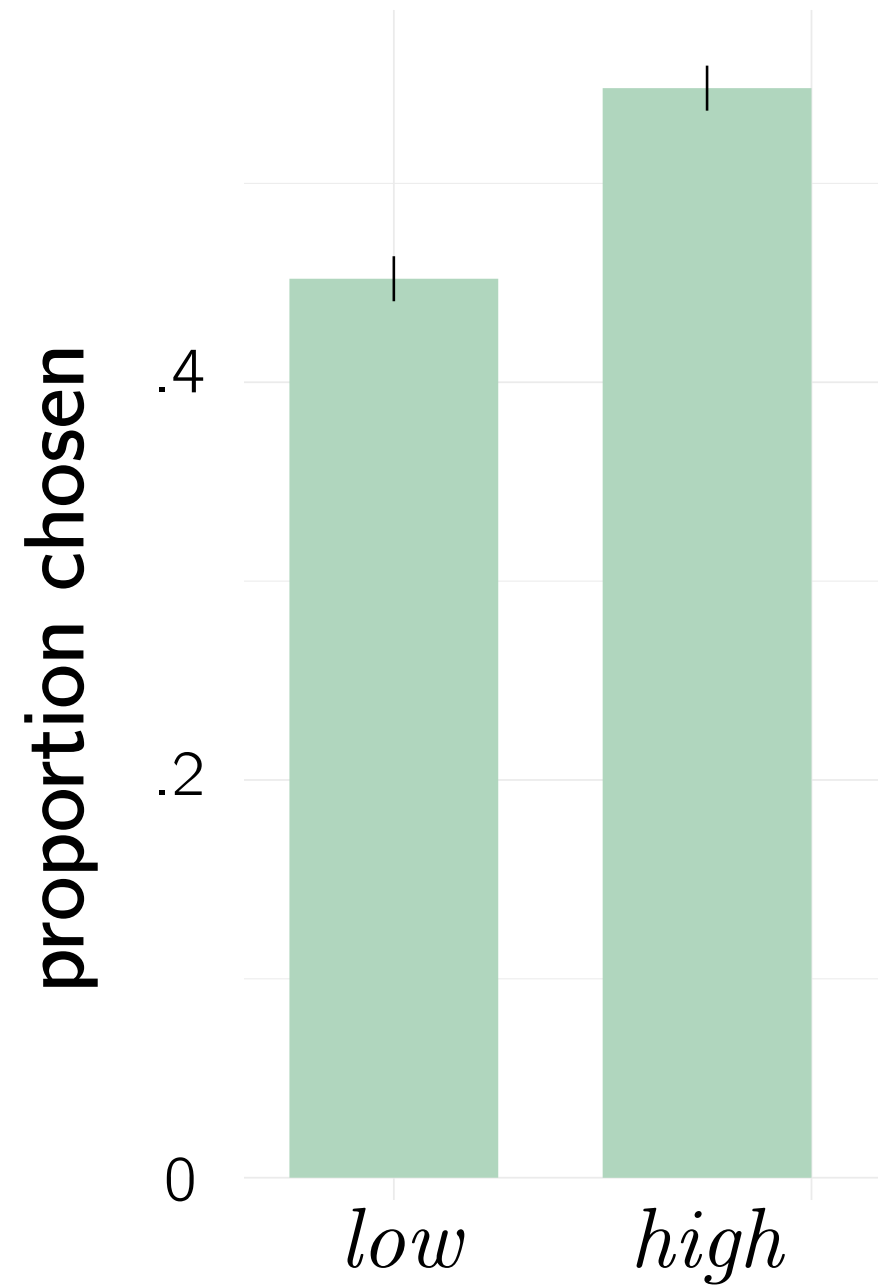
Upvotes are Popularity



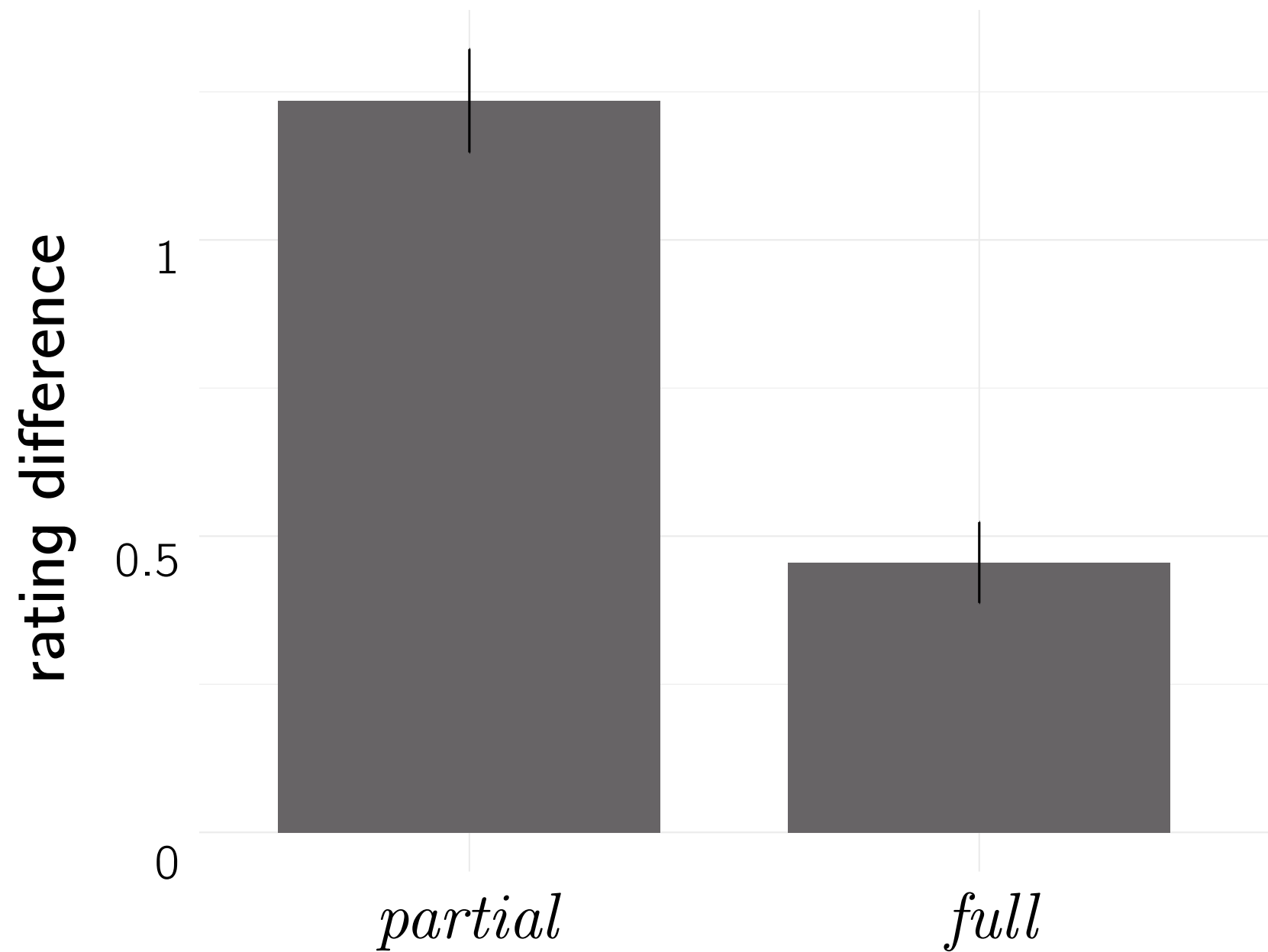
Upvotes Influence Curiosity



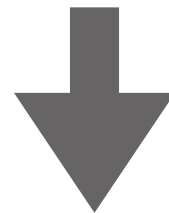
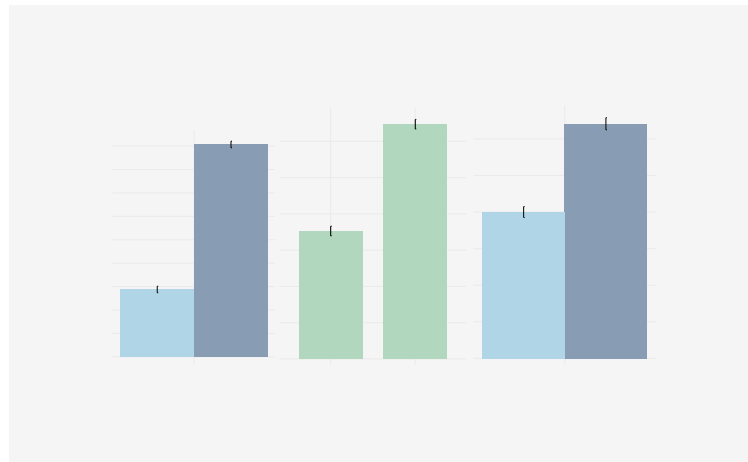
Upvotes Influence Search



Smaller Effect Sizes

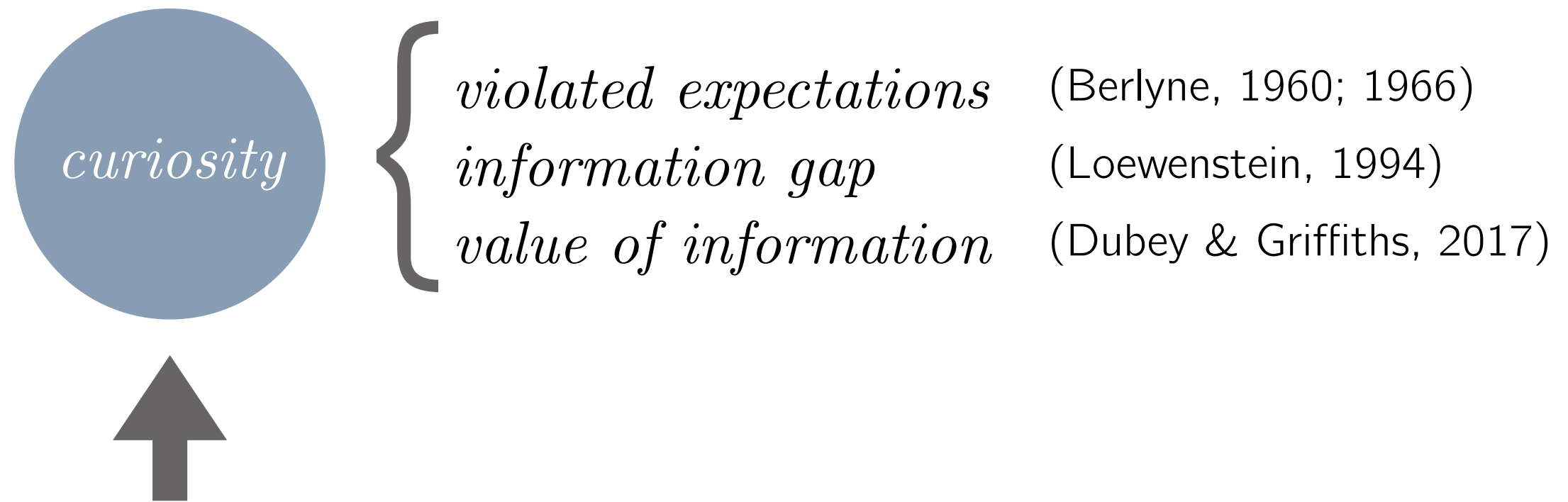


Goal



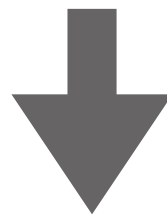
2. *why is curiosity affected by popularity?*

Theories of Curiosity



Potential Causes

{	<i>violated expectations</i>	(Berlyne, 1960; 1966)
	<i>information gap</i>	(Loewenstein, 1994)
	<i>value of information</i>	(Dubey & Griffiths, 2017)

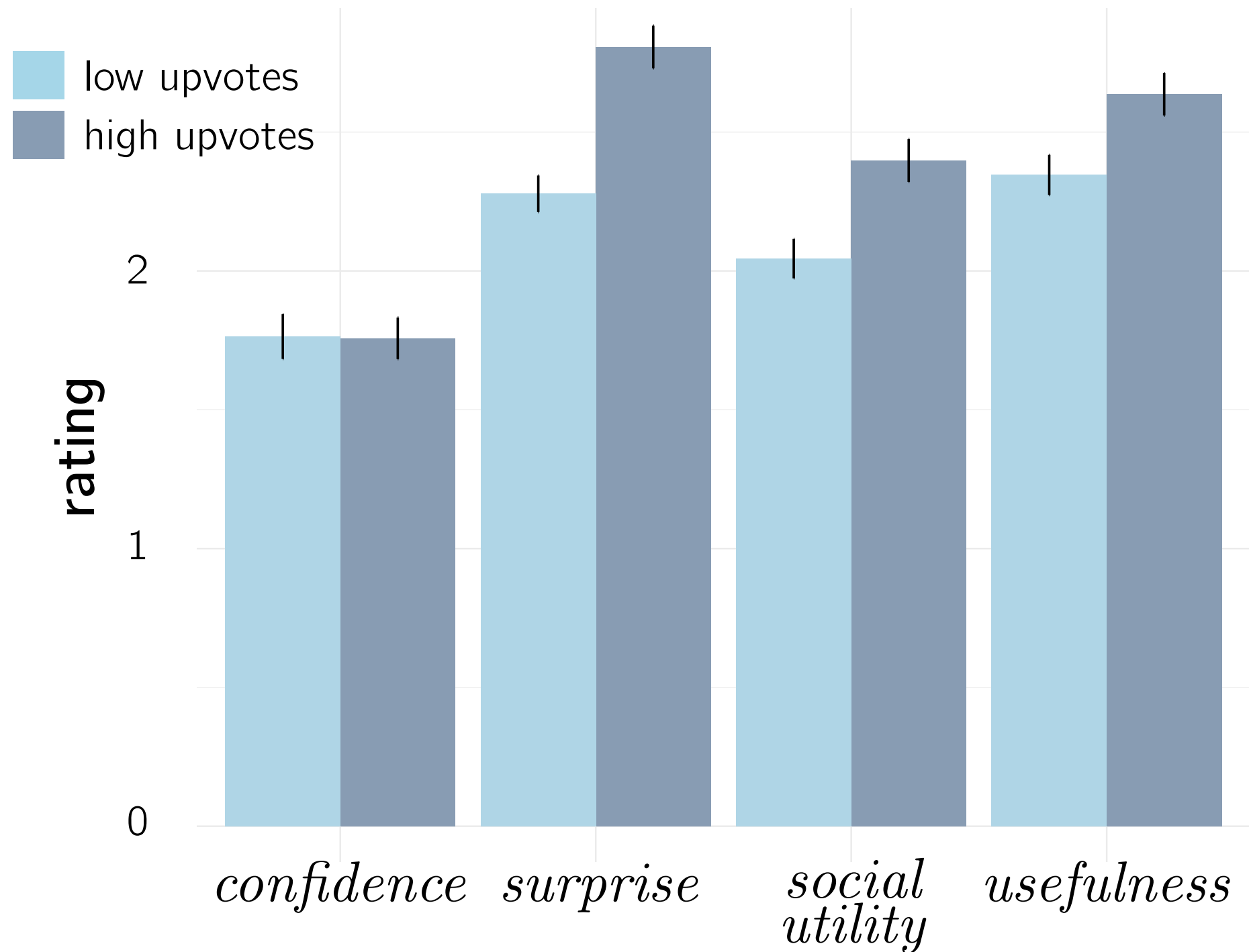


*confidence, surprise,
social utility, usefulness*

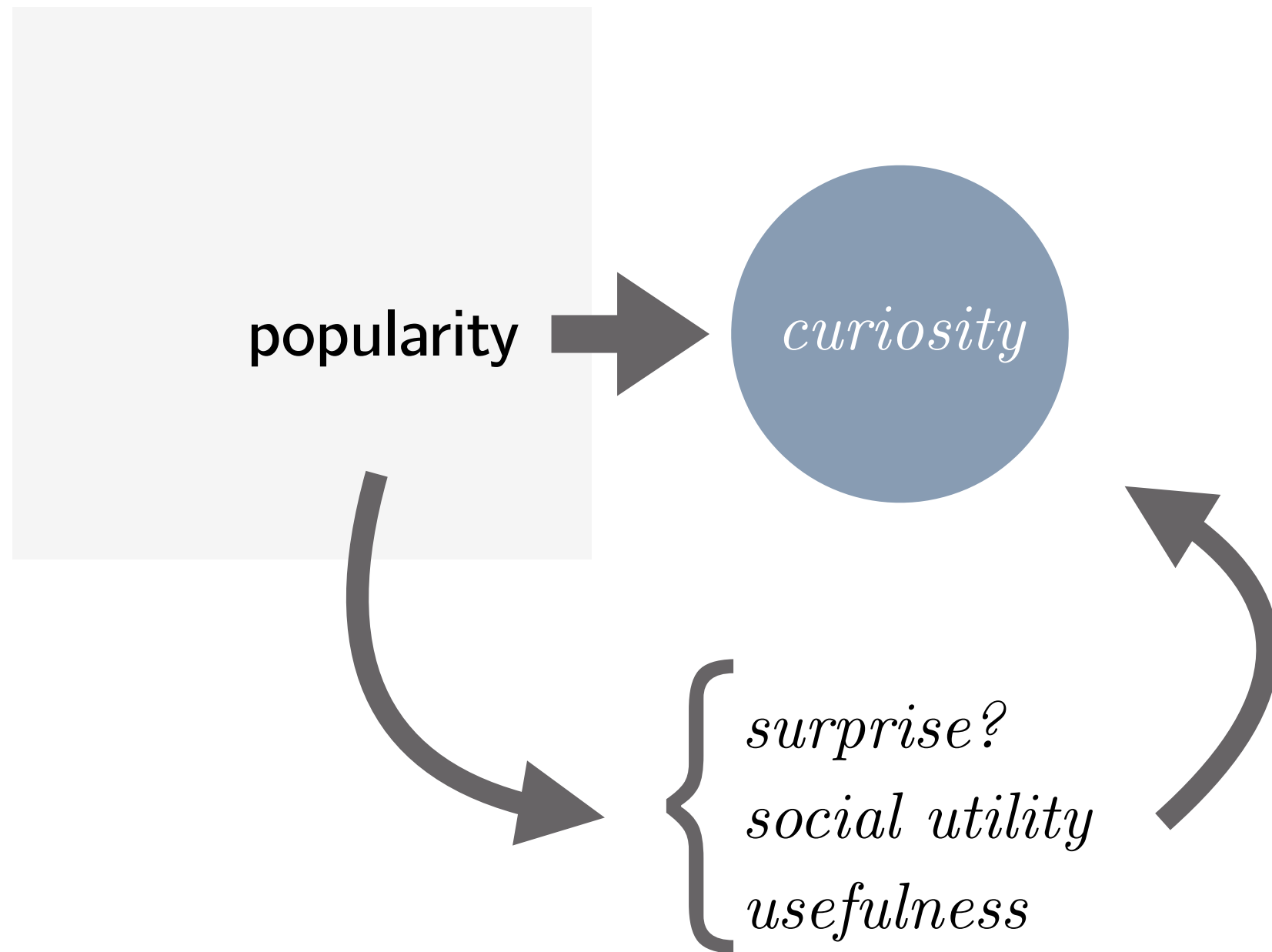
Additional Questions

3. How **confident** are you that you know the correct answer to this question?
4. How **surprised** are you by the popularity of this question?
5. To what extent would knowing the answer to this question be useful to you in a **social** setting?
6. To what extent would knowing the answer to this question be **useful** to you in the future?

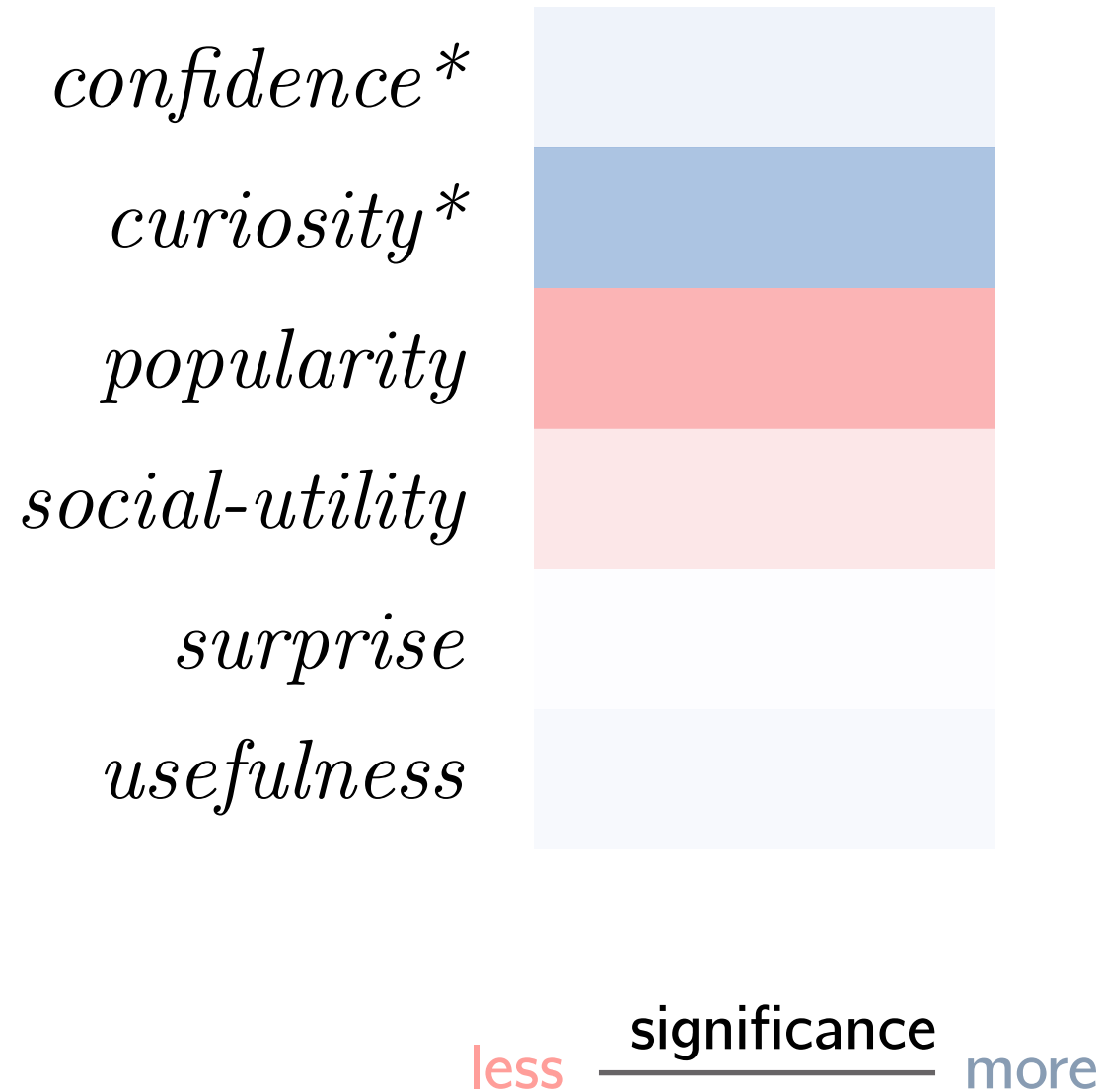
Some Factors Affected



Popularity Partially Mediated



Effect Not Reducible



Take-Aways

1

manipulating popularity **affects curiosity,**
changing information search

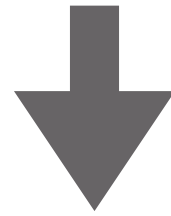
2

occurs in both **partial-information** *and*
full-information *settings*

3

possibly **caused by** *surprise, social utility*
and usefulness

Take-Aways



intervention methods?

(Pluck & Johnson, 2011; Gentry et al., 2014)

