

The Effect of Knowledge about a Group on Perceived Group Variability and Certainty about Stereotype-Based Inferences

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BACKGROUND

People often learn about categories, particularly social categories, based on biased sources of information.

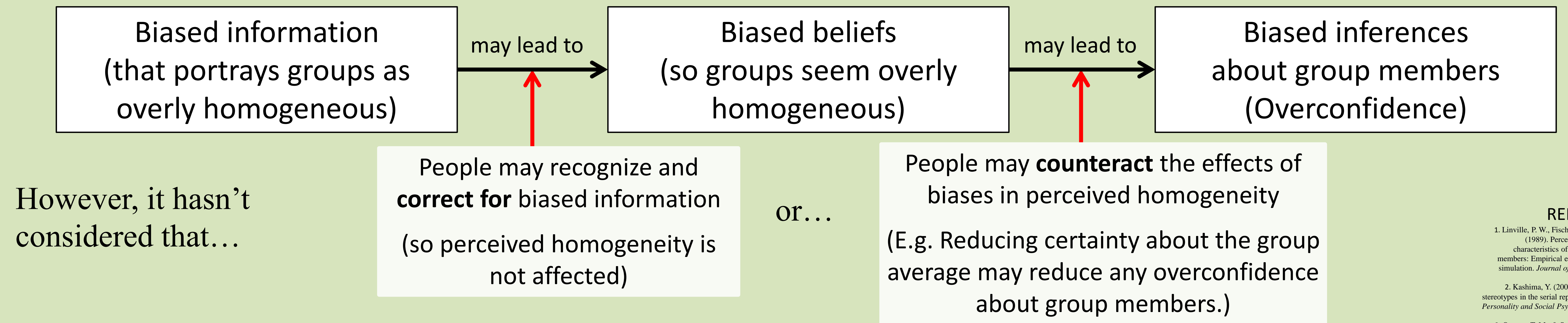
With **limited first-hand knowledge** from personal experience with a group, this may underrepresent a group's variability, because sample variance tends to be less than population variance¹



With **second-hand knowledge** (e.g. from media or other people), communication biases may lead to underrepresenting a group's variability²



Previous research suggests (but hasn't fully shown) that...^{1,3,4}



However, it hasn't considered that...

Do these corrective or counteracting processes occur, reducing effects of biased information?

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METHODS

People made ratings about 24 social groups:

	High 1 st -hand High 2 nd -hand	Low 1 st -hand High 2 nd -hand	Low 1 st -hand Low 2 nd -hand
Nationality	Chinese	French	Madagascar
	Indian	North Korean	Moroccan
Program of study	Finance	Priest-studies	Information Science
	Management	Astrophysics	Linguistics
Career	Family doctors	Politicians	Helicopter pilots
	High school teachers	Poets	Cartographers
Hobby	Fashion	Boxing	Collecting old books
	Video games	Knitting	Birdwatching

+ up to 4 self-generated groups participants were part of

Ratings about each group:

Certainty about group member:

For a random person from this group, how [extraverted] are they? How certain are you?

Certainty about group average:

How [extraverted] is this group on average? How certain are you?

Perceived homogeneity:

How similar are people in this group in terms of how [extraverted] they are?

First-hand knowledge: (reverse coded to compute lack of first-hand knowledge)

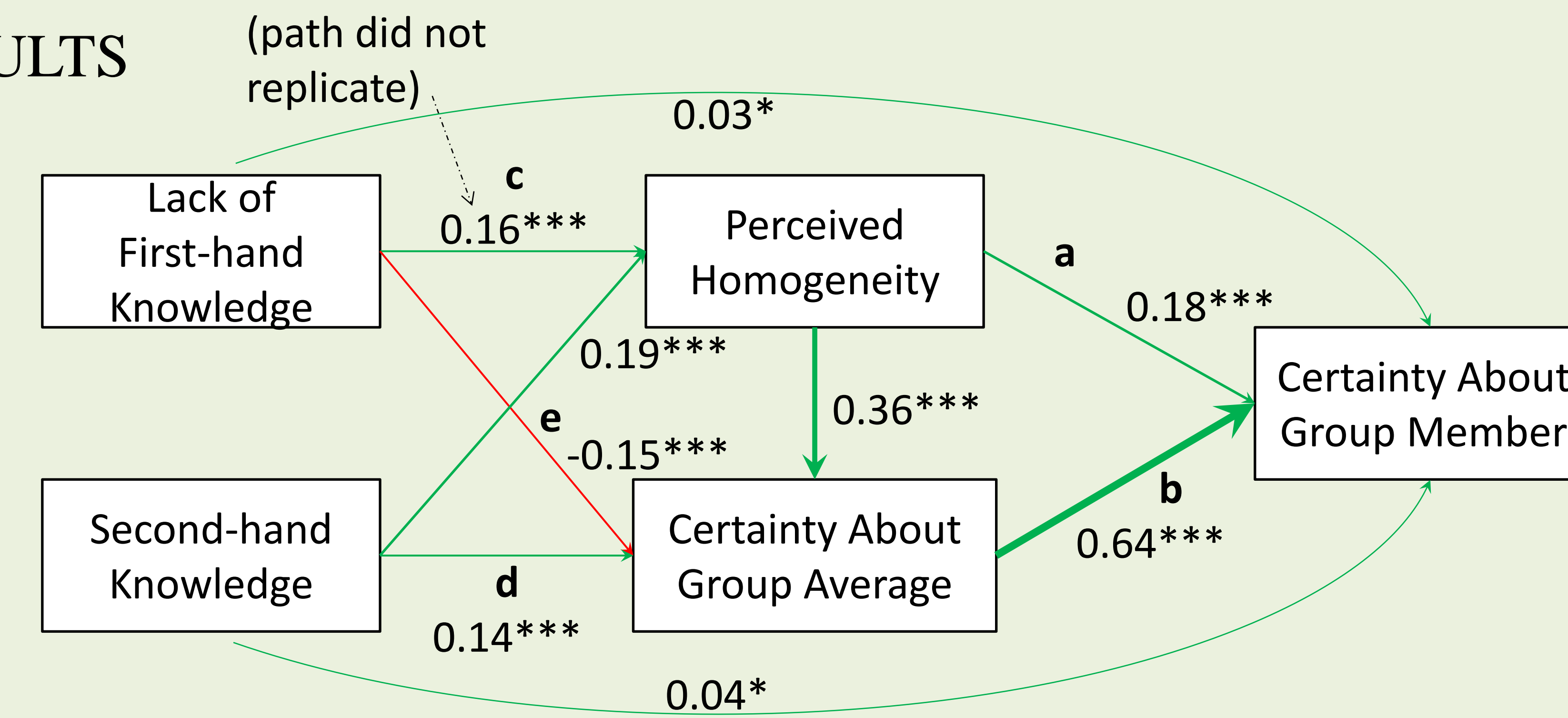
How much do you know about this group's personality based only on your personal experience interacting with them?

Second-hand knowledge:

How much do you know about this group's personality based only on other sources of information (e.g. the media or other people)?

Traits:
extraverted,
organized,
adventurous,
creative

RESULTS



Total effects on certainty about group members:

Lack of First-hand knowledge:
 $\beta = -0.05$ **

Second-hand knowledge:
 $\beta = 0.17$ ***

People determined their certainty about group members' traits based on a group's perceived homogeneity (path a) and their certainty about the group average (path b).

Biased information made groups appear more homogeneous (this was not corrected for), both when people lacked 1st-hand knowledge (path c) (though this did not replicate in a follow up study) and when people had 2nd-hand knowledge about a group (path d).

For 2nd-hand knowledge, this led to greater certainty about group members (it was not counteracted).

For a lack of 1st-hand knowledge, this was counteracted, so certainty about group members did not increase, because people were also less certain about the group average (path e). (See total effects.)

DISCUSSION: This work highlights the need examine more closely when biased information will bias category-based inferences, and the processes that may allow people to correct for or counteract these biases.