



The paradox of the environmentally conscious: when product return behavior misaligns with intentions

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Summary

Topic: This research examines customer retail return behavior by their environmental consciousness.

Motivation: Returned inventory incurs major environmental costs through transportation, packaging, and disposal of returned goods. Reducing return rates should be a win-win for the environment, consumers, and retailers.

Methods / findings: Through a lab study, we found that more (vs. less) environmentally conscious consumers were more likely to return items because they purchased multiple sizes of the same item at once. We analytically modeled this purchase behavior and found that an environmentally conscious consumer should prefer buying sequentially.

Impact: This incongruence could impact the way retailers present product information and help consumers understand blind-spots in their behavior, reducing return rates.

Methods

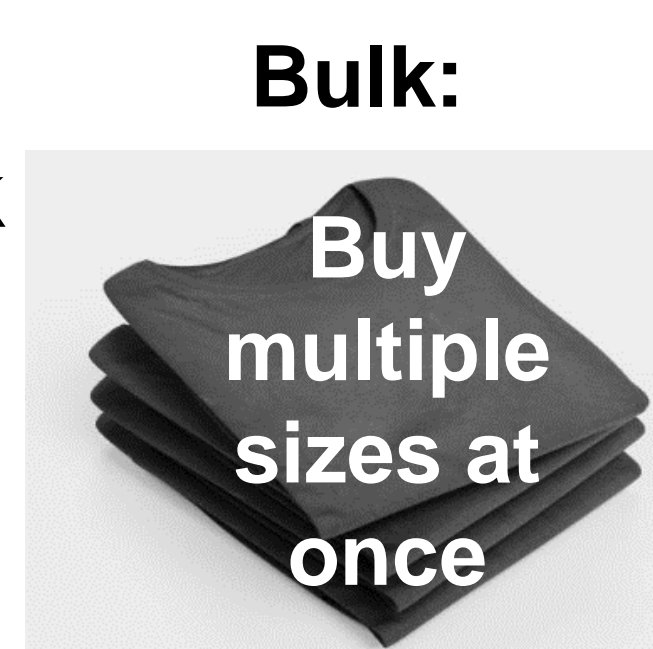


Lab study:

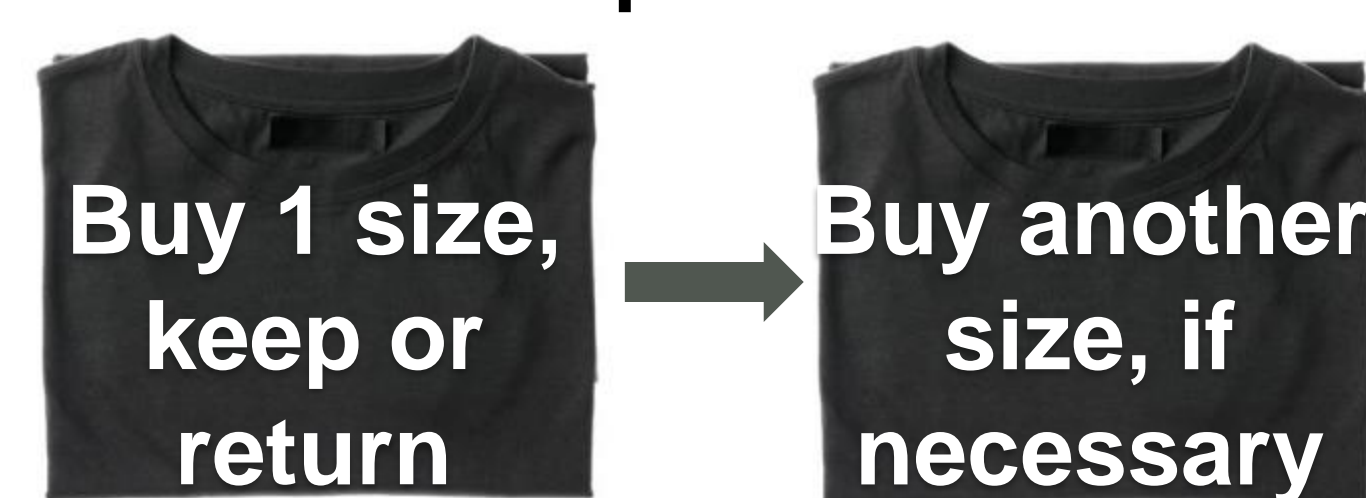
201 participants (38% female) were recruited and given a hypothetical prompt about purchasing a jacket from an online retailer.

Participants were asked:

- Return likelihood?
- Purchasing 1 or 2+ sizes?
- Environmentally conscious question bank



Sequential:



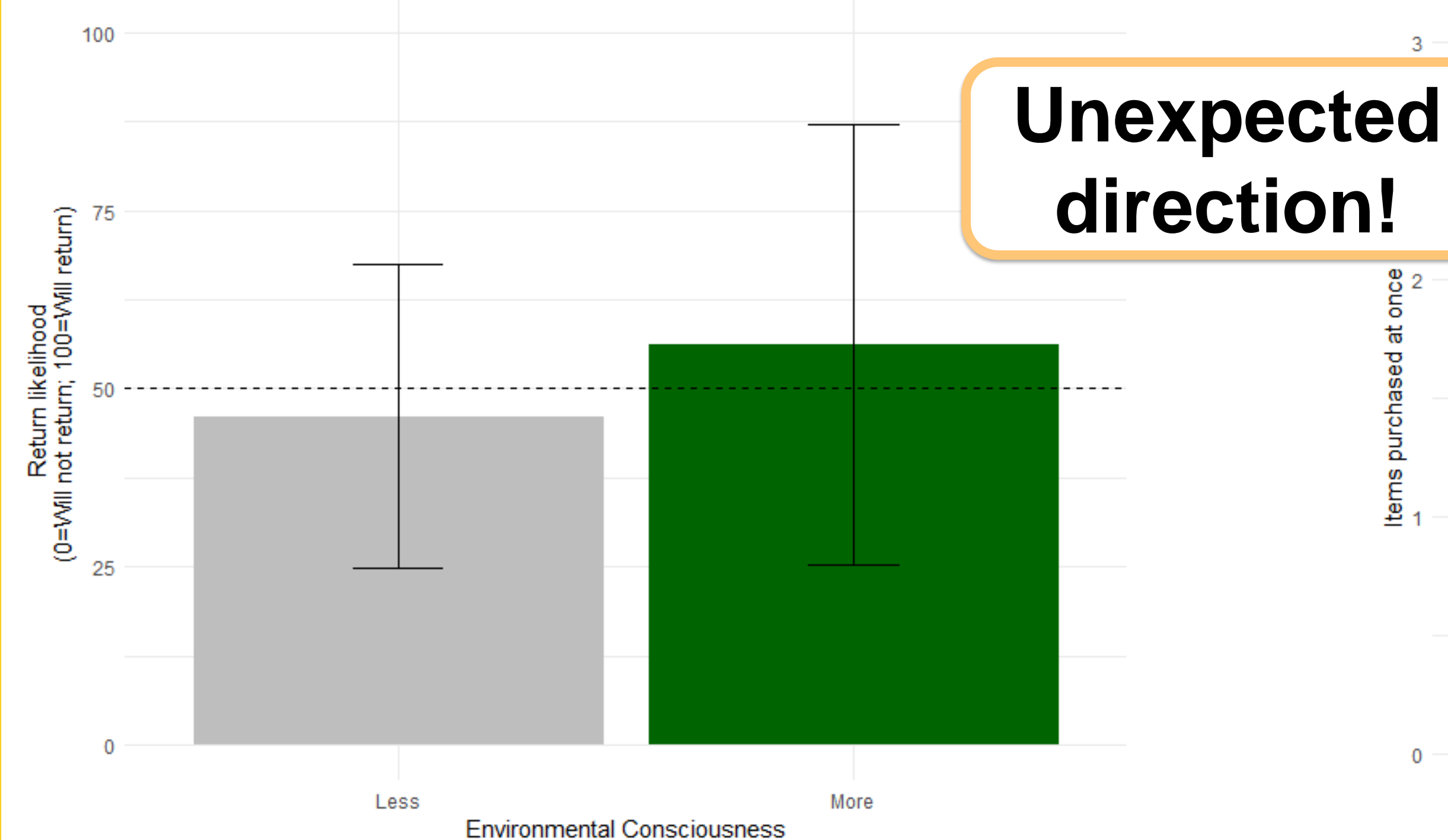
Analytical study:

From the lab study, we found participants bought multiple sizes of the same item at a time, increasing return likelihood. Using a decision tree with probabilities associated with liking and/or fit of an item, we calculated the environmental cost for the return process for each path on the tree. We compared the expected environmental costs of purchasing two sizes of an item vs. one size of an item.

Lab study: Results

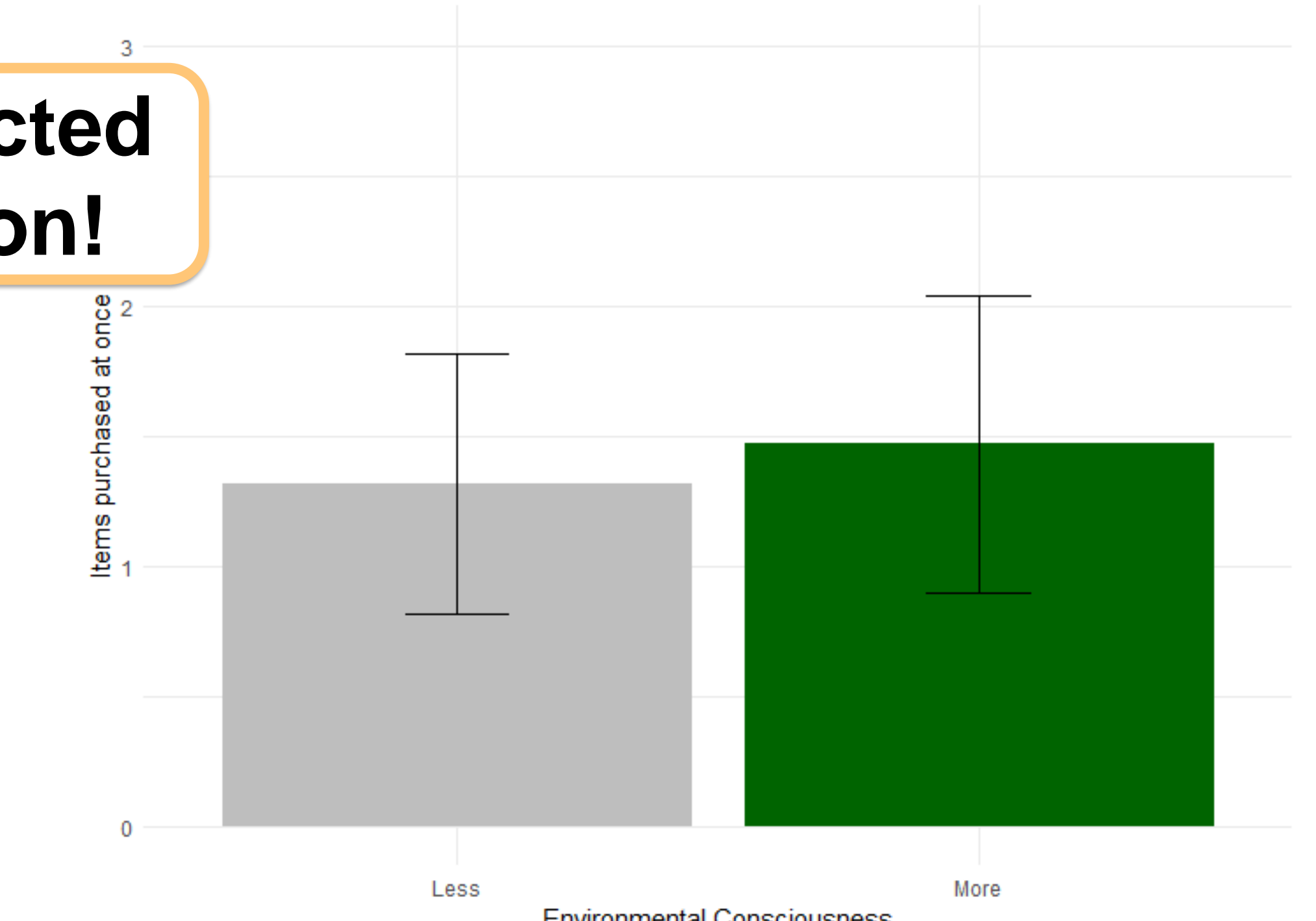
Return likelihood by environmental consciousness:

More environmentally conscious consumers are more likely to return items.



Items purchased by environmental consciousness:

More environmentally conscious consumers are more likely to purchase multiple sizes of the same item.

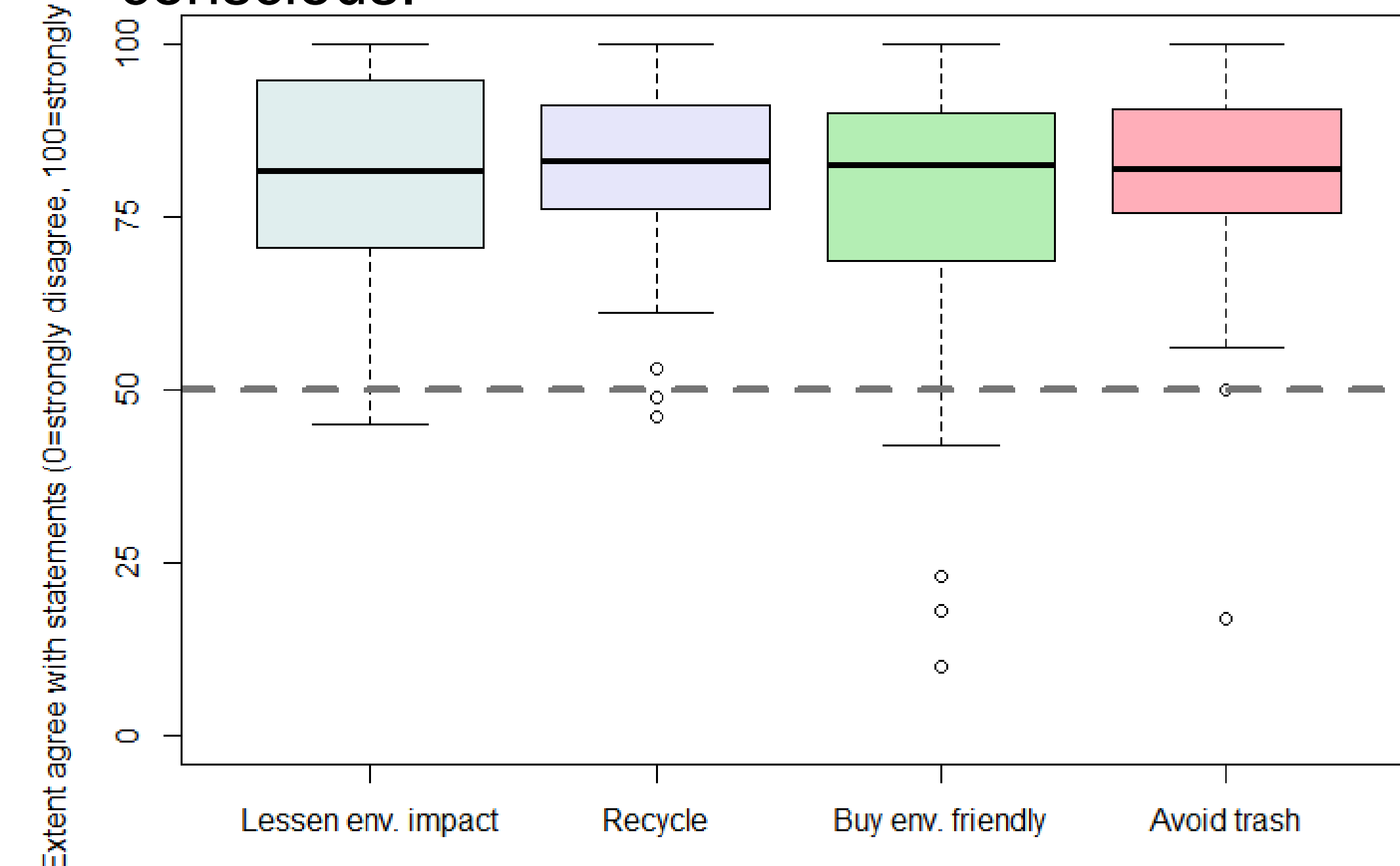


The environmentally conscious group

Environmentally conscious question bank. Participants answered the extent to which they agree with the following questions:

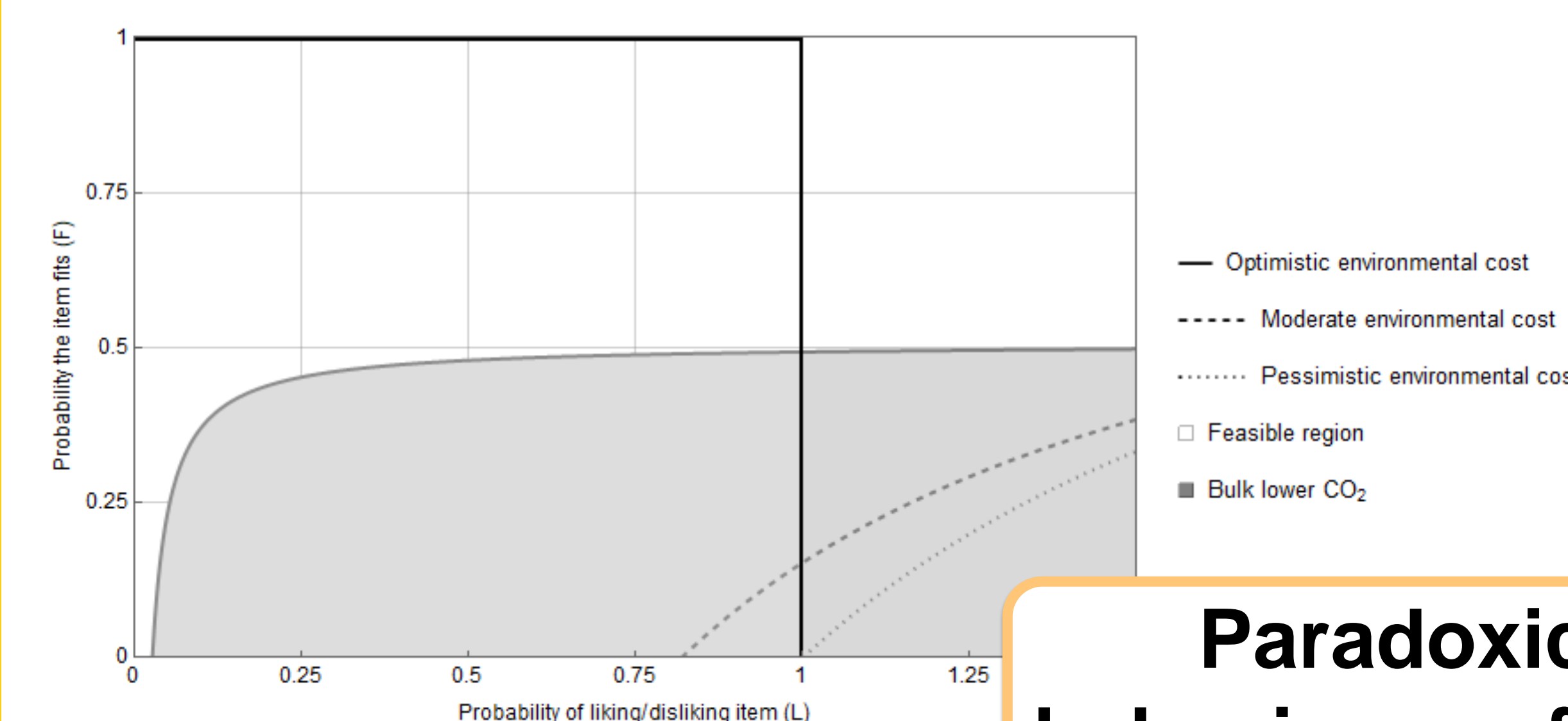
1. I have made significant changes in my lifestyle to lessen my environmental impact.
2. I go out of my way to recycle.
3. I go out of my way to buy products that are environmentally friendly.
4. I will be repairing, recycling, or donating items rather than throwing away or buying new clothing.

Participants that answered in the top 50% of any 3 questions are "More" environmentally conscious.



Analytical study: Results

Plot of probabilistic conditions where consumers should purchase in bulk (gray region). This is defined by the probability the items fits and the probability of liking/disliking the item.



Takeaways:

- In most cases, consumers should purchase sequentially.
- If fit is more certain, consumers should always buy sequentially.
- Some caveats (when optimistic scenarios occur).

Paradoxical behavior confirmed!