



When do perceptions of wastefulness affect how people make choices?

A recommendation by **Douglas Markant** ^{ID} based on peer reviews by **Quentin Andre** and **Travis Carter** ^{ID} of the STAGE 2 REPORT:

Zijin Zhu, Gilad Feldman (2024) Revisiting the Psychology of Waste: Replication and extensions Registered Report of Arkes (1996). OSF, ver. 5, peer-reviewed and recommended by Peer Community in Registered Reports. <https://osf.io/2jnc8>

Submitted: 05 June 2024, Recommended: 18 September 2024

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Markant, D. (2024) When do perceptions of wastefulness affect how people make choices?. *Peer Community in Registered Reports*, 100801. [10.24072/pci.rr.100801](https://doi.org/10.24072/pci.rr.100801)

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When does the perceived wastefulness of different actions affect people's choices? In an influential set of studies examining different conceptions of wastefulness (overspending, underutilization, and sunk costs), Arkes (1996) found a systematic aversion to wastefulness in decision making, even when choosing to avoid wastefulness has no economic value or works against personal interest. While these findings have been influential in basic and applied research, there have been no attempts to directly replicate the results. Moreover, the original study had several methodological limitations, including the use of relatively small samples and critical gaps in statistical reporting and analyses. In the current study, Zhu and Feldman (2024) conducted a high-powered replication of Arkes (1996) using an online sample of participants (N=659). The authors incorporated several extensions to improve the methodological rigor relative to the original article, including comprehension checks, manipulation checks, a within-subjects design, and a novel quantitative analysis of participants' self-reported motivations for their choices. The authors successfully replicated the effect of perceived wastefulness on two of the three scenarios used in the original article, but participants' self-reported reasons for their choices only provided partial support for the role of perceived wastefulness in decisions, with behavioral consistency and maximizing economic value also playing a role. The original effect was not observed in a third scenario, with a failed manipulation check that may indicate changes in the perceptions of wastefulness in the domain (tax preparation). Overall, the results provide some support for the role of wastefulness aversion in decision making, while also showing that perceived wastefulness might be outweighed by other considerations depending on how people interpret or reason about a situation. The Stage 2 manuscript was evaluated over one round of in-depth review by the recommender and two expert reviewers. Following revision, the recommender judged that the manuscript met the Stage 2 criteria and awarded a positive recommendation. **URL to the preregistered Stage 1 protocol:** <https://osf.io/r7tsw> **Level of bias control achieved:** Level 6. No part

of the data or evidence that was used to answer the research question was generated until after IPA. **List of eligible PCI RR-friendly journals:**

- [Collabra: Psychology](#)
- [International Review of Social Psychology](#)
- [Meta-Psychology](#)
- [Peer Community Journal](#)
- [PeerJ](#)
- [Royal Society Open Science](#)
- [Social Psychological Bulletin](#)
- [Studia Psychologica](#)
- [Swiss Psychology Open](#)

References:

1. Arkes, H. R. (1996). The psychology of waste. *Journal of Behavioral Decision Making*, 9, 213-224. [https://doi.org/10.1002/\(SICI\)1099-0771\(199609\)9:3%3C213::AID-BDM230%3E3.0.CO;2-1](https://doi.org/10.1002/(SICI)1099-0771(199609)9:3%3C213::AID-BDM230%3E3.0.CO;2-1)
2. Zhu, Z. and Feldman, G. (2024). Revisiting the Psychology of Waste: Replication and extensions Registered Report of Arkes (1996) [Stage 2]. Acceptance of Version 5 by Peer Community in Registered Reports. <https://osf.io/2jnc8>

Reviews

Evaluation round #1

DOI or URL of the preprint: <https://osf.io/drhxm>

Version of the preprint: 4

Authors' reply, 07 September 2024

Revised manuscript: <https://osf.io/2jnc8>

All revised materials uploaded to: <https://osf.io/gf8rc/>, updated manuscript under sub-directory "PCIRR Stage 2\PCI-RR submission following R&R"

[Download author's reply](#)

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Decision by **Douglas Markant** , posted 30 July 2024, validated 30 July 2024

When do perceptions of wastefulness affect how people make choices?

Dear Dr. Feldman,

Thank you for submitting your Stage 2 registered report entitled “Revisiting the Psychology of Waste: Replication and Extensions Registered Report of Arkes (1996)” to PCI: Registered Reports. I have received comments from the same reviewers from Round 1 and have reviewed the report myself. Overall, we are in agreement that the updated submission largely meets the Stage 2 review criteria, and that the resulting report is impressive in its clarity, attention to detail, and thorough documentation of the methods and analyses.

There are a few details related to the results and discussion that are in need of revision before moving to a final acceptance. Please address the following points in your revision:

1. Address the inconsistencies in the results noted by reviewer TC below.
2. Clarify details of the order effect analyses:
 - (a) There appears to be an incomplete footnote on pg. 59. Please correct with the justification for any departure from the Stage 1 submission. Wasn't the intention simply to use a stricter .005 threshold for any significance tests?
 - (b) “We suggest caution in over-interpreting these effects, and as we noted in the peer review in Stage 1.” — I'd recommend providing a brief explanation of this point rather than alluding to an external document. You might consider instead providing a link to the PCI:RR page in the footnote.
3. Clarify interpretation and discussion of “reasons” for choice:
 - (a) Pg. 49: “Thus, we found support for minimizing waste as the most important reason, with no support for differences between the waste and no waste conditions.” — This obscures the finding that waste and value were indistinguishable as reported reasons for this scenario.
 - (b) While there is discussion of the reported reasons for Scenario 1, the discussion for Scenarios 2 and 3 focuses only on differences between conditions. For example there is no discussion of the notable finding that waste was the least endorsed reason in Scenario 2, an interesting result that appears to be at odds with the intention of the target article. I'd recommend providing further discussion of these results that revisits the “Exploratory competing hypotheses” listed in Table 1 for all 3 scenarios.
 - (c) Pg. 62: “The absence of significant effects suggests that the influence of various decision-making factors does not substantially vary across different conditions. This finding indicates that the decision-making process is stable, with participants consistently applying the same reasoning regardless of variations in the level of wastefulness.” — This conclusion seems tenuous in light of the manipulation checks, particularly in the case of Scenario 2 where there was no difference in perceived wastefulness. You might consider discussing the manipulation checks earlier, since they are important to the interpretation of the other effects. But absent such a change, I recommend revising this statement to reflect the actual variation in perceived wastefulness (or lack thereof) seen in these scenarios.

Best wishes,
Doug Markant

Reviewed by **Travis Carter** , 15 July 2024

The authors did an admirable job with a full and complete reporting of their analyses. I also appreciate the care with which they approached drawing conclusions, particularly with regard to Scenario 2, which did not

yield results that were consistent with the original paper. Their thoughtful inclusion of a manipulation check was helpful in putting that null result into context.

I noticed a few typos, so I'd suggest the authors/editors give it a thorough proofreading.

I also noticed one small issue with the reporting of the results: As part of the Willingness extension, for Scenario 2, the 95% CI excludes zero, yet it yielded a non-significant p-value. Was the lower bound meant to be negative? The text (p. 53), Table 14, and caption for Figure 8 are inconsistent about the sign of the t-test, effect size, and CIs. Similar inconsistencies with Scenario 3 in the text (p. 54) between the table (14) and figure (9). These likely come down to slightly different defaults in the stats software about identifying Group 1 vs. 2.

Reviewed by [Quentin Andre](#), 05 July 2024

In generating this review, I have followed the guidelines for Stage 2 RR:

Have the authors provided a direct URL to the approved protocol in the Stage 2 manuscript? YES

Did they stay true to their protocol? Are any deviations from protocol clearly justified and fully documented?
YES

Is the Introduction in the Stage 1 manuscript (including hypotheses) the same as in the Stage 2 manuscript?
Are any changes transparently flagged? YES

Did any prespecified data quality checks, positive controls, or tests of intervention fidelity succeed? YES

Are any additional post hoc analyses justified, performed appropriately, and clearly distinguished from the preregistered analyses? YES

Are the conclusions appropriately centered on the outcomes of the preregistered analyses? YES

Are the overall conclusions based on the evidence? YES

My conclusion is thus that the authors have adhered to the methods and analysis reported in the in-principle acceptance of their stage 1 manuscript.

I found the results of the replication clearly reported, and the exploratory analysis of mechanisms to be enlightening and clear. The manuscript is long and dense, but is a nice piece of scholarly work, and I thank the authors for an enlightening read.