Reply to PCIRR S2 decision letter reviews: Fox and Rottenstreich (2003) replication

We thank the editor and the reviewers for their useful suggestions and below we provide a detailed response to each item.

A track-changes comparison of the previous submission and the revised submission can be found on: https://draftable.com/compare/ufGZujVsPFzy (https://osf.io/vxfsr)

A track-changes manuscript is provided with the file: "PCIRR-S2-RNR-Fox-Rottenstreich-2003-replication-main-manuscript-trackchanges.docx" (https://osf.io/asbd5)

Reply to Editor: Dr./Prof. Romain Espinosa

> **Thank you very much for submitting your Stage 2 to PCI-RR. I was very pleased to see your completed study and look forward to recommending it. I have included below some of my comments on your manuscript.**
>
> **The two referees who reviewed your Stage 1 gratefully accepted to also examine your completed study. As you will see, both referees have a very high opinion of your work.**

Thank you for the reviews obtained, your feedback, and the invitation to revise and resubmit.

> **.1. Olivier suggests some minor changes to improve the readability of the manuscript and to expand a bit your discussion horizon. I let you decide whether you think these changes are worth including. (The same applies for my own comments.)**

We did our best to address all the feedback that was clear and we could follow.

.2. Don suggests a much more drastic change in the manuscript as he believes that a restructuring would considerably help the readers appreciate your replication work. Please note that the PCI-RR rules do not require authors to change the structure of the paper with respect to what has been agreed upon at Stage 1. In other words, you are free not to make any changes in this regard. However, my personal opinion tends to align with Don's view. A great strength of your study (and Feldman's work in general) is your meticulous work on all technical details and issues related to replication studies. This is highly appreciated and, in my opinion, greatly contributes to the production of a robust corpus of knowledge in the field. However, I think that an external reader, who is interested in whether the original study replicates or not, and who will have a quick read of your work just to know the results, might be discouraged because of all these methodological discussions. I am a bad judge myself as I tend to do the same as you do, but I received the very same comment for one of my works, and, having read your Stage 2 in detail for this new round, I now understand what the referee meant at that time. I think that all Feldman's replication efforts are also more impactful if 'standard' researchers (i.e., not replication people but readers who are just interested in the particular research question of the original study) can easily get to know the replication results.

After talking with the editorial board of PCI-RR, we let you the possibility of restructuring the paper if you want to, and move some methodological discussions in the Supplementary Materials. I would perfectly understand if you do not want to do so, and once again, this is optional and does not condition Stage 2 acceptance. I do not know your publication strategy, so you might want to leave it intact or have it restructured now, depending on what you have in mind.

Thank you. We appreciate the feedback, and did a major overhaul of the structure of the methods and the results section to integrate the former "Data analysis plan" in the methods with the reporting in the results section. We also went beyond that to try and improve flow and ease of understanding.

Please see our detailed reply to the reviewer below.

.3. I am looking forward to receiving your revised manuscript. I think Olivier's suggestions and mine should not take too long. Thanks again for choosing PCI-RR for your work. We are lucky to have such high-quality replication studies at PCI-RR.

• Regarding the 'reverse not happen' element: I understand that there was an unexpected possibility to report a probability of the universe of events different from 100%. You decided to depart from your registered analysis plan by focusing on one probability and reconstructing adequate probability measures. I am satisfied with the deviation, and how it is implemented and justified.

• I greatly appreciated the discussion under "Implications, limitations, and directions for future research". It is a very valuable discussion and one of the most valuable lessons to draw from the paper.

Thank you very much for the very positive and constructive process.

.4. • Regarding Table 13, I would suggest adding the table notes a brief explanation of the interpretation from Lebel et al. (2019). I think that your results fall into these three categories (copy-pasting from Lebel et al., 2019, which I went reading):
1) Signal – consistent: replication ES 95% confidence interval (CI) excludes 0 and includes original ES point estimate
2) Signal – inconsistent, smaller (same direction): replication ES 95% CI excludes 0 but also excludes original ES point estimate; the replication ES is smaller and in same direction as original ES.
3) No signal – inconsistent: replication ES 95% CI includes 0 but excludes original ES point estimate.

Thank you. We added the following to the note in Table 13:

> We used the LeBel et al. (2019) replication evaluation criteria, summarized in the supplementary materials Figures S4a/b. Briefly: "Signal – consistent": The confidence intervals (CI) for the replication effect size (ES) excludes zero and includes the original study's ES; "Signal – inconsistent, smaller": The the replication ES CI excludes zero and the upper CI is smaller than the original study's ES; "No signal – inconsistent": The replication ES CI includes zero and does not overlap with the original study's ES.

In the supplementary materials we added Figures S4a and S4b that summarize the taxonomy.

.4. • In the Supplementary Materials, the header still indicates Stage 1.

Thank you. We removed that.

.5. • Please indicate what is plotted in Figure 1 (in the caption or Figure notes). Same for Figure 2.

It was not entirely clear to us what was missing in our description of the figures, but we tried to revise to make things clearer.

We changed the Figure 1 title to:

> Figure 1
> Studies 1a, 1b, and 3: Comparison of estimations between the Case and Class conditions (Mann-Whitney tests)

and added this note:

> *Note*. Violin plots of the distribution of responses, boxplots displaying the median, first, and third quartiles, and the red circle identifying the median value.

We changed the Figure 2 title to:

> Studies 1a, 1b, 3, and 4: Comparison of ignorance priors (1a/b and 3) and decisions (4) between the Case and Class conditions (Chi-squared tests)

And the note included a detailed explanation of the figure:

> *Note*. For Studies 1a, 1b, and 3, the left panel shows comparison between responses that aligned with case-primed ignorance priors and those that did not. The right panel shows comparison between responses that aligned with class-primed ignorance priors and those that did not. For Study 4, the left panel depicts the proportions of participants choosing the uncertain higher payment option versus the certain lower payment option in the case condition, and the right panel shows the proportions of these choices in the class condition.

Reply to Reviewer #1: Dr./Prof. Olivier L'Haridon

> **2A. Data can test the authors' proposed hypotheses.**
>
> **2B. The introduction, rationale and stated hypotheses are consistent with the approved Stage 1 submission.**
>
> **2C. The authors adhered precisely to the registered study procedures.**
>
> **2D. Unregistered exploratory analyses are justified, notably based on previous reviewer reports. Though inconclusive, additional analysis on order effects was worth investigating. The event analysis provided informative results.**

Thank you for the positive, supportive, and constructive feedback.

> **In Table 4, incentives for replication are expressed in £. Harmonization with other tables is needed, at least in a footnote, through, e.g., exchange rates.**

The reason for Table 4 showing this in pounds is because Prolific is a UK based company and charges researchers in pounds, even though they pay their US participants in US dollars. To address your comment, we updated Table 4 to include the amount in US dollars next to the British Pounds:

> Thirty participants taking part in the pretest received £0.95 (~$1.20) as compensation. Each of the remaining participants received £1.05 (~$1.33). The payment was determined based on the estimated completion time from the pretest, aiming for £9 (~$11.37) per hour.

We also added the following note to Table 4:

> We reported compensation in British Pounds given that Prolific charges researchers in pounds. US dollar estimates are according to the exchange rate in February 2025 (1 pound = 1.2635 US dollars).

> **Figure 2 uses pie charts, which is not the best way to present proportions. A basic table with proportions sounds like a better choice.**

You did not explain, and so are unsure what the issue is with our pie charts. Many of the criticism over the use of pie-charts are for those having more than two categories. Our pie-charts are simple, proportions are detailed on the pie-chart, and the proportions are summarized in Figures 9 and 11.

We'll just note that we previously used similar pie-charts in many of our other replications endorsed by PCIRR, here is one recent example:

> Zhu, Z., & Feldman, G. (2025). Revisiting the Psychology of Waste: Replication Registered Report of Arkes (1996). https://doi.org/10.17605/OSF.IO/GF8RC (PCIRR Stage 2 endorsement: https://doi.org/10.24072/pci.rr.100801)

> **2E. The authors' conclusions are justified, given the evidence. The conclusion could foster the interpretation in terms of ambiguity attitudes for Study 1a Q3, in relation with violations of binary additivity. Similarly, the results for Study 4 suggest a difference between choice-based/revealed preferences procedures and other procedures, that should be pointed out more clearly.**

Apologies, but this feedback is very broad and somewhat vague, and so we are not sure what you meant exactly in this comment ("violations of binary additivity", "difference between choice-based/revealed preferences procedures") and we would rather not try and guess. Since this does not seem like a critical issue, we opted not to make further changes.

Reply to Reviewer #2: Prof. Don Moore

> **I think this project is great; the authors have done important and impressive work examining the replicability of an important and influential recent theory.**

Thank you for the positive and supportive opening note and the constructive feedback.

> **.1. Therefore, I started positively disposed toward this manuscript. I wanted to like it, but really struggled with this version of the writeup. My Stage 1 review praised the project, but I found this Stage 2 version almost unreadably complex. There are too many studies, too many details, too many mixed and complicated results. The authors could do a lot more to help readers understand what they had done and make sense of the results.**
>
> **I think probably it is a mistake to present all the details on all the methods for all the studies before presenting any results. I found it demoralizing to slog through page after page of methods, data analysis strategies, deviations from original studies, and deviations from preregistrations without seeing any results. I could not keep it straight in my head and it all got mixed up in a big jumble in which I lost interest by the time I made it to the results on page 38. Then when the results finally did come, they came in a complicated blizzard in which I had trouble tracking what actually mattered and what it meant for the theories of partition dependence.**
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> **.2. If the authors want anyone to read their paper, they might think about reorganizing it. I would humbly offer a counterexample:**
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> **- O'Donnell, M. et al. (2021). The psychological consequences of scarcity are less general and less replicable than they seem: An empirical audit and review. Proceedings of the National Academy of Sciences, 118(44), e2103313118.**
>
> **O'Donnell et al. present 20 different replications crisply and succinctly, offering an overview of the results in their brief PNAS paper. In particular, the forest plot they present in Fig 1 is a helpful summary of the replicability of the studies they consider. Of course, there are many important details that did not fit in this brief report; they are all fully and excruciatingly reported in the supplemental materials available for interested readers. Would a model like that be viable for this paper?**

> **Having said all of that, I will repeat that I think this is a wonderful initiative. I am grateful to the authors for all their hard work and think that this paper makes a valuable contribution to the literature. I am ready to recommend it, even in its current state. I would be even more enthusiastic if it were easier to read.**

Thank you for the feedback, we appreciate it.

We first note that our main aim is to emphasize transparency, comprehensiveness, evaluability, and reproducibility to serve as examples that counter the very issues that the replications aim to address in the target articles. It is important for us to be as transparent as possible about all that we did, and to allow others to easily compare what we agreed upon in Stage 1 to what was executed in Stage 2. The decision letter by the recommender based on his consultation with PCIRR indicates that they have the same aims.

We followed the typical Registered Report format that allows for an easier comparison of the Stage 1 to the Stage 2. Yet, this is valuable feedback to help us see the challenge a reader might face with this structure, and we do care about readability and flow. Therefore, we have worked to try and improve on that to address the provided suggestions.

We took the following steps:

1. We integrated our Data Analysis Plan section in the methods section into our results section so that the planned analysis appears next to the actual analysis.
2. We moved sections around so that the replications appear first, followed by the replication evaluation, followed by the extensions. In the extensions we presented the most important extensions first, and moved the order analysis extensions to the end.
3. We changed some of the headings to better indicate what the sections are about, and rephrased some of the introductory text in each section to make it clearer what was done and why.

> **.3. Additional notes:**
>
> **.3.1. What do the boxes represent in Figure 1? A note in the figure's caption would help.**

We added the following:

> Violin plots of the distribution of responses, boxplots displaying the median, first, and third quartiles, and the red circle identifying the median value.

.3.2. Fig 2: the resolution of the images and the stats reported with them is poor. Also, reporting p<.001 will be easier for readers to understand than p=9.176e-05.

The resolution is a result of the PDF conversion from the Word files to the PDF. In this revision we attempted to convert to PDF with no compression of the images.

The original Word DOCX files that were used to create the preprint PDF contain the figures in high-resolution. Both the Word DOCX files and the figures in full resolution are provided on the OSF project.

As for the p-values scientific notation with exact p-values, we see what you mean. We used the ggstatsplot R package to create the figures and it only reports exact p-values. We have grown used to it and have come to expect it to be this way and appreciate it including that information. They use this notation for the exact p-values because it is the most space efficient to have a consistent look across all figures even if the p-value is very small.

This is a somewhat subjective matter, it only applies to a few figures with very low p-values, and we used the APA $p < .001$ notation when we report those statistics in the text, and so we hope you'll understand us choosing to keep the figures in this way.

I appreciate the quality of the paper's online supplement. The OSF site is well organized.

Thank you for the feedback.