Week 2 -
Dilemma Game

Dilemma game by Erasmus University Rotterdam

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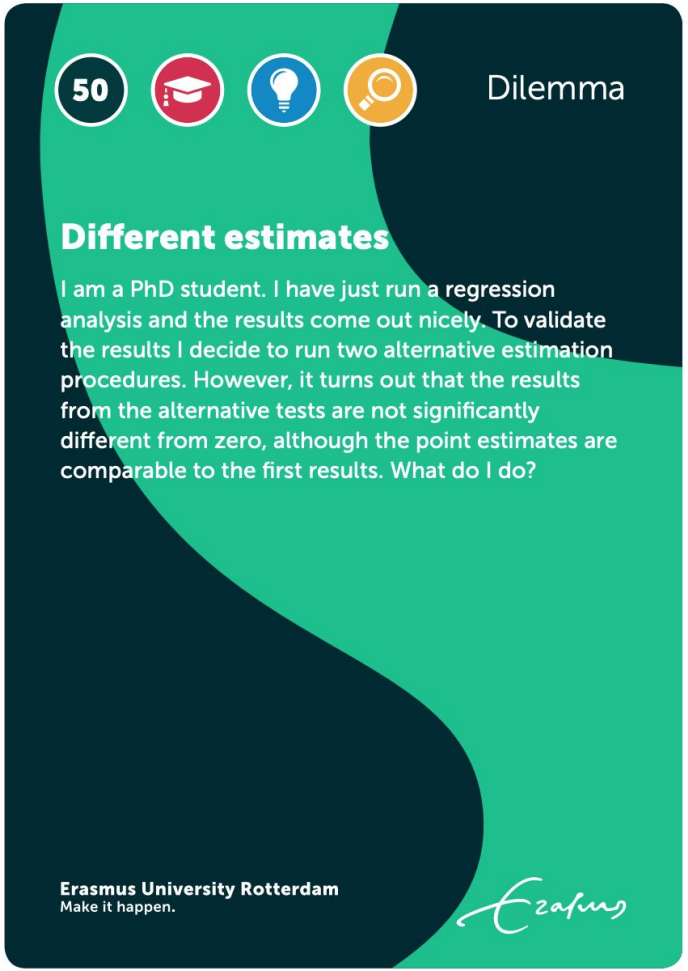
“Like in any profession, scientists are frequently faced with dilemmas: Can I exclude particular observations from my research? Can I use exactly the same data set for multiple papers? Should I agree on a colleague being a co-author on a paper to which she has not made a significant contribution? ”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Dilemma
Different estimates
I am a PhD student. I have just run a regression analysis and the results come out nicely. To validate the results I decide to run two alternative estimation procedures. However, it turns out that the results from the alternative tests are not significantly different from zero, although the point estimates are comparable to the first results. What do I do?
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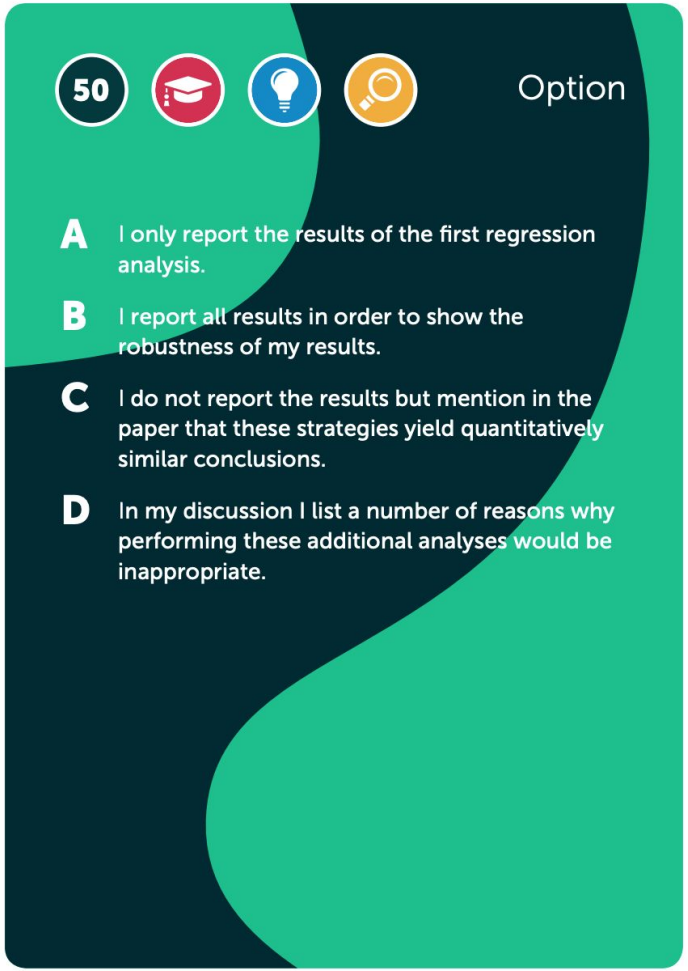
Make it happen.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Option
A I only report the results of the first regression analysis.
B I report all results in order to show the robustness of my results.
C I do not report the results but mention in the paper that these strategies yield quantitatively similar conclusions.
D In my discussion I list a number of reasons why performing these additional analyses would be inappropriate.

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Dilemma

Spoilsport

I am using data from a widely used data source within my institute. While processing the data, I come across some systematic problems (missing values, outliers) that apparently nobody has ever bothered about before. Remedying the error accurately would take me half a year. My supervisor suggests following "common practice", without specifying. Common practice is not to report the problem. Alternative sources are not readily available. What do I do?

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Option

A I take extensive time to analyse the problems, even if that implies that my PhD will be delayed.

B I go to the head of the institute and ask for an investigation into past and current research based on the data set. The results might be problematic.

C I change the scope of my research project so that I no longer have to use the data.

D I contact researchers who published earlier on the database. If they agree with the supervisor I follow common practice.

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Dilemma

Fitting

I am in the process of data analysis. I have used several statistical methods that have produced only partial significance. Suddenly I find a method which does not exactly fit my research design and the nature of the data and variables but it gives a much better and significant result. What do I do?

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Option

A I adopt the new method without thoroughly discussing the problems of using it.

B I stick to the method which suits my settings better regardless of having partial results.

C I adopt the new method and openly discuss the problem in my paper.

D I discuss both methods in my paper.

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Fear of scooping

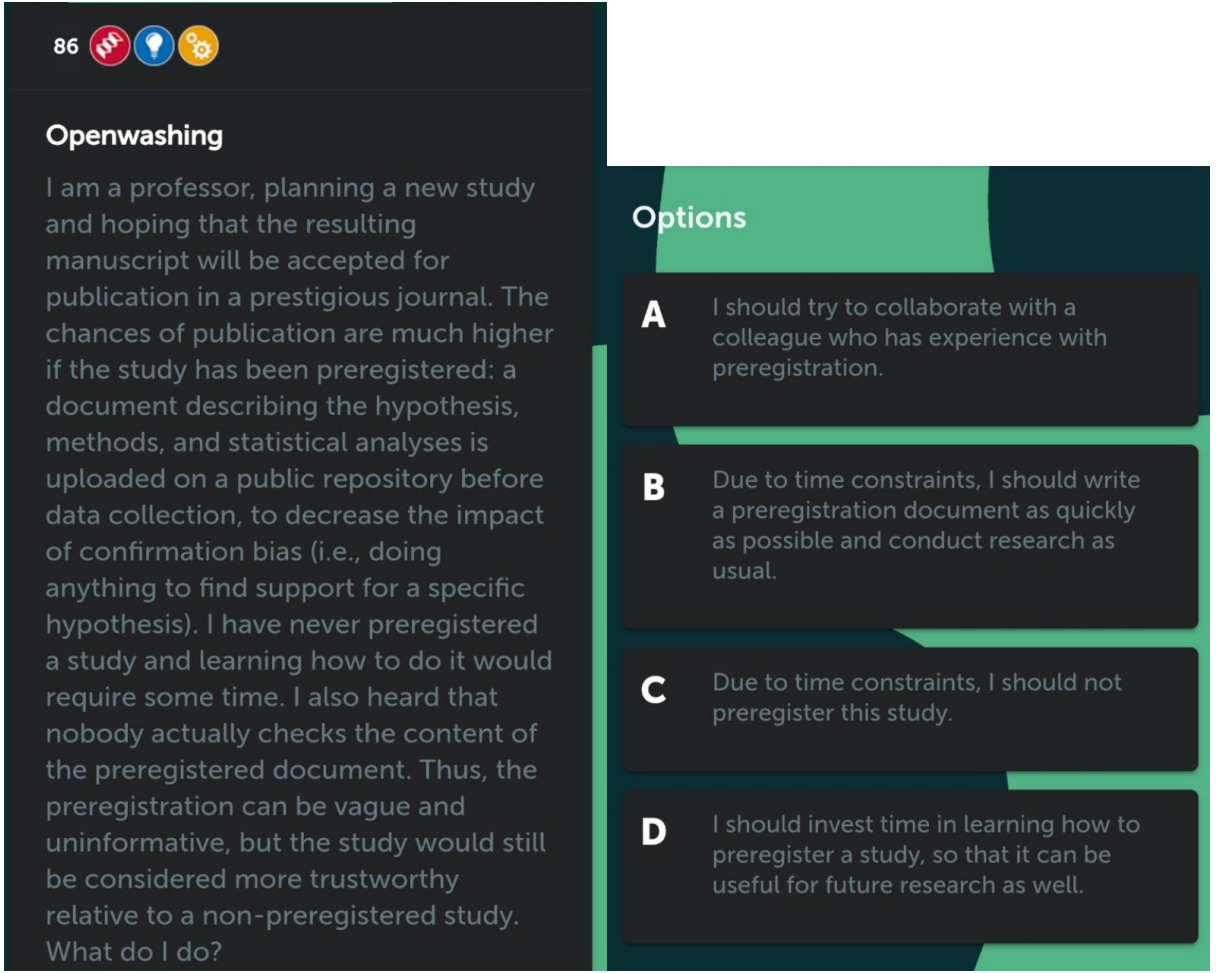
I am a PhD Candidate and I have just published my first paper. Together with the manuscript, I am planning to publicly share the data collected during this project. The data are properly anonymized, and a lot of effort has been put in the documentation, to increase the chances of reusability. This would be a good career move, because this practice is positively evaluated within my research field. However, my supervisor is afraid of scooping: other researchers would be able to ask novel research questions, analyze the shared data, and publish without involving either me or my supervisor. What do I do?

A My supervisor is right. The data should not be shared.

B I should share the data but no documentation. This would make it difficult for other researchers to reuse the data, unless they ask for help. This would ensure that I will be co-author in any following publication.

C I should go to the Head of Department and report my supervisor's unethical behavior: data collection was possible thanks to public funding and we should give back to society as much as possible.

D I explain to my supervisor the benefits of data sharing, for example increased citations of the original manuscript. Then, I proceed to publicly share the data.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Openwashing
I am a professor, planning a new study and hoping that the resulting manuscript will be accepted for publication in a prestigious journal. The chances of publication are much higher if the study has been preregistered: a document describing the hypothesis, methods, and statistical analyses is uploaded on a public repository before data collection, to decrease the impact of confirmation bias (i.e., doing anything to find support for a specific hypothesis). I have never preregistered a study and learning how to do it would require some time. I also heard that nobody actually checks the content of the preregistered document. Thus, the preregistration can be vague and uninformative, but the study would still be considered more trustworthy relative to a non-preregistered study. What do I do?
Options
A
I should try to collaborate with a colleague who has experience with preregistration.
B
Due to time constraints, I should write a preregistration document as quickly as possible and conduct research as usual.
C
Due to time constraints, I should not preregister this study.
D
I should invest time in learning how to preregister a study, so that it can be useful for future research as well.