

# MAXIMILIAN MAIER

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## RESEARCH INTEREST

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### Experimental

Moral Psychology, Judgement & Decision Making, Psychology of Existential Risk

### Statistics and Methodology

Bayesian Statistics, Meta-Analysis, Theory Development

## EDUCATION

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**PhD Candidate in Experimental Psychology (supervisor Prof. Adam Harris)** 2021 -  
University College London

**Research Master Psychology (specialization in statistics, 8.8, distinction)** 2019 - 2021  
University of Amsterdam  
Thesis: *Evaluating human forecasts using Bayesian inference*

**B.Sc. Psychology (1.0, distinction)** 2016 - 2019  
Julius-Maximilians-Universität Würzburg  
Thesis: *Why do we search for information online? - How Google search queries can be used to measure attitudes on aggregate level*

**Semester abroad** 2018  
Lingnan University, Hong Kong

**Abitur (1.0, distinction)** 2009-2016  
Meranier-Gymnasium, Lichtenfels

## RESEARCH EXPERIENCE

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**Remote Research Internship with Lucius Caviola** *Juli 2020 - July 2021*  
*Harvard University, Department of Psychology*

I take the lead on a project to investigate Unit Asking as a method to increase people's awareness for the importance of safeguarding the long-term future.

**Research Assistant with Eric-Jan Wagenmakers and JASP** *March 2020 - July 2021*  
*University of Amsterdam, Department of Psychology*

I am responsible for writing grants to attract new funding for the open source statistical software JASP. In addition, I developed and implemented a new Robust Bayesian Meta-Analysis in the presence of publication bias.

**Research Internship with Denny Borsboom** *March 2020 - June 2020*  
*University of Amsterdam, Department of Psychology*

We developed a computational model to compare the quality of theories in the (social) sciences to improve theories in psychology and beyond.

**Remote Research Assistant with Maya Mathur** *June 2019 - October 2020*  
*Stanford University, Quantitative Sciences Unit*

First, I was Research Assistant on a project to conduct a large meta-meta-analysis across fields to assess publication bias. Now, I take the lead on a paper for *Campbell Systematic Reviews* on selection models to adjust for publication bias.

**Bachelors Thesis Psychology***March 2019 - August 2019**University of Würzburg, Department of Psychology*

We investigated how Google Search queries can be used as a new measure of attitudes and opinions which is less influenced by social desirability.

**Research Internship with Daniël Lakens***February 2019 - April 2019**TU Eindhoven, Human Technology Interaction Group*

I worked on detecting publication bias by  $p$ -curving a large existing database of published meta-analyses in the journal Psychological Bulletin.

**Research Internship University of Würzburg***September 2017 - February 2018**University of Würzburg, Department of Psychology*

We studied the relationship between cognitive conflict and facial recognition.

**TEACHING EXPERIENCE**

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**Teaching Assistant in the Course Statistics, Data Analysis, and Modelling** *October 2021 - December 2021**University College London, Department of Experimental Psychology*

In this Master's level statistics course, students learn about advanced data analytical techniques in R. As a teaching assistant, I answer student questions during tutorials and help with the R assignments.

**Supervision of Two Undergraduate Projects***October 2021 - February 2022**University College London, Department of Experimental Psychology*

Together with Prof. Adam Harris I supervise two undergraduate students working on a project about temporal unpacking in the domains of both existential risks and consumer choice.

**Teaching Assistant in the Course Good Research Practices** *November 2020 - January 2020**University of Amsterdam, Department of Psychology*

In this course, students learn about the replication crisis and steps they can take in their research to reach more reliable conclusions. As a TA, I gave a lecture on the Student Initiative for Open Science and was responsible for grading essays and presentations.

**SCHOLARSHIPS AND AWARDS**

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Ph.D. scholarship by Longview Philanthropy to work on the Psychology of Existential Risk and Longtermism (*£91 600*) *2021*

Study abroad grant and study fee coverage for the Research Master's Psychology awarded by the "Studienstiftung des Deutschen Volkes" *2019 - Present*

Admitted to the "Studienstiftung des Deutschen Volkes", a German sponsorship organisation for highly talented students. *2019 - Present*

Travel grant "Forschung vor Ort" for research visit to Daniël Lakens Lab at TU Eindhoven. *2019*

Admitted to the "Max-Weber Program", a Bavarian sponsorship organization for highly talented students. *2016 - Present*

Student affiliate of the Center for the Science of Moral Understanding at the University of North Carolina. *2020 - Present*

**PUBLICATIONS**

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**Maier, M.\***, Bartoš, F.\*, & Wagenmakers, E.-J. (2020). Robust Bayesian Meta-Analysis: Addressing publication bias with model-averaging. *In press at Psychological Methods*.  
<https://doi.org/10.31234/osf.io/u4cns>

Bartoš, F.\*, & **Maier, M.\*** (2019). Power or alpha? The better way of decreasing the false discovery rate. *In press at Meta-Psychology*. <https://doi.org/10.31234/osf.io/ev29a>.

\*both authors contributed equally

## PREPRINTS & MANUSCRIPTS SUBMITTED FOR PUBLICATION

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**Maier, M.** & VanderWeele, T., Mathur, M. (2021). Using selection models to assess sensitivity to publication bias: A tutorial and call for more routine use. *Manuscript under revision at Campbell Systematic Reviews* <https://doi.org/10.31222/osf.io/tp45u>.

Bartoš, F., **Maier, M.**, & Wagenmakers, E.-J. (2021). No Need to Choose: Robust Bayesian Meta-Analysis with Competing Publication Bias Adjustment Methods. *Manuscript under revision at Evidence Synthesis Methods*. <https://doi.org/10.31234/osf.io/kvsp7>.

**Maier, M.** & van Dongen, N., Borsboom, D. (2021). Comparing theories with the Ising Model of Explanatory Coherence. *Manuscript under 2nd revision at Psychological Methods* <https://doi.org/10.31234/osf.io/shaef>.

**Maier, M.** & Lakens, D. (2021). Justify your alpha: A primer on two practical approaches. *Manuscript under second revision at Advances in Methods and Practices in Psychological Science*. <https://doi.org/10.31234/osf.io/ts4r6>

Bartoš, F.\*, **Maier, M.\***, & Wagenmakers, E.-J. (2020). Adjusting for publication bias in JASP - selection models and Robust Bayesian Meta-Analysis. *Manuscript under revision at Advances in Methods and Practices in Psychological Science*.  
<https://doi.org/10.31234/osf.io/75bqn>

\*both authors contributed equally

## TALKS

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Maier, M. (2021). Tracking the footprint of publication bias across science. Talk given at the annual conference of the Meta-Analysis in Economics Research Network (MAER-NET), University of Pireus

Maier, M. (2021). RoBMA (Robust Bayesian Meta-Analysis) - Bayesian model-averaging over selection models and PET-PEESE. Talk given online at the world meeting of the International Society for Bayesian Analysis (ISBA).

Maier, M. (2021). Introduction to Bayesian approach to statistical analysis - From estimation to model-averaging. Invited talk at the research consortium on Determinants of Physical Activities in Settings (DE-PASS).

Maier, M. (2020). Comparing theories with the Ising Model of Explanatory Coherence. Talk given online at the International Workshop on Theory (Re)Construction in the Empirical Social and Behavioral Sciences. <https://tinyurl.com/yyv62mwq>

Maier, M. (2020). Comparing theories with the Ising Model of Explanatory Coherence. Talk given online at the International Workshop on Theory (Re)Construction in the Empirical Social and Behavioral Sciences. <https://tinyurl.com/yyv62mwq>

Maier, M. & van Dongen, N., (2020). We want good theories. But when do we have a good theory? Invited Talk at Daniël Lakens' Lab, TU Eindhoven.

Maier, M. (2020). Bayesian benefits for meta-analysis in the presence of publication bias. Talk given online at the International Meeting of the Psychometric Society. <https://youtu.be/KFt9Yra0ykM>

Maier, M., Dahrendorf, M., & Schumacher, L. (2020). An introduction to open science. Invited Lecture at the College for Politics, Psychology, Law and Economics (PPLE), University of Amsterdam.

Maier, M., Geiger, S., & Stephan., A. (2020). Preregistration and preprints – What, why and how? Invited Lecture at the Faculty of Behavioral and Movement Sciences, VU Amsterdam.

Maier, M. (2019). Google search queries as a data source for psychology. Invited talk at Projects and Methods of Social Psychology, University of Würzburg.

## **SOFTWARE**

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Maier, M., & Lakens, D. (2021). JustifyAlpha [R package]. <https://cran.r-project.org/web/packages/JustifyAlpha/index.html>

Bartoš, F., & Maier, M. (2020). RoBMA: An R Package for Robust Bayesian Meta-Analyses [R package]. <https://CRAN.R-project.org/package=RoBMA>

Maier, M. Estimating the Ising Model of Explanatory Coherence [R package]. <https://github.com/MaxMaier42/IMEC>

Maier, M. Justify Alpha by Optimizing Learning [Shiny App]. <https://maxmaier.shinyapps.io/OptimizeAlpha>

## **PROGRAMMING SKILLS**

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R (Advanced)

Python (Basic)

## **OTHER ACTIVITIES AND SOCIAL COMMITMENT**

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Member of the Student Initiative for Open Science (SIOS), an initiative that tries to spread adoption of open science practices among students. *2019 - 2021*

Active member of the Effective Altruism movement, a group that tries to use evidence and reason to do as much good as possible. I also founded a weekly EA journal club in which we discuss books about moral philosophy. *2017 - Present*

Internship in the German Bundestag (MP Margarete Bause). *2018*

## **REFERENCES**

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Prof. Eric-Jan Wagenmakers, University of Amsterdam, Department of Psychology

Prof. Denny Borsboom, University of Amsterdam, Department of Psychology

Prof. Daniël Lakens, TU Eindhoven, Human Technology Interaction Group

Dr. Lucius Caviola, Harvard University, Department of Psychology

Dr. Adam Harris, University College London, Department of Experimental Psychology