Dr. rer. nat. Simon Stephan

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in Simon Stephan   🌐 https://www.simonstephan.com

Personal Data

Date of Birth	🔖	**31.01.1990** Kassel, Germany.
Work Address	🔖	**Department of Psychology, University of Göttingen,** Gosslerstr. 14, 37073 Göttingen, Germany.

Employment History/Work Experience/Positions

Aug 2023 – Sep 2024	🔖	**Parental leave**.
2019 – · · · ·	🔖	**Postdoctoral Researcher**, Department of Cognition and Decision Making, PI: Prof. Dr. Michael R. Waldmann, University of Göttingen.
2014 – 2019	🔖	**Pre-doctoral Researcher** Department of Cognition and Decision Making, PI: Prof. Dr. Michael R. Waldmann, University of Göttingen.
2010 – 2014	🔖	**Student Research Assistant and Tutor** Department of Psychology, University of Göttingen.

Education

2015 – 2019	🔖	**Doctorate degree, Dr. rer. nat. (summa cum laude)** University of Göttingen (Program: Behavior and Cognition, BeCog). Thesis title: *Answering Causal Queries About Singular Cases – An Evaluation of a New Computational Model*, Supervisor: Prof. Dr. Michael R. Waldmann.
2012 – 2014	🔖	**M.Sc. Psychology, (with distinction)** University of Göttingen. Thesis title: *Lack-Of Control Induced Illusory Pattern Perception as a Result of Diagnostic Self-Deception* (Grade: 1.0).
2009 – 2012	🔖	**B.Sc. Psychology (with distinction)** University of Göttingen. Thesis title: *Force Dynamics und moralische Intuition – Der Einfluss basaler Kräftekonstellationen auf die Bewertung abstrakter Stimuli* (Grade: 1.0).

Awards, Achievements, and Grants

Awards and Achievements

2024	🔖	**APA Division 3 Best Paper Award**, for the paper Stephan, S. (2024). Reasoning about actual causation in reversible and irreversible causal structures. Journal of Experimental Psychology: Learning, Memory, and Cognition.

Awards, Achievements, and Grants (continued)

2017   ▌ **Computational Modeling Prize in High-level Cognition**, sponsored by the Cognitive Science Society for the best full paper submissions that involve computational cognitive modeling.

Grants

2016–2018   ▌ **Leibniz-ScienceCampus Grant (9,552.80 €)**. "The relationship between causal and moral judgments".

2015–2017   ▌ **Leibniz-ScienceCampus Grant (7,272.40 €)**. "The role of intentions in children's and adult's causal ascriptions".

Institutional Responsibilities

2016 – 2017   ▌ **PhD Representative**, PhD program Behavior and Cognition (BeCog), University of Göttingen.

Research Publications

An online version of the publication list including links to PDFs and other publication related materials can be found on my personal website here: `https://www.simonstephan.com/#publications`.

1   **S. Stephan**, "Reasoning about actual causation in reversible and irreversible causal structures," *Journal of Experimental Psychology: Learning, Memory, and Cognition*, Advance Online Publication. 2024. *Best Paper Award from APA Division 3. `https://www.apadivisions.org/division-3/awards`.

2   **S. Stephan**, "Revisiting the narrow latent scope bias in explanatory reasoning," *Cognition*, vol. 241, p. 105 630, 2023.

3   **S. Stephan**, N. Engelmann, and M. R. Waldmann, "The perceived dilution of causal strength," *Cognitive Psychology*, vol. 140, p. 101 540, 2023.

4   **S. Stephan** and M. R. Waldmann, "The interplay between covariation, temporal, and mechanism information in singular causation judgments." in *Advances in Experimental Philosophy of Causation.* A. Wiegmann and P. Willemsen, Eds., London, UK: Bloomsbury Press, 2022, pp. 101–122.

5   **S. Stephan** and M. R. Waldmann, "The role of mechanism information in singular causation judgments," *Cognition*, vol. 218, p. 104 924, 2022.

6   T. Gerstenberg and **S. Stephan**, "A counterfactual simulation model of causation by omission," *Cognition*, vol. 216, p. 104 842, 2021.

7   N. Skovgaard-Olsen, **S. Stephan**, and M. R. Waldmann, "Conditionals and the hierarchy of causal queries." *Journal of Experimental Psychology: General*, vol. 150, pp. 2472–2505, 2021.

8   **S. Stephan**, S. Placì, and M. R. Waldmann, "Evaluating general versus singular causal prevention." in *Proceedings of the 43rd Annual Conference of the Cognitive Science Society*, T. Fitch, C. Lamm, H. Leder, and K. Tessmar, Eds., Austin, TX: Cognitive Science Society, 2021, pp. 1402–1408.

9   **S. Stephan**, K. Tentori, S. Pighin, and M. R. Waldmann, "Interpolating causal mechanisms: The paradox of knowing more." *Journal of Experimental Psychology: General*, vol. 150, pp. 1500–1527, 2021.

10   **S. Stephan**, R. Mayrhofer, and M. R. Waldmann, "Time and singular causation – a computational model," *Cognitive Science*, vol. 44, e12871, 2020.

11 S. Stephan and M. R. Waldmann, "Causal scope and causal strength: The number of potential effects of a cause influences causal strength estimates.," in *Proceedings of the 42nd Annual Conference of the Cognitive Science Society*, S. Denison, M. Mack, Y. Xu, and B. C. Armstrong, Eds., Austin, TX: Cognitive Science Society, 2020, pp. 3426–3432.

12 S. Stephan and M. R. Waldmann, "On causal claims, contingencies, and inference: How causal terminology affects what we think about the strength of causal links," in *Proceedings of the 42nd Annual Conference of the Cognitive Science Society*, S. Denison, M. Mack, Y. Xu, and B. C. Armstrong, Eds., Austin, TX: Cognitive Science Society, 2020, pp. 3419–3425.

13 S. Stephan, R. Mayrhofer, and M. R. Waldmann, "Assessing singular causation: The role of causal latencies," in *Proceedings of the 40th Annual Conference of the Cognitive Science Society*, T. Rogers, M. Rau, X. Zhu, and C. Kalish, Eds., Austin, TX: Cognitive Science Society, 2018, pp. 1080–1085.

14 S. Stephan and M. R. Waldmann, "Preemption in singular causation judgments: A computational model," *Topics in Cognitive Science*, vol. 10, pp. 242–257, 2018.

15 S. Stephan and M. R. Waldmann, "Marbles in inaction: Counterfactual simulation and causation by omission.," in *Proceedings of the 39th Annual Conference of the Cognitive Science Society*, G. Gunzelmann, A. Howes, T. Tenbrink, and E. Davelaar, Eds., Austin, TX: Cognitive Science Society, 2017, pp. 1126–1131.

16 S. Stephan and M. R. Waldmann, "Preemption in singular causation judgments: A computational model," in *Proceedings of the 39th Annual Conference of the Cognitive Science Society*, G. Gunzelmann, A. Howes, T. Tenbrink, and E. Davelaar, Eds., Austin, TX: Cognitive Science Society, 2017, pp. 1126–1131.

17 J. Nagel and S. Stephan, "Explanations in causal chains: Selecting distal causes requires exportable mechanisms," in *Proceedings of the 38th Annual Conference of the Cognitive Science Society*, A. Papafragou, D. Grodner, D. Mirman, and J. C. Trueswell, Eds., Austin, TX: Cognitive Science Society, 2016, pp. 806–812.

18 S. Stephan and M. R. Waldmann, "Answering causal queries about singular cases," in *Proceedings of the 38th Annual Conference of the Cognitive Science Society*, A. Papafragou, D. Grodner, D. Mirman, and J. C. Trueswell, Eds., Austin, TX: Cognitive Science Society, 2016, pp. 2795–2801.

19 J. Nagel and S. Stephan, "Mediators or alternative explanations: Transitivity in human-mediated causal chains," in *Proceedings of the 37th Annual Conference of the Cognitive Science Society*, D. C. Noelle, R. Dale, A. S. Warlaumont, *et al.*, Eds., Austin, TX: Cognitive Science Society, 2015, pp. 1691–1696.

Forthcoming/Pre-Prints

● S. Placì, S. Stephan, M. R. Waldmann, & G. Vallortigara (in preparation). When Newton beats Euclid: intuitive physics underlies sensitivity to geometry. `https://doi.org/10.31234/osf.io/78syx`.

● J. Nagel, S. Stephan, & M. R. Waldmann (under review). Understanding causal devices: Nomological machines guide causal understanding.

Conference Presentations

July 2022   ▐ **44th Annual Meeting of the Cognitive Science Society**, Toronto, Canada [virtual]
Poster Presentation: "The Perceived Dilution of Causal Strength".

  ▐ **SPP & ESPP**, Milan, Italy
Poster Presentation: "The Perceived Dilution of Causal Strength".

July 2021   ▐ **43rd Annual Meeting of the Cognitive Science Society**, Vienna, Austria [virtual]
Poster Presentation: "Evaluating General vs. Singular Causal Prevention".

September 2019   ▐ **27th Conference of the European Society for Philosophy and Psycholog**, Athens, Greek
Talk: "The Role of Effect and Sample Size in Causal Induction".

Conference Presentations (continued)

	🔖	**European Conference for Cognitive Science**, Bochum, Germany **Poster Presentation:** "The Role of Effect and Sample Size in Causal Induction".
June 2019	🔖	**Summer Institute on Bounded Rationality**, Berlin, Germany **Flash Talk & Poster Presentation:** "Answering Causal Queries about Singular Cases: An Evaluation of a New Computational Model".
July 2018	🔖	**40th Annual Meeting of the Cognitive Science Society**, Madison (Wisconsin), USA **Talk:** "Assessing Singular Causation: The Role of Causal Latencies".
May 2018	🔖	**International Meeting of the Psychonomic Scociety**, Amsterdam, Netherlands **Poster Presentation:** "Answering Singular Causation Queries: The Role of Temporal and Mechanistic Information".
February 2018	🔖	**7th Annual Meeting of the DFG Priority Program "New Frameworks of Rationality"**, Etelsen, Germany **Presented Project:** "Interpolating Causal Mechanisms: The Paradox of Knowing More".
August 2017	🔖	**25th Conference of the European Society for Philosophy and Psychology**, London, UK **Talk:** "Answering Causal Queries About Singular Cases".
July 2017	🔖	**39th Annual Meeting of the Cognitive Science Society**, London, UK **Talk:** "Preemption in singular causation judgments: A computational model".
	🔖	**39th Annual Meeting of the Cognitive Science Society**, London, UK **Talk:** "Marbles in inaction: Counterfactual simulation and causation by omission".
March 2017	🔖	**6th Annual Meeting of the DFG Priority Program "New Frameworks of Rationality"**, London, UK **Talk:** "Answering Causal Queries About Singular Cases".
August 2016	🔖	**38th Annual Meeting of the Cognitive Science Society**, Philadelphia, USA **Talk:** "Answering Causal Queries About Singular Cases".
	🔖	**38th Annual Meeting of the Cognitive Science Society**, Philadelphia, USA **Poster Presentation:** "Explanations in Causal Chains: Selecting Distal Causes Requires Exportable Mechanisms".
July 2015	🔖	**37th Annual Meeting of the Cognitive Science Society**, Pasadena, USA **Poster Presentation:** "Mediators or Alternative Explanations: Transitivity in Human-Mediated Causal Chains".

Teaching and Supervision

Courses

● **Quantitative methods I** (Bachelor Psychology): Basics of research design and hypothesis testing, data visualization, descriptive and inferential data analysis, data visualization, power analyses. Practical exercises in MS Excel.

– Winter 2014/15, Winter 2015/16, Winter 2016/2017, Winter 2018/20, Winter 2020/21, Winter 2021/22

● **Quantitative methods II** (Bachelor Psychology): General Linear Model and applications (multiple linear regression and its assumptions, ANOVA, contrast analyses, logistic regression, multilevel models). Practical exercises in R and RStudio (Markdown).

– Summer 2015, Summer 2016, Summer 2017, Summer 2019, Summer 2020, Summer 2021, Summer 2022

see: `https://quantigoettingen.github.io/quantigoettingen/` for online course materials.

• **The principles of learning and behavior** (Bachelor Psychology): foundations and applications of classical and operant conditioning. (As part of the second year undergraduate psychology module "Allgemeine Psychologie II" ["General Psychology II"])
– Winter 2022/2023

Supervision

• **How does causal stability influence action preferences on the individual and group level?** (tranlsated from German) M.Sc. thesis, A. Sykulla, Summer 2024.

• **The narrow latent scope bias in explanatory reasoning – an overrated phenomenon?** B.Sc. thesis, J. Larysch, Summer 2023.

• **The role of personal risk and ambiguity affinity when choosing between causally stable vs. unstable interventions.** (translated from German) B.Sc. thesis, A. Bierbach, Summer 2022.

• **Do causal strength and mechanism knowledge influence the degree of causal Markov violations in common cause structures?** (translated from German) B.Sc. thesis, J. T. Ferchlandt, Summer 2021.

• **Causal reasoning and the role of mechanisms: does the quality of probabilistic inferences improve in the face of mechanistically transparent causal systems?** (translated from German) B.Sc. thesis, A. Kühne, Summer 2021.

• **Causal strength intuitions based on causal scope under causal capacity manipulations?** B.Sc. thesis, P. Steinberg, Summer 2021.

• **The influence of effect valence and causal process type on the perceived dilution of causal strength.** B.Sc. thesis, G. Döscher, Summer 2021.

• **Understanding maintaining causes and processes in simple dynamic feedback-loop structures.** M.Sc. thesis, J. Schwerdt, Summer 2021. (co-supervised with York Hagmayer)

• **Maintaining Factors in Causal Feedback Loop Structures.** M.Sc. thesis, M. Bensberg, Summer 2021. (co-supervised with York Hagmayer)

• **Triggering and maintaining causes.** (translated from German) M.Sc. thesis, E. Preuß, Summer 2020. (co-supervised with York Hagmayer)

• **The weakening-effect in the interpolation of causal mechanism.** (translated from German) B.Sc. thesis, N. Walter, Summer 2020.

• **Predictive judgments in interpolated versus lengthened causal chains.** (translated from German) B.Sc. thesis, M. Akil, Winter 2018/19.

• **Which category level do reasoners consider when they make general versus singular causation judgments?** B.Sc. thesis, J. Reddehase, Summer 2018.

• **The influence of observed statistical normality on the evaluation of singular causal strength.** (translated from German) B.Sc. thesis, J. Blümer, Summer 2018.

• **Was this causal or coincidental? The influence of general causation knowledge on singular causation judgments.** (translated from German) B.Sc. thesis, J. Wasmuth, Summer 2017.

• **Singular causation judgments – the role of preemption and generic causal uncertainty.** (translated from German) B.Sc. thesis, K. Serwazi, Summer 2017.

• **Double prevention in causal reasoning.** (translated from German) B.Sc. thesis, J. Baum, Winter 2016/17.

Ad Hoc Reviews

see: `https://www.webofscience.com/wos/author/record/AAA-7836-2022`

- Cognition
- Cognitive Psychology:
- Cognitive Science
- Computational Brain & Behavior
- Journal of Experimental Psychology: General
- Journal of Experimental Psychology: Learning, Memory, and Cognition
- Journal of Cognitive Psychology
- Journal of Experimental Social Psychology
- Memory & Cognition
- Philosophical Psychology
- Psychological Review
- PLoS One
- Proceedings of the Annual Meeting of the Cognitive Science Society

Skills

Languages	▮	German (native)
		English (excellent reading, writing, and speaking competencies)
		French (solid communication competencies)
		Italian (basic communication competencies)
Coding	▮	LaTeX, ActionScript, R
Software	▮	R-Studio, Quarto, MS Office, SPSS, STATISTICA, Photoshop, Illustrator, Inkscape, Animate.
Web Dev	▮	Html, css, JavaScript.
Misc.	▮	Academic research and publishing, teaching, supervision (Bachelor and Master Theses).

References

Available upon Request