

# Dr Ryan Heuser

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## EDUCATION

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*Stanford University*

Ph.D., English, 2019

Dissertation: *Abstraction: A Literary History*

Committee: John Bender, Mark Algee-Hewitt, Mark Greif

M.A., English, 2013

*University of Florida*

B.A., English (summa cum laude), 2008

## EMPLOYMENT

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*University of Cambridge, Cambridge Digital Humanities*  
Assistant Professor of Digital Humanities, 2024-ongoing

*University of Cambridge, King's College*  
Official Fellow, 2024-ongoing

*King's College London, King's Digital Lab*  
Sr Research Software Engineer, 2024-2024

*Princeton University, Center for Digital Humanities*  
Research Software Engineer II, 2022-2024

*University of Cambridge, King's College*  
Junior Research Fellow, 2019-2022

*Stanford University, Literary Lab*  
Associate Research Director, 2011-2015

*Stanford University, Center for Spatial and Textual Analysis (CESTA)*  
Humanities Research Programmer, 2010-2011

## PUBLICATIONS

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- “Computational Hermeneutics: Evaluating Generative AI as a Cultural Technology.” *Frontiers in Artificial Intelligence* 9 (2026). (Co-authored with Cody Kommers, Drew Hemment, et al).
- “Cultural Collapse: Toward a Generative Formalism for AI Cultural Production.” *Anthology of Computers and the Humanities* 3 (2025).
- “Generative Aesthetics: On formal stuckness in AI verse.” *Journal of Cultural Analytics* 10.3 (2025), special issue on Computational Formalism.
- “Computing Koselleck: Modeling Semantic Revolutions, 1720-1960.” *Explorations in the Digital History of Ideas*. Ed. Pete de Bolla. Cambridge University Press (2024).
- “Enlightenment Entanglements of Improvement and Growth.” *Explorations in the Digital History of Ideas*. Ed. Pete de Bolla. Cambridge University Press. (2024). (Co-authored with Pete de Bolla and Mark Algee-Hewitt).
- “Mapping London’s Emotions.” *New Left Review* 101 (2016): 63-91. (Co-authored with Franco Moretti and Erik Steiner).
- “Mapping the Emotions of London in Fiction, 1700-1900: A Crowdsourcing Experiment.” *Literary Mapping in the Digital Age*. Ed. David Cooper, Chris Donaldson, and Patricia Murrieta-Flores. Ashgate. 2016. (Co-authored with Mark Algee-Hewitt, Van Tran, Annalise Lockhart, and Erik Steiner).
- “Phonological and Metrical Variation across Genres”. *Proceedings of the 2015 Annual Meeting on Phonology* (2016). (Co-authored with Arto Anttila).
- “Learning to Read Data: Bringing out the Humanistic in the Digital Humanities.” *Victorian Studies* 54.1 (2011): 79-86. (Co-authored with Long Le-Khac).

## WORK IN PROGRESS

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*Abstraction: A Literary History*. (expected completion 2026).

“Antimetricality and the Rhythms of Prose.” *Language*. (Revising; co-authored with Arto Anttila and Paul Kiparsky).

“Abstract Realism.” (Journal article)

## GRANTS IN PROGRESS

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Toward a new Collaborative Computational Project for Arts, Humanities, and Culture research (CCP-AHC). Three-year UKRI-funded project. Advisory group. 2025-ongoing.

## COMPLETED GRANTS

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WhatEvery1Says (WE1S). Directed by Alan Liu at the University of California–Santa Barbara. Funded by the Andrew W. Mellon Foundation. Advisory group. 2018-2019.

Textual Geographies. Directed by Matthew Wilkens at the University of Notre Dame, funded by the National Endowment for the Humanities. Researcher. 2017-2018.

Crowdsourcing in the Humanities. Directed by Zephyr Frank at Stanford University, Center for Spatial and Textual Analysis. Funded by the Andrew W. Mellon Foundation. Researcher. 2011-2014.

## PRESS COVERAGE

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“How Data Analysis Can Enrich the Liberal Arts.” *The Economist*. Dec 19, 2020.

Jennifer Schluesser. “The Book Crunchers.” *The New York Times*. Oct 30, 2017.

Sarah Laskow. “Why the London of British Literature Barely Changed for 200 Years.” *Atlas Obscura*. Feb 2, 2017.

Emily Matchar. “Stanford Researchers Map the Feelings Associated With Different Parts of London.” *Smithsonian Magazine*. Apr 4, 2017.

Ralph Blumenthal. “Stanford Literary Lab Maps ‘Emotions in Victorian London’.” *The New York Times*. Apr 13, 2015.

## LITERARY LAB PAMPHLETS

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Reprinted in *Canon/Archive: Studies in Quantitative Formalism from the Stanford Literary Lab*, ed. Franco Moretti (New York: n+1, 2017)

“The Emotions of London.” *Stanford Literary Lab* 13 (2016). (Co-authored with Franco Moretti and Erik Steiner).

“Canon/Archive: Large-scale Dynamics in the Literary Field.” *Stanford Literary Lab* 11 (2016). (Co-authored with Mark Algee-Hewitt, Sarah Allison, Marissa Gemma, Franco Moretti, and Hannah Walser).

“On Paragraphs: Scale, Themes, and Narrative Form.” *Stanford Literary Lab* 10 (2015). (Co-authored with Mark Algee-Hewitt and Franco Moretti).

“Style at the Scale of the Sentence.” *Stanford Literary Lab* 5 (2013). (Co-authored with Sarah

Allison, Marissa Gemma, Franco Moretti, Amir Tevel, and Irena Yamboliev).  
“A Quantitative Literary History of 2,958 Nineteenth-Century British Novels: The Semantic Cohort Method.” *Stanford Literary Lab* 4 (2012). (Co-authored with Long Le-Khac).  
“Quantitative Formalism: An Experiment.” *Stanford Literary Lab* 1 (2011). (Co-authored with Sarah Allison, Matthew Jockers, Franco Moretti, and Michael Witmore).

## TEACHING

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### *Instructor*

“Critical AI” (Cambridge Digital Humanities MPhil, 2025-ongoing)  
“Distant Reading” (CDH MPhil, 2025-ongoing)  
“Critical Technical Practice” (CDH MPhil, 2025-ongoing)  
“Practical Criticism and Critical Practice” (Cambridge English, 2020-ongoing)  
“Python for Poets” (Princeton, 2023)  
“Automating the Bechdel Test: Computing Gender Bias across Media” (CDH, 2022)  
“Literary Text Mining” (Stanford English, 2019)

### *Co-Instructor*

“Ballad, Sonnet, Lyric, Line: The Stories of Poetic Forms” (Princeton graduate English course, 2023)

### *Teaching Assistant*

“Humanities and Data Science Faculty Institute” (Princeton)  
“Introduction to English II: Milton and Melville” (Stanford English)  
“Shakespeare” (Stanford English)

### *Workshop Instructor*

“Introduction to Word Embedding Models for the Humanities” (University of Trier)  
“Introduction to Python for Digital Humanities” (Stanford Center for Spatial and Textual Analysis)

## HONORS AND AWARDS

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Alden Dissertation Prize, Stanford University, 2019. Awarded to the best dissertation in the English Department that year.

Paul Fortier Prize, Alliance of Digital Humanities Organizations, 2017.

## INVITED TALKS

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“Exploration in the Digital History of Ideas.” Open Lecture Series, Cambridge Digital Humanities. 2025.

- “Computing Koselleck: Modelling Semantic Revolutions, 1720–1960.” Computational Humanities Research Group, King’s College London. 2024.
- “Cultures of Abstraction: Artificial Intelligence and Distant Reading.” Observatoire des Textes, des Idées et des Corpus. Sorbonne University. 2021.
- “Computing Intellectual History: Word Embedding Models and Lexical Semantic Change, 1720-1960.” University of Birmingham Department of English Language and Linguistics. 2021.
- “*Sattelzeit* and Semantic Change.” Revolutionary Translations; Translators as Revolutionaries. King’s College London. 2020.
- “Abstract Realism.” Eighteenth-Century and Romantic Studies Graduate Seminar. University of Cambridge. 2020.
- “Computational Keywords: Historical Semantics and Cultural History, 1660-1830.” University of Trier. 2018.
- “Computational Keywords: Abstractions of Value, 1750-1850.” Yale DHLab and the 18th/19th-Century Colloquium. 2018.
- “Word Vectors in the Eighteenth Century.” Institute for Pure and Applied Mathematics: Workshop IV: Mathematical Analysis of Cultural Expressive Forms: Text Data. Los Angeles. 2016.
- “Affect and Space as Mediating Technologies: Reflections from and on the ‘Emotions of London’ Literary Lab Project.” Cultural Analytics. Chicago. 2015.

#### CONFERENCE PRESENTATIONS

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- “Cultural Collapse: Toward a Generative Formalism for AI Cultural Production.” Computational Humanities Research. Luxembourg. 2025.
- “Samuel Johnson and the Algebra of Syntax.” American Society for Eighteenth-Century Studies. Toronto. 2024.
- “Historical Prosody and Mechanical Form.” American Comparative Literature Association. Montreal. 2024.
- “The Concrete, the Particular and the Punctilio.” Western Society for Eighteenth-Century Studies. Los Angeles. 2023.
- “Abstract Realism.” American Society for Eighteenth-Century Studies. Baltimore, MD. 2022.
- “Prose Rhythm and Antimetricality.” Linguistics Society of America. Washington, DC, USA. 2022. (with Arto Anttila and Paul Kiparsky).
- “The Rise and Fall of Antimetricality.” Bridging Gaps, Creating Links: The Qualitative-Quantitative Interface in the Study of Literature. Padua, Italy. 2018. (with Paul Kiparsky).
- “Word Vectors in the Eighteenth Century.” Digital Humanities. Montreal. 2017. [*Awarded Paul Fortier Prize*]
- “Building Blocks of Fiction: Literary Lexical Bundles, 1700-1900.” Digital Humanities. Krakow. 2016. (with Marissa Gemma).

- “Associationism, Analogy, and Computationalism.” Annual Meeting of the Western Society for Eighteenth-Century Studies (WSECS). Santa Barbara. 2017.
- “ELIZA, Virtual Therapist: or, Notes toward a Virtual Humanities.” Modern Language Association. Philadelphia. 2017.
- “Knowledge Networks, Juxtaposed: Disciplinarity in the Encyclopédie and Wikipedia.” Digital Humanities. Sydney. 2015. (with Mark Algee-Hewitt and John Bender).
- “Phonological and Metrical Variation across Genres.” Annual Meeting of Phonology. Vancouver. 2015. (with Arto Anttila).
- “Phonological and Metrical Variation across Genres.” Linguistics Society of America. Washington, D.C. 2015. (with Arto Anttila).
- “Virtual Poetics: A Thought Experiment.” SyncDH. Santa Barbara. 2015.
- “Mapping the Emotions of London in Fiction, 1700-1900: A Crowdsourcing Experiment.” Digital Humanities. Sydney. 2015. (with Mark Algee-Hewitt, Van Tran, Annalise Lockhart, and Erik Steiner).
- “Transhistorical Poetry Project Phase II: Metrical Form.” Digital Humanities. Lausanne. 2014. (with Mark Algee-Hewitt, Maria Kraxenberger, J.D. Porter, Jonathan Sensenbaugh, and Justin Tackett).

## **LANGUAGES AND SKILLS**

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English: fluent/native

German: proficient reading, writing, and speaking

French: proficient reading

Programming: fluent in Python; proficient in R, Java, javascript, PHP, other languages

Data science: fluent in NLP, data visualization and analysis; proficient in machine learning