

# Ted Underwood

School of Information Sciences and Department of English  
University of Illinois at Urbana-Champaign

501 E. Daniel St.  
Champaign, IL 61820

(217) 419-2056  
tunder@uiuc.edu

## Education

Ph.D., English, Cornell University, January 1997  
B.A., Philosophy, Williams College, 1989

## Employment

Professor of Information Sciences, UIUC (2016 -)  
Professor of English, UIUC (2014-)  
Associate Professor of English, UIUC (2007-14)  
Assistant Professor of English, UIUC (2003-06)  
Assistant Professor of English, Colby College (1998-2003)  
Visiting Assistant Professor, University of Rochester (1997-8)  
Teaching Assistant, Cornell University (1993-5)  
Research programmer, AI Atlanta, summers 1987, 1988.

## Work in progress

- *A Perspectival History of Fiction in English*.
- “Characterization in Fiction and Biography” (collaboration with Natalie Declerck, Ryan Dubnick, and Hoi-Yan Wong).
- “Metatopics: Modeling Novels with their Reviews” (collaboration with Kent Chang, Yuerong Hu, and Jessica Witte).

## Publications

### Books

- *Distant Horizons: Digital Evidence and Literary Change*. Chicago: Univ. of Chicago Press, 2019.
- *Why Literary Periods Mattered: Historical Contrast and the Prestige of English Studies*. Palo Alto, CA: Stanford University Press, 2013.
- *The Work of the Sun: Literature, Science, and Political Economy 1760-1860*. New York: Palgrave, 2005.

### Papers in proceedings

- “The Historical Significance of Textual Distances,” 2nd Joint SIGHUM Workshop on Computational Linguistics for Cultural Heritage, Social Sciences, Humanities and Literature.

- David Bamman, Ted Underwood, Noah Smith. “A Bayesian Mixed Effects Model of Literary Character.” Association for Computational Linguistics 2014.
- Ted Underwood, Mike Black, Loretta Auvil, Boris Capitanu. “Mapping Mutable Genres in Structurally Complex Volumes.” 2013 IEEE International Conference on Big Data, pp. 95-104.

### Journal articles and chapters in books

- “Why Literary Time is Measured in Minutes.” *ELH* 85.2 (2018): 341-65.
- “Algorithmic Modeling; or, Modeling Data We Do Not Yet Understand.” In *The Shape of Data in Digital Humanities*, ed. Julia Flanders and Fotis Jannidis. Ashgate, 2018.
- Ted Underwood, David Bamman, and Sabrina Lee. “The Transformation of Gender in English-Language Fiction.” *Journal of Cultural Analytics*, February 2018.
- “A Genealogy of Distant Reading.” *Digital Humanities Quarterly* 11.2 (2017).
- James F. English and Ted Underwood. “Shifting Scales: Between Literature and Social Science,” introduction to a special issue co-edited by English and Underwood, *Modern Language Quarterly* 77.3 (2016): 277-95.
- Ted Underwood and Jordan Sellers. “The Longue Durée of Literary Prestige.” *Modern Language Quarterly* 77.3 (2016): 321-44.
- Ted Underwood and the Novel™ Research Group, “Genre Theory and Historicism.” *Journal of Cultural Analytics*, October 2016.
- “The Life Cycles of Genres.” *Journal of Cultural Analytics*, May 2016.
- “Distant Reading and Recent Intellectual History.” *Debates in Digital Humanities 2016*, ed. Matthew K. Gold and Lauren Klein. Minneapolis: University of Minnesota Press, 530-33.
- “Hold On Loosely: Or, Gesellschaft and Gemeinschaft on the Web,” *Debates in Digital Humanities 2016*, ed. Matthew K. Gold and Lauren Klein. Minneapolis: University of Minnesota Press, 519-22.
- “The Literary Uses of High-Dimensional Space.” In *Assumptions of Sociality: A Colloquium of Social and Cultural Scientists*, a special issue of *Big Data and Society* ed. John Mohr, Ronald Breiger and Robin Wagner-Pacifici. 2015.
- Andrew Goldstone and Ted Underwood. “The Quiet Transformations of Literary Study: What Thirteen Thousand Scholars Could Tell Us.” *New Literary History* 45.3 (2014): 359-84.
- “Theorizing Research Practices We Forgot to Theorize Twenty Years Ago.” *Representations* 127 (2014): 64-72.
- Andrew Goldstone, Ted Underwood. “What Can Topic Models of PMLA Teach Us About the History of Literary Scholarship.” *Journal of Digital Humanities* 2.1 (2012).
- Ted Underwood, Jordan Sellers. “The Emergence of Literary Diction.” *Journal of Digital Humanities* 1.2 (2012).
- “If Romantic Historicism Shaped Modern Fundamentalism, Would That Count as Secularization?” *European Romantic Review* 21 (2010): 327-43.
- “Discontinuity and Culture (in the 1840s and in Foucault).” *Philosophy and Culture*, ed. Rei Terada. Romantic Circles, 2008. <http://www.rc.umd.edu/praxis/philcult/>

- “How Did the Conservation of Energy Become ‘The Highest Law in All Science?’” *Repositioning Victorian Sciences: Shifting Centers in Nineteenth-Century Scientific Thinking*, ed. David Clifford, Elisabeth Wadge, Alex Warwick, and Martin Willis. London: Anthem Press, 2006. 119-30.
- “Stories of Parallel Lives and the Status Anxieties of Contemporary Historicism.” *Representations* 85 (2004): 1-20.
- “Skepticism and Surmise in Humphry Davy.” *The Wordsworth Circle* 34 (2003): 95-103.
- “Historical Difference as Immortality in the Mid-Nineteenth-Century Novel.” *Modern Language Quarterly* 63 (2002): 443-469.
- “Romantic Historicism and the Afterlife.” *PMLA* 117 (2002): 237-51.
- “How to Save ‘Tintern Abbey’ from New-Critical Pedagogy (in Three Minutes Fifty-Six Seconds).” *Romanticism and Contemporary Culture*. Ed. Laura Mandell and Michael Eberle-Sinatra. *Romantic Praxis Series*. Romantic Circles, University of Maryland, 2002.
- “The Science in Shelley’s Theory of Poetry.” *Modern Language Quarterly* 58.3 (1997): 299-321.
- “Productivism and the Vogue for ‘Energy’ in Late Eighteenth-Century Britain.” *Studies in Romanticism* 34.1 (1995): 103-25.

### Reviews and journalism

- “Why an Age of Machine Learning Needs the Humanities.” *Public Books*. December 5, 2018.
- Sarah Bond, Hoyt Long, and Ted Underwood, “Digital is Not the Opposite of Humanities,” *Chronicle of Higher Education*, November 1, 2017.
- “The Stanford Literary Lab’s Narrative,” *Public Books*, November 2, 2017.
- Review of *The Bestseller Code*, by Jodie Archer and Matthew Jockers. *Public Books*, October 2016.
- Ted Underwood, Hoyt Long, and Richard Jean So, “Cents and Sensibility.” *Slate*, Dec 10, 2014.
- “On the Digital Humanities.” *Open Letters Monthly: An Arts and Literature Review*. July 2012.
- Alan Bewell, Jon Klancher, Christina Lupton, and Ted Underwood, review forum on *This is Enlightenment*, ed. Clifford Siskin and William Warner. *Studies in Romanticism* 50.3 (2011): 531-43.
- Essay review of *Technologies of the Picturesque*, Ron Broglio, *The Blind and Blindness*, Edward Larissy, and *Science and Sensation in Romantic Poetry*, Noel Jackson. *European Romantic Review* 22 (2011): 79-85.
- “The Denaturalization of Economic Thought.” Review of Margaret Schabas, *The Natural Origins of Economics*. *Eighteenth-Century Life* 33.1 (2009): 71-73.
- Review of *Imperfect Histories: The Elusive Past and the Legacy of Romantic Historicism*, by Ann Rigney. *European Romantic Review* 14 (2003): 384-7.
- Review of *England in 1819: The Politics of Literary Culture and the Case of Romantic Historicism*, by James Chandler. *European Romantic Review* 11 (2000): 360-4.

## Articles in reference works

- Matthew Jockers and Ted Underwood. “Text Mining the Humanities,” in *The Blackwell Companion to Digital Humanities*, 2nd ed., edited by Susan Schreibman, Ray Siemens, and John Unsworth. Wiley-Blackwell, 2016. 291-306.
- “Natural History and Scientific Prose,” *The Blackwell Encyclopedia of Romantic Genre*, ed. Frederick Burwick and Diane Long Hoeveler. London: Blackwell, 2012. 7 pp.
- “Historiography,” *Blackwell Handbook to Romanticism Studies*, ed. Joel Faflak and Julia M. Wright. London: Blackwell, 2011. 227-43.

## Blogs

- *The Stone and the Shell*. [tedunderwood.com](http://tedunderwood.com) 2010-16. 98 posts, 248,000 views. Reflection on digital libraries and on text mining in the humanities.
- *The Uses of Scale in Literary Study*. [usesofscale.com](http://usesofscale.com) 2012-13. 4 posts, 1,600 pageviews. Resources for cleaning and normalizing text to support humanistic research at scale.

## Software and data

- Ted Underwood, Boris Capitanu, Peter Organisciak, Sayan Bhattacharyya, Loretta Auvil, Colleen Fallaw, J. Stephen Downie (2015). *Word Frequencies in English-Language Literature, 1700-1922 (0.2) [Dataset]*. HathiTrust Research Center. doi:10.13012/J8JW8BSJ. <https://sharc.hathitrust.org/genre>
- Ted Underwood, “Page-Level Genre Metadata for English-Language Volumes in HathiTrust, 1700-1922.” [figshare](https://figshare.com). 2014. Covers 854,476 volumes. <http://dx.doi.org/10.6084/m9.figshare.1279201>
- “Parallelized Topic-Modeling Software in Java.” <https://github.com/tedunderwood/Parallel-LDA>
- “Tools for Wrangling Data from HathiTrust.” <https://github.com/tedunderwood/DataMunging>

## Grants and honors

- Fellow, National Humanities Center, Research Triangle, NC, 2018-19, \$51,000.
- Collaborator, WCSA+DC (J. Stephen Downie and Beth Plale, co-PIs). Andrew W. Mellon Foundation, \$1.17 million.
- Associate, Center for Advanced Study, UIUC 2015-16.
- Primary collaborator, Text Mining the Novel (Andrew Piper, McGill, PI). My portion of the project funded to \$120,000 CDN over six years (2014-20).
- ACLS Digital Innovation Fellowship, calendar year 2014. \$85,000.
- LAS Centennial Scholar, University of Illinois, Urbana-Champaign, 2013-16. \$30,000.
- NEH Digital Humanities Start-Up Grant, 2013-14. \$57,100.
- Primary Investigator, Uses of Scale in Literary Study, supported by the IPRH “Humanities Without Walls” initiative, funded by the Andrew W. Mellon Foundation, \$40,000. 2012-13.
- IACAT fellowship, NCSA, UIUC. 2012-13. \$25,000.

- XSEDE Start-Up Allocation of 30,000 hours on the Blacklight supercomputer at the Pittsburgh Supercomputing Center. 2012-13.
- Primary Collaborator, Expanding SEASR Services, Andrew W. Mellon Foundation, \$761,000; John Unsworth and Matt Jockers, PIs; my use case was funded to \$70,000. 2010-12.
- William and Flora Hewlett International Research Travel Grant, 2005
- Research Board Grant, University of Illinois, 2004-5
- Humanities Research Grants, Colby College, 1999-2000, 2001-2, 2002-3
- My dissertation received Cornell's Messenger-Chalmers Graduate Prize (for historical research), and 2<sup>nd</sup> place in the Guilford Essay Competition (for excellence in English prose)

*Teaching:* I've taught courses ranging from literary history (especially of nineteenth-century Britain), to surveys of digital humanities and data science, to programming and text mining. I could teach R, Python, or Java, and I'm comfortable explaining the quantitative premises and practical applications of machine learning algorithms, whether applied to text or to more structured datasets. I'm particularly interested in teaching students to understand the epistemological premises of machine learning as integral parts of a principled interpretive theory appropriate for the humanities.

## *Presentations*

### **Invited talks**

- "Perspective, Parallax, and the History of Genre," University of California Berkeley, October 2018.
- "Measurement and Human Perspective," invited talk at the Second Joint SIGHUM Workshop on Computational Linguistics for Cultural Heritage, Social Sciences, Humanities, and Literature, Santa Fe, August 2018.
- "Digital Perspectives on the Long Arc of Literary History," Ferguson Lecture at Tulane University, April 2018.
- "Distant Reading and the Problem of Perspective," presented at Heidelberg University and the University of Würzburg, Germany, November 2017.
- "Hundreds, Thousands, or Millions of Words: Fitting our Methods to the Question," keynote address at "How to Do Things with Millions of Words," University of British Columbia, November 2016.
- "How Well Do We Already Understand Literary History?," Bazargan Lecture at Eastern Illinois University, October 2016.
- "Predicting the Past: Using Machine Learning to Illuminate Three Centuries of Literary History," University of Edinburgh, May 2016.
- "Toward a Literary Longue Durée," keynote address at Writing Literary History 1900-1950, Katholieke Universiteit Leuven, September 2015.
- "Piketty's Model: Literary History Without Fixed Objects," Micromégas, Stanford Literary Lab, February 2015.

- “Two Ways of Using Numbers in the Humanities: An Argument with Thomas Piketty.” Rutgers University, September 2014.
- “Beyond tools: The questions about interpretation that link computer science to the humanities.” Delivered at UVA, Emory, Kansas University and Indiana University, Spring 2014.
- “We’ve been mining data for twenty years. How did we forget to theorize it?” Digital Forum at the University of Pennsylvania, Oct 2, 2013.
- “Can mining a million books tell us anything new?” Center for Digital Humanities, University of South Carolina, Oct 18, 2013.
- “Digital humanities and library science.” Joint appearance with Harriett Green at the University of Michigan Library, Oct 28, 2013.
- “The Unwritten History of Literary Practice.” Stanford Literary Lab. Feb 2013.
- “How Well Do We Understand Literary History?” University of Nebraska Digital Humanities Forum. Keynote presentation. Feb 2013.
- “Learning What We Don’t Know About Literary History,” Notre Dame. November 2012.
- “The Modest Promise of ‘Big Data’ in Literary Study.” Invited presentation at McGill University. Montréal. May 2012.
- “Humanistic Imagination and the Mere Counting of Words.” Invited presentation at Loyola University Chicago. April 2012.

#### **Recent conference presentations**

- “A Broader Purpose,” presentation for “Varieties of Digital Humanities,” MLA 2018. Transcript: <https://tedunderwood.com/2018/01/04/a-broader-purpose/>
- “The Pace of Literary Change,” University of Chicago, Cultural Analytics Conference, May 2015.
- “Computer science as a hermeneutic of suspicion.” MLA 2014.
- “New models of literary collectivity.” MLA 2014.
- “The Imaginative Use of Numbers.” MLA 2013.
- “The Methodologies We Argue About, and the Ones We Agree to Use Quietly.” MLA 2012. Seattle, WA.
- “The Felt Moment; or, Taking our Brainstorms Back from Google,” North American Society for the Study of Romanticism, Park City, UT, 2011.
- “Timelines, Handbooks, and the Cultivation of Historical ‘Perspective.’” North American Society for the Study of Romanticism, Vancouver, BC, 2010.

#### *Academic service*

##### **At the disciplinary level**

- Service on the editorial board of *Cultural Analytics*, 2016 -
- Associate Director of NINES, 2011-14

- Service on the editorial board of Eighteenth-Century Studies, 2011-13
- Frequent service on review panels for the National Endowment of the Humanities and American Council of Learned Societies.

**University of Illinois, Urbana-Champaign**

- Data Science Education Task Force, 2017-
- Data Science Initiative, NCSA, 2015-16
- Committee on Stewarding Excellence, 2010-11
- Provost's Advisory Group, 2011-12
- Undergraduate Research Committee, 2012-13
- Committee for Research and Education at NCSA, 2014-15
- Interdisciplinary Working Group for Computation, Data, and Information, NCSA, 2014-15

**School of Information Sciences, UIUC**

- Admissions Committee, 2016-17

**College of Liberal Arts and Sciences, UIUC**

- LAS Honors Committee, 2007-10; chair of, 2009-10

**Department of English, UIUC**

- Curriculum Committee, 2008-09, 2011-12
- Grad Admissions Committee, 2003-04, 2004-05
- Advisory Committee, 2005-06, 2011-12, 2012-13
- Director of Undergraduate Studies, 2007-10
- Honors Committee, 2007-10
- Undergraduate Awards Committee, 2007-10