Simon Todd

July 12, 2024

Contact Information

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Academic Appointments

Adjunct Fellow, New Zealand Institute of Language, Brain and Behaviour **2023–**

Assistant Professor of Linguistics, University of California, Santa Barbara **2020–**
- Affiliated Faculty, Cognitive Science Program 2020–
- Affiliated Faculty, Department of Computer Science 2021–
- Research Faculty Affiliate, Center for Information Technology and Society 2021–
- Core Faculty, Quantitative Methods in the Social Sciences Ph.D. Emphasis 2022–

Postdoctoral Fellow, New Zealand Institute of Language, Brain, and Behaviour **2019–20**
PIs: Jen Hay, Jeanette King

Education

Ph.D., Linguistics, Stanford University **2019**
Dissertation: The Listener in Language Change
Committee: Dan Jurafsky (co-advisor), Meghan Sumner (co-advisor), Jen Hay

M.A., Linguistics, Stanford University **2015**

B.A.(Hons), Mathematics, University of Canterbury **2012**

B.A., Linguistics, Mathematics, French (minor), University of Canterbury **2011**

Honors and Awards

Paper Awards

Top 100 most-downloaded papers (#57), Scientific Reports, 2020

Best student paper, Phonetics and Phonology in Europe, 2015

Teaching, Mentoring, and Service Awards

UCSB Chancellor's Faculty Award for Undergraduate Research Mentoring, 2024

Stanford Alumni Association Graduate Student Community Impact Award, 2018

Graduate Fellowships and Awards

Stanford Humanities Center Geballe Dissertation Prize Fellowship, 2018

American Council of Learned Societies Mellon Dissertation Fellowship, 2018 (declined)

Mabelle McLeod Lewis Memorial Fund Fellowship, 2018 (declined)

Stanford University Pigott Scholars Program Fellowship, 2016

Stanford University Graduate Diversity Fellowship, 2013

Fulbright New Zealand General Graduate Award, 2013

Undergraduate Scholarship and Awards

Scholarships (11, various sources), 2009-2012
University of Canterbury, Māori Education Trust, Freemasons, HMNZS Canterbury, NZQA

University of Canterbury Senior Scholar (top undergraduate student), 2012

Cook Memorial Prize for Mathematics, 2012

William Brent Wilson Memorial Prize for Applied Mathematics, 2011

Peter Bryant Memorial Prize for Mathematics, 2010

Grants

UCSB Academic Senate Faculty Research Grant, 2021–2022. *Do non-Spanish-speaking Americans have a Spanish proto-lexicon?* (**Simon Todd, PI**) $15,165

Royal Society of New Zealand Marsden Fund, 2023–2026. *Te reo Māori vowel sequences within and across morpheme boundaries.* (Jennifer Hay, PI; Jeanette King, co-PI; Forrest Panther, co-PI; Marton Sóskuthy, co-PI; **Simon Todd, co-PI**) NZ $647,000

Royal Society of New Zealand Marsden Fund, 2024–2027. *A real-world example of implicit grammar learning.* (Jeanette King, PI; Jennifer Hay, co-PI; Forrest Panther, co-PI; **Simon Todd, co-PI**) NZ $870,000

Books

Todd, Simon. 2013. *4tφ: A Supplement for Scholarship Calculus* [textbook series]. Takapuna, New Zealand: Eton Press.

Articles (peer-reviewed)

Note: ^{G} indicates a graduate student coauthor, and ^{U} an undergraduate.

Mattingley, Wakayo, Jennifer Hay, **Simon Todd**, Forrest Panther, Jeanette King, and Peter Keegan. 2024. Ongoing exposure to an ambient language continues to build implicit knowledge across the lifespan. *Linguistics Vanguard*. doi: `10.1515/lingvan-2023-0137`

Yao, Qing^U and **Simon Todd**. 2024. BERT's insights into the English dative and genitive alternations. *Proceedings of the Society for Computation in Linguistics 7*(1), 52–62. doi: `10.7275/scil.2130`

Varatharaj, Ashvini^G and **Simon Todd**. 2024. More than just statistical recurrence: Human and machine unsupervised learning of Māori word segmentation across morphological processes. *Proceedings of the 21st SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology*, 20–31. doi: `10.18653/v1/2024.sigmorphon-1.3`

Mattingley, Wakayo, Forrest Panther, **Simon Todd**, Jeanette King, Jennifer Hay, and Peter Keegan. 2024. Awakening the proto-lexicon: A proto-lexicon gives learning advantages for intentionally learning a language. *Language Learning*. doi: `10.1111/lang.12635`

Roll, Nathan^U, Calbert Graham, and **Simon Todd**. 2023. PSST! Prosodic Speech Segmentation with Transformers. *Proceedings of the 27th SIGNLL Conference on Computational Natural Language Learning*, 476–487. doi: `10.18653/v1/2023.conll-1.31`

Oh, Yoon Mi, **Simon Todd**, Clay Beckner, Jennifer Hay, and Jeanette King. 2023. Assessing the size of non-Māori-speakers' active Māori lexicon. *PLOS ONE 18*(4), e0289669. doi: `10.1371/journal.pone.0289669`

Ventayol-Boada, Albert^G, Nathan Roll^U, and **Simon Todd**. 2023. Unsupervised part-of-speech induction for language description: Modeling documentation materials in Kolyma Yukaghir. *Proceedings of the 2nd Field Matters Workshop on NLP Applications to Field Linguistics*, 22–29. doi: `10.18653/v1/2023.fieldmatters-1.3`

Panther, Forrest, Wakayo Mattingley, Jennifer Hay, **Simon Todd**, Jeanette King, and Peter Keegan. 2023. Morphological segmentations of non-Māori-speaking New Zealanders match proficient speakers. *Bilingualism: Language and Cognition*. doi: `10.1017/S1366728923000329`

Todd, Simon, Chadi Ben Youssef^G, and Alonso Vásquez-Aguilar^G. 2023. Language structure, attitudes, and learning from ambient exposure: Lexical and phonotactic knowledge of Spanish among non-Spanish-speaking Californians and Texans. *PLOS ONE 18*(4), e0284919. doi: `10.1371/journal.pone.0284919`

Clapp, William^G, Charlotte Vaughn, **Simon Todd**, and Meghan Sumner. 2023. Talker-specificity and token-specificity in recognition memory. *Cognition 237*, 105450. doi: `10.1016/j.cognition.2023.105450`

Panther, Forrest, Wakayo Mattingley, **Simon Todd**, Jennifer Hay, and Jeanette King. 2023. Proto-lexicon size and phonotactic knowledge are linked in non-Māori-speaking New Zealand adults. *Laboratory Phonology 14*(1). doi: 10.16995/labphon.7943

Hay, Jennifer, Jeanette King, **Simon Todd**, Forrest Panther, Wakayo Mattingley, Yoonmi Oh, Clay Beckner, Jeremy Needle, and Peter Keegan. 2022. Ko te mōhiotanga huna o te hunga kore kōrero i te Reo Māori [Implicit knowledge of Māori among non-Māori-speakers]. *Te Reo 65*(1), 42–59.

Todd, Simon, Annie Huang^U, Jeremy Needle, Jennifer Hay, and Jeanette King. 2022. Unsupervised morphological analysis in a language with reduplication. *Proceedings of the 19th SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology*, 12–22. doi: 10.18653/v1/2022.sigmorphon-1.2

Oh, Yoon Mi, **Simon Todd**, Clay Beckner, Jennifer Hay, Jeanette King, and Jeremy Needle. 2020. Non-Māori-speaking New Zealanders have a Māori proto-lexicon. *Scientific Reports 10*, 22318. doi: 10.1038/s41598-020-78810-4 [**Top 100 Papers of 2020 (#57)**]

Todd, Simon, Janet B. Pierrehumbert, and Jennifer Hay. 2019. Word frequency effects in sound change as a consequence of perceptual asymmetries: An exemplar-based model. *Cognition 185*, 1–20. doi: 10.1016/j.cognition.2019.01.004

Szmrecsanyi, Benedikt, Jason Grafmiller, Joan Bresnan, Anette Rosenbach, Sali Tagliamonte, and **Simon Todd**. 2017. Spoken syntax in a comparative perspective: the dative and genitive alternation in varieties of English. *Glossa: a journal of general linguistics 2*(1), 86. doi: 10.5334/gjgl.310

James, Alex, Ken Morrison, and **Simon Todd**. 2013. A mathematical model of the defence mechanism of a Bombardier beetle. *Journal of the Royal Society Interface 10*(79), 20120801. doi: 10.1098/rsif.2012.0801

Todd, Simon. 2012. How do undergraduate mathematics students want to learn? [invited article] *Community for Undergraduate Learning in the Mathematical Sciences Newsletter 5*, 12-19. University of Auckland, NZ.

Conference Presentations & Posters (non-archival)

*Note: ^{G} indicates a graduate student coauthor, and ^{U} an undergraduate. * indicates the presenter.*

Varatharaj^G, Ashvini, and **Simon Todd***. 2024. Using variation in language structure to understand implicit language learning in non-Māori speakers exposed to Māori. *Variation and Language Processing 6*. Vigo, Spain.

Todd, Simon*. 2024. Lexical adoption, exposure, and attitudes: The case of *eh* in New Zealand. *Variation and Language Processing 6*. Vigo, Spain.

Zhukova, Marina^G*, **Simon Todd**, and Laurel Brehm. 2024. How do GenZ users process chatbot memory lapses? An eye tracking study [poster]. *CAMP[6]: 6th Annual California Meeting on Psycholinguistics*. Stanford, CA.

Willis, Chloe^G*, and **Simon Todd**. 2024. #Bi Twitter: A keyness analysis of bisexual discourses on Twitter. *98th Annual Meeting of the Linguistic Society of America*. New York, NY.

Mattingley, Wakayo*, Forrest Panther, Jennifer Hay, Jeanette King, **Simon Todd**, and Peter Keegan. 2023. Childhood exposure is not needed to build a Māori proto-lexicon. *Annual Conference of the Linguistic Society of New Zealand*. Auckland, New Zealand.

Mattingley, Wakayo*, Forrest Panther, Jennifer Hay, **Simon Todd**, Jeanette King, and Peter Keegan. 2023. The initial stage of language learning: Linguistic diversity shapes a proto-lexicon in children. *23rd International Conference of the Japan Second Language Association*. Tokyo, Japan.

Willis, Chloe^G*, and **Simon Todd**. 2023. Happy, #horny, and valid: A keyness analysis of bisexual discourses on Twitter. *Queer in AI Workshop at ACL 2023*. Toronto, Canada.

Todd, Simon*, Chadi Ben Youssef[G], and Alonso Vásquez-Aguilar[G]. 2023. Attitudes moderate implicit knowledge of Spanish among non-Spanish-speaking Californians and Texans. *97th Annual Meeting of the Linguistic Society of America.* Denver, CO.

Mattingley, Wakayo*, Forrest Panther, Jeanette King, Jennifer Hay, **Simon Todd**, and Peter Keegan. 2022. The role of a proto-lexicon in intentionally learning a language. *Linguistic Society of New Zealand Conference.* Dunedin, New Zealand.

King, Jeanette*, Jennifer Hay, Peter Keegan, Wakayo Mattingley, **Simon Todd**, and Forrest Panther. 2022. The whakaoho o te mōhiotanga huna [Awakening the proto-lexicon]. *Te Puna o Te Kī.* Virtual.

Clapp, William[G]*, Charlotte Vaughn, **Simon Todd**, and Meghan Sumner. 2022. Talker-specificity vs. token-specificity in recognition memory [poster]. *LabPhon 18.* Virtual.

King, Jeanette*, Jennifer Hay, Peter Keegan, **Simon Todd**, Yoon Mi Oh, Jeremy Needle, Clay Beckner, Wakayo Mattingley, and Forrest Panther. 2021. Language exposure and the development of a proto-lexicon. *Fifth International Conference on Language Contact in Times of Globalization.* Virtual.

Todd, Simon*, Jeremy Needle, Jennifer Hay, and Jeanette King. 2021. Phonological influences on lexicalized compound formation in Māori. *95th Annual Meeting of the Linguistic Society of America.* Virtual.

Needle, Jeremy*, **Simon Todd**, Jeanette King, and Jennifer Hay. 2021. Overt speaker knowledge of reduplication patterns in te Reo Māori. *95th Annual Meeting of the Linguistic Society of America.* Virtual.

Todd, Simon*. 2019. Diagnosing change in a sparse, bursty variable: *Eh* in Pākehā English. *Linguistic Society of New Zealand Conference.* Christchurch, New Zealand.

Todd, Simon*, Jeremy Needle, Jennifer Hay, and Jeanette King. 2019. Quantitative insights into Māori word structure. *Linguistic Society of New Zealand Conference.* Christchurch, New Zealand.

Mengesha, Zion[G]*, **Simon Todd***, and Meghan Sumner. 2019. Personae in spreading activation and false memory [poster]. *93rd Annual Meeting of the Linguistic Society of America.* New York, NY.

Todd, Simon*. 2018. Exceptionality and faithfulness in Polish stress: Comparing mono- and multistratal approaches [poster]. *92nd Annual Meeting of the Linguistic Society of America.* Salt Lake City, UT.

Todd, Simon*, Meghan Sumner, and Grant Shillington[U]. 2016. Attention and socioacoustic salience: Investigation with dichotic listening. *Sociolinguistic Variation and Language Processing Conference.* Blacksburg, VA.

Todd, Simon*. 2016. Something from nothing: Pragmatic parsing of partitive possessives [poster]. *90th Annual Meeting of the Linguistic Society of America.* Washington, D.C.

Podesva, Robert J.*, Daniel Galbraith[G], Sunwoo Jeong[G], Sharese King[G], Bonnie Krejci[G], Kate Lindsey[G], Teresa Pratt[G], **Simon Todd**, Casey Wong[G], and Robert Xu[G]. 2016. A sociophonetic study of /l/-darkening among Latina/o and European Americans in Bakersfield, California. *American Dialect Society Annual Meeting.* Washington, D.C.

Todd, Simon*. 2015. Pronouncing the Zs: Epenthesis in English plural possessives. *Phonetics & Phonology in Europe 2015.* Cambridge, UK. [**Best Student Paper Award**]

Jeong, Sunwoo[G]*, **Simon Todd**, Justine Kao[G], Noah Goodman, and Meghan Sumner. 2015. The effect of prosodic cues and social information on the interpretation of hyperbole. *Language, Cognition, and Society (AFLiCo 6).* Grenoble, France.

Todd, Simon*. 2012. Functional Load and length-based Māori vowel contrast [poster]. *The 13th Language and Society Conference*. Auckland, New Zealand.

Todd, Simon*. 2011. How do maths students want to learn? *Volcanic Delta: The Eighth Southern Hemisphere Conference on Teaching and Learning Undergraduate Mathematics and Statistics*. Rotorua, New Zealand.

Invited Presentations

May 18, 2024. "Building implicit linguistic knowledge (without even trying)." Invited keynote presentation, *Southern California Undergraduate Linguistics Conference*. Los Angeles, CA.

March 17, 2023. "Building implicit linguistic knowledge through passive exposure." *UC Berkeley Phonetics and Phonology Forum*. Berkeley, CA.

November 9, 2022. "Building implicit linguistic knowledge through passive exposure." *UCSB Quantitative Methods in the Social Sciences Research Seminar*. Santa Barbara, CA.

October 7, 2022. "Synergies of Computational Linguistics and Natural Language Processing: A case study in morphological segmentation." *UCSB Responsible Machine Learning Summit*. Santa Barbara, CA.

August 10, 2022. "Language structure, attitudes, and learning from ambient exposure: Lexical and phonotactic knowledge of Spanish in non-Spanish-speaking Californians and Texans." *New Zealand Institute of Language, Brain and Behaviour Research Meeting*. Christchurch, New Zealand.

March 31, 2022. "Learning by listening: Implications for humans and machines." *UCSB Center for Information Technology and Society Research Seminar*. Santa Barbara, CA.

July 19, 2021. "Building linguistic knowledge: the surprising amount you can pick up by listening." *UCSB Groundbreaking Research / Innovative Technologies Talk Series*. Virtual.

May 23, 2019. "The listener in language change." *New Zealand Institute of Language, Brain and Behaviour Seminar Series*. Christchurch, New Zealand.

January 31, 2019. "The listener in language change: A computational approach." *UC Santa Barbara Linguistics Colloquium Series*. Santa Barbara, CA.

January 23, 2019. "The listener in language change: A computational approach." *University of Illinois at Urbana-Champaign Linguistics Seminar Series*. Urbana-Champaign, IL.

November 26, 2018. "Word frequency effects in sound change: A listener-based exemplar model." *UC Berkeley Phonetics and Phonology Forum*. Berkeley, CA.

February 17, 2017. "Connecting speech perception and sound change: A computational model of push-chains." *UC Berkeley CogNetwork Seminar*. Berkeley, CA.

November 4, 2016. "Word frequency effects in push chains as a consequence of perceptual asymmetries: A computational model." *New Zealand Institute of Language, Brain and Behaviour Seminar Series*. Christchurch, New Zealand.

Theses

at **Stanford University**

Faithfulness and Exceptionality in Polish Stress: A Multistratal OT Analysis. In-Depth Language Requirement, 2016. Advisor: Paul Kiparsky.

Something from Nothing: Pragmatic Parsing of Partitive Possessives. 2nd Qualifying Paper, 2015. Committee: Chris Potts (chair), Vera Gribanova, Boris Harizanov.

Avoiding Interpretation Ambiguities with Phonetic Cues. 1st Qualifying Paper, 2014. Committee: Dan Jurafsky (chair), Joan Bresnan, John Rickford.

at **University of Canterbury**

Developing Linguistic Structure: An Iterated Stochastic Exemplar Model. Undergraduate Honours Thesis, 2012. Advisor: Alex James.

Teaching Experience

at **University of California, Santa Barbara** (all as instructor)

Programming for Linguists. Undergraduate & graduate. Fall 2020, 2021, 2023.

Foundations of Computational Linguistics. Undergraduate (Winter 2021, 2023, 2025) & graduate (Winter 2021, Fall 2024).

Advanced Computational Linguistics: Text Processing. Undergraduate (Spring 2021, 2023) & graduate (Spring 2021).

Computational Cognitive Models of Language. Graduate. Fall 2022.

at **Stanford University**

Instructor, *Language Evolution and Change.* Mentored by Dan Jurafsky. Summer 2018.

Instructor, *Introduction to Python.* Center for Computational Social Science, Summer 2017.

TA, *African American Vernacular English.* With John Rickford, Winter 2017.

TA, *Introduction to Phonology.* With Arto Anttila, Autumn 2015.

Corpus TA, Department of Linguistics. With Chris Potts, AY 2014–15.

at **University of Canterbury**

Tutor, *Mathematics 1B.* With Rua Murray, Semester Two, 2012.

Tutor, *Mathematics 1A.* With David Wall, Semester One, 2012.

Head Tutor, *Scholarship Calculus Problem-solving Workshops.* With John Hannah, 2011–12.

at **St. Andrew's College** (Christchurch, New Zealand)

Instructor, *Scholarship Calculus Extension Program.* With Dean McKenzie, 2009–13.

Students Advised

Ph.D. Dissertations

Chadi Ben Youssef, *mMerge: A corpus driven multiword expression discovery algorithm*; in progress (member)

Cedar Brown; in progress (member)

Christian Brendel; in progress (chair)

Albert Ventayol-Boada, *Machine learning meets language description: Exploring Kolyma Yukaghir through supervised and unsupervised learning models*; in progress (member)

Wenda Xu (Department of Computer Science, UCSB); in progress (member)

Marina Zhukova, *Unpacking differences in emoji perception, processing, and interpretation*; in progress (chair)

Chloe Willis, *The theoretical and methodological implications of bisexuality in language and sexuality studies*; completed Summer 2023 (member)

Patrick Hall, *Docling.js: Building a new approach to designing software for language documentation using the web platform*; completed Winter 2022 (member)

Phillip Rogers, *Syntactic distributional information in the lexicon: Systematicity, functional pressures, and grammatical implications*; completed Winter 2022 (member)

Ph.D. Qualifying Projects

Ashvini Varatharaj; in progress (co-chair)

Yanlu Zhong; in progress (member)

Marina Zhukova, *Leveraging clustering algorithms and discourse analysis to unpack the functions of the Thumbs Up emoji on Twitter*; completed Winter 2024 (chair)

Jordan Douglas-Tavani, *Exploring the special first-position clitic cluster: Evidence for further complicating this syntactic phenomenon from miluk kuukwis*; completed Spring 2022 (member)

M.A. Theses & Portfolios

Cooper Bedin; in progress (member)

René Boye; in progress (member)

Allie Osborne (MLING, University of Canterbury); in progress (member)

Ashvini Varatharaj, *Understanding the effect of structure on implicit language learning*; completed Winter 2024 (chair)

Cedar Brown, *The politics of community language change: A computational analysis of language norms in an online trans community*; completed Spring 2022 (member)

Marina Zhukova, *Gesture emoji: Use in Twitter*; completed Spring 2022 (portfolio; member)

B.A. Theses & Capstone Projects

Khang Dinh; in progress

Josephine Kaminaga, Jennie Wu, and Daniel Yeung, *Aligning Embedding Spaces Across Languages to Identify Word Level Equivalents*; completed Spring 2024

Qing Yao, *BERT's insights into the English dative and genitive alternations*; completed Winter 2024

Nathan Roll, *An integrated approach to prosodic boundary detection in untranscribed speech via lexico-syntactic knowledge transfer*; completed Winter 2023

Undergraduate Research Assistants

2023–24: Siddharth Chattoraj; Wanzhen Fu; Jiashu Huang; Lu Liu; Shahil Patel; Shannon Rumsey

2022–23: Siddharth Chattoraj; Edward Huang; Justin Liu; Lu Liu; Nathan Roll; Shannon Rumsey; Sammy Shuliman; Vela Song; Haoran Yan

2020–21: Annie Huang

Service

at **University of California, Santa Barbara**

Director of the Linguistics Lab, Department of Linguistics, 2023–present

Lab Committee, Department of Linguistics, 2020–present

Admissions Committee, Department of Linguistics, 2022, 2023

Colloquium Committee, Department of Linguistics, AY 2022–23

Mentor, LGBTQ+ Mentorship Connection Program, RCSGD, 2023

Acting Chair, Lab Committee, Department of Linguistics, Winter 2023

Graduate Teaching Associate Mentor, Department of Linguistics, Winter 2022, Fall 2023

Faculty Search Committee (Language & Cognition), Department of Linguistics, 2021

Faculty Legislature Committee, Academic Senate, AY 2020–21

at **Stanford University**

Student Mentor, Enhancing Diversity in Graduate Education Program, VPGE, AY 2018–19

Graduate Studies Committee, Department of Linguistics, AY 2017-18

Elected Graduate Student Representative, Department of Linguistics, AY 2017–18

Coordinator, Cognitive Science Seminar, Department of Linguistics, AY 2017–18

Community Associate, Graduate Life Office, 2014–15, 2017-18

Financial Officer, Stanford Association of New Zealanders, 2015-16, 2017–18

Admissions Committee, Department of Linguistics, 2017

Mentor, Summer Intern Program, Center for the Study of Language and Information, 2015

Coordinator, Cognition & Language Workshop, Stanford Humanities Center, 2014–16, 2017–18

Coordinator, Phonetics & Phonology Workshop, Department of Linguistics, AY 2015–16

Social Committee, Department of Linguistics, AY 2013–14

at **University of Canterbury**

Postdoctoral Search Committee, NZILBB, 2020

Māori Student Mentor, Māori Development Team, 2011–2012

PVC Arts Student Advisory Board, College of Arts, 2012

Student Council Member, UC Arts, 2012

Peer Review

Journals: Language and Speech; Journal of Language Evolution; Journal of Phonetics; Journal of Psycholinguistic Research

Conferences: Chicago Linguistic Society; Laboratory Phonology; Linguistic Society of America; Phonetics and Phonology in Europe

LANGUAGES English (native), French (proficient), Māori (beginner), Mandarin Chinese (beginner)

COMPUTER SKILLS E-Prime, Java, Javascript, MATLAB, Praat, Python, R