David Ruskin

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University of Guam

Research Keywords:

CHamoru language documentation; Language archiving; Language preservation; Language Evolution; Pidgin & Creole Linguistics; Experimental Historical Linguistics; Probabilistic decision making; Experimental linguistic psychology

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Education:

Ph.D.   University of Rochester
Brain and Cognitive Sciences, 2014

M.A.   University of Rochester
Brain and Cognitive Sciences, 2011

B.S.   University of Wisconsin – Madison
Linguistics, 2006

Grants & Awards

2018 – CSR grant; Awarded to provide participant payments for my grad student's thesis work (Fu'una Sanz)

2019 – National Science Foundation, Documenting Endangered Languages: BCS-1911401 - Developing CHamoru Language Infrastructure: *Goggue Yan Chachalani Mo'na I Fino'-ta* (Embrace and Make a Way Forward for Our Language) Robert Underwood, PhD, co-PI. This is a 3.5 year, $280,000 grant to train local scholars in documentary field linguistics, and to document and archive aspects of the CHamoru language

2019 – CLASS Travel grant to present work at the Linguistic Society of America & Society of Pidgin & Creole Languages conferences in New Orleans, Jan 2020

Graduate Students Advised

Fu'una Sanz.
> Project: Changes in use of CHamoru plural marking since Topping & Dungca as a bellwether for the health and future of the language

Thomås (Mås) Santos
> Project: Documentation of CHamoru geminate productions, and how these are changing over time and being lost, also as an indicator of the health of the language Mås is currently applying for linguistics PhD programs, and will likely start a program in Fall of 2022.

Teaching Experience:

At the University of Guam:

Instructor:
> Introduction to Language
> LN 101
>> *Fañomnåkan 2022*. Enrollment: 13
>> *Fanuchånan 2018.* Enrollment: 17
>> A sister course to Introduction to Linguistics. Covers aspects of Sociolinguistics, Historical Linguistics, Language Origins, Animal Communication, Language Processing, and Linguistic Identity

> Writing for Research
> EN 111
>> *Fanuchånan 2021*. Enrollment: 21
>> *Fañomnåkan 2022*. Enrollment: 20
>> A required undergraduate course in research-type writing, including proper sourcing of materials, argument structure, and various forms of drafting, pre-writing, and revising

> Introduction to Linguistics
> LN 300
>> *Fañomnåkan 2022*. Enrollment: 5
>> *Fañomnåkan 2021*. Enrollment: 11
>> *Fanuchånan 2020*. Enrollment: 11
>> *Fañomnåkan 2020.* Enrollment: 10
>> *Fanuchånan 2019.* Enrollment: 10
>> *Fanuchånan 2018.* Enrollment: 15
>> Language analysis from the ground up: Phonetics, Phonology, Morphology, Syntax, Semantics, and Pragmatics. Additional material covering Language Acquisition, Language and/in the brain, and Careers in Linguistics

World Englishes
LN 371
    Fanuchånan 2020. Enrollment: 2
    Fanuchånan 2020. Enrollment: 6
    Fanuchånan 2019. Enrollment: 9
    English has become the most widely spoken world language predominantly by
    second language speakers. This has led to the formation of many regional
    Englishes. How do they form? What are their properties? How have world
    languages shaped culture, and how has culture shaped language varieties?

Structure of English
LN 385
    Fañomnåkan 2019. Enrollment: 15
    A course in the grammar and mechanics of Standard English, including sentence
    structure, word formation, word choice, and social aspects of language use. Of
    particular relevance to current and future English teachers.

Topics in Linguistics: Phonetics
LN 440 (undergraduate) / 440-G (graduate)
    Fañomnåkan 2021. Enrollment: 4 UG
    Fañomnåkan 2019. Enrollment: 8 (6 UG / 2 G)
    A course in theoretical and laboratory phonetics (the linguistic study of speech
    sounds and their production). Included collecting field data and a focus on
    methods of analysis.

Topics in Linguistics: Phonology
LN 440 (undergraduate) / 440-G (graduate)
    Fanuchånan 2019. Enrollment: 6
    What are the rules we use for putting speech sounds together into words and into
    phrases? Focus on segmental and more recent autosegmental approaches.

Topics in Linguistics: Language Development / Language Acquisition
LN 440 (undergraduate / Grad)
    Fañomnåkan 2022. Enrollment: 6 (4 UG / 2 G)
    Fañomnåkan 2020. Enrollment: 13 UG
    Humans are really good at using language, but other animals aren't. Why? What
    allows us to speak/sign? How do we acquire this ability? How have people
    investigated this process? What does this tell us about the human endowment?

Topics in Linguistics: Pragmatics
LN 440-B (undergraduate) / 440-G (graduate)
    Fanuchånan 2021. Enrollment: 3
    Fanuchånan 2020. Enrollment: 6
    Fanuchånan 2018. Enrollment: 8
    Theories and studies investigating the non-literal use of language, and all that it

entails, presupposes, and implicates. A focus on situated dialogue and underlying factors that facilitate conversation.

Seminar in Psycholinguistics
LN 663
>*Fañomnåkan 2019.* Enrollment: 4 G
>A graduate-level seminar in how the brain processes language and a comprehensive rundown of modern approaches to investigating this functionality.

Contemporary Critical Theory
EN/LN 680
>*Fañomnåkan 2021.* Enrollment: 2 G
>A graduate-level seminar in current theory on a revolving topic. The above semester was taught as a contemporary theoretical accounts of reading and writing to have cross-over appeal to EN masters students.

Thesis Advisement
LN 695
>*Fañomnåkan 2021.*
>*Fanuchånan 2020.*
>Student: Thomås Santos.   Project: [See grad students, above]
>
>*Fañomnåkan 2020.*
>*Fanuchånan 2019.*
>*Fañomnåkan 2019.*
>Student: Fu'una Sanz.   Project: [See grad students, above]

Special Studies: Applied Field Methods in Documentary Linguistics
LN 494
>*Fañomnåkan 2020.* Enrollment: 4
>Second part of the training course for the NSF grant. Further development of interviewing, recording, transcribing, and archiving skills. Collecting primary field data and processing it with peer collaboration and instructor advisement.

Special Studies: Applied Field Methods in Documentary Linguistics
LN 594
>*Fañomnåkan 2020.* Enrollment: 5
>Advanced graduate level version of 494, including advanced projects and methods of analysis. Projects include: Spell-check tool development, morphological analysis tool development (for demos of these, see Products section of CV), spectrographic analysis and deep learning approaches to phoneme lassification, parametric and non-parametric analyses of linguistic data, prosodic analysis with ToBI (Tone and Break Index system).

Special Studies: Field Methods in Documentary Linguistics

LN 394 / LN 590 (grad)
Fanuchånan 2019. Enrollment: 10
Training course for the NSF grant. Crash course in the basics of documentary field linguistics to get our research team up to speed.

At the University of Rochester:

Instructor:
Foundations of Cognitive Science
BCS 111 / PSY 111
Spring 2018. Enrollment: 125
Fall 2017. Enrollment: 175
Spring 2017. Enrollment: 125
Fall 2016. Enrollment: 150
Fall 2014. Enrollment: 150
Origins to present-day. Emphasis is placed on scientific literacy – evaluating data from primary sources, considering where that data comes from, using it to form new hypotheses, and piecing these together to form an overall picture of the mind.

Music & the Mind
Music 162 / Music Theory 260 / BCS 260
Fall 2014. Enrollment: 65
How is music built up? How do we process it, perceive it, and produce it? How is it represented in the brain, and what basic rhythmic and melodic abilities do we share with other animals?

Language Development
Linguistics 208 / American Sign Language 208 / BCS 259 / PSY 259
Spring 2018. Enrollment: 65
How do we learn languages? Compares acquisition by children and adults, as well as radical situations, like pidgin/creole formation. Students also design a research project, collect corpus data, and present their findings to their peers.

Language Use & Understanding
Linguistics 241 / BCS 261 / PSY 261 –
Spring 2017. Enrollment: 30
Spring 2015. Enrollment: 25
A close look at theories and models of language comprehension and production, evaluated alongside a handful of special topics. Students design a semester-long research project, collect & analyze conversational data, and write-up their results.

Senior Seminar / Senior Seminar with Honors
BCS 310 / 311
Spring 2015. Enrollment: 15
Course designed with Prof. Celeste Kidd (now at UC-Berkeley)

What are best practices for presenting scientific data clearly and concisely? Students workshop their own materials, and critically evaluate writeups of scientific studies in popular media. Additional practical advice on graduate school applications.

Capstone: Field Methods
Linguistics 389
> *Spring, 2014.* Enrollment: 10
> A Guinean speaker of Fulɓe acted as a linguistic informant in the classroom. Students used their knowledge of linguistics to elicit and analyze data, and then to write a basic grammar of the language. Taught with additional input from Prof. Nadine Grimm and Prof. Joyce McDonough.

Guest Lecturer:

Graduate Research & Documentation
EN/LN 501
> *Spring 2021.* Lecture on Linguistics.

Foundations of Cognitive Science
BCS 111 / PSY 111
> *Summer 2013.* Lecture on Animal Communication.

Language Development
Linguistics 208 / American Sign Language 208 / BCS 259 / PSY 259
> *Spring 2013.* Lecture on Pidgins & Creoles.
> *Spring 2012.* Lecture on Pidgins & Creoles.
> *Spring 2011.* Lecture on Pidgins & Creoles.

Teaching Assistant:

Animal Minds
BCS 183 / PSY 183
> *Spring, 2010.* Enrollment: 70   (Instructor: David Holtzman)
> A comprehensive review of animal cognition, including topics of consciousness, communication, and theory of mind.

Animal Minds
BCS 183 / PSY 183
> *Fall, 2008.* Enrollment: 70   (Instructor: David Holtzman)
> [Description above]

Cognitive Psychology
BCS 112
> *Spring, 2008.* Enrollment: 150   (Instructor: Ben Faber)

How are fundamental systems of the mind (such as memory, attention, and consciousness) realized in the brain? Special focus on cutting-edge research.

Professional Training:

Large Courses Teaching Group. University of Rochester. Spring, 2018.
Discussion group of instructors to share experience and ideas, and develop best practices.

Future Faculty Workshop, University of Rochester. January, 2014.
"Assessing Learning in the Classroom."

Future Faculty Workshop. University of Rochester. November, 2013.
"Learner-Centered Teaching."

Future Faculty Workshop, University of Rochester. April, 2013.
"What is a Mentor and What Good is Having One?"

Future Faculty Workshop, University of Rochester. April, 2010.
"How to Prepare for a Faculty Position."

Future Faculty Workshop, University of Rochester. April, 2010.
"Innovative Teaching Approaches."

Professional Memberships:

Current & Prior Memberships:
Cognitive Science Society
Linguistic Society of America
Society for Pidgin and Creole Linguistics
Society for Caribbean Linguistics
Society for Music Perception and Cognition
Archaeology, Astronautics & SETI Research Association

Professional Service:

Reviewer, *Learning and Reconciliation Through Indigenous Education in Oceania*, Perry Pangelinan & Troy McVey, eds.
Consulting linguist for a Marshallese sociolexicology study, 2019-2018
Reviewer, *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 2018
Academic advising to University of Rochester Undergrads, Present-2016.
Conference Reviewer, Society for Pidgin and Creole Linguistics. Summer 2013.

University Service

English and Applied Linguistics Masters Program Committee Member
English Search Committee member, Spring 2019
English Search Committee, chair, Spring 2020
College of Liberal Arts and Social Sciences Annual Research Conference Planning
    Committee, 2018-2019
College of Liberal Arts and Social Sciences Annual Research Conference Planning
    Committee, co-Chair, 2019-2020
Masters Thesis Committee External Member, James Fee, Spring 2019
Masters Thesis Committee Internal Member, Miranda Taylor, Fall 2021

Community Service

Ritidian Refuge cleanup, 2020-2022
Island Coastal Cleanup, 2019
Island Coastal Cleanup, 2018
Friends of Reefs, Guam, coral reef benthic monitoring

Research Interests

1) What is the state of the CHamoru language? How is it changing? Where is it headed?
What can we do to document information at risk of being lost? What avenues do we
have for revitalization, and how effective can they be?
Includes developing tools for professional and pedagogical language study.

2) How do very low-level, innate biases in the way we learn and handle information lead
to dramatic historical language change? Are radical versions of language contact and
language change, like pidginization and creolization, special processes? Or are they just
amplified versions of typical processes? What are the different contributions of adult and
child learners, and how do our processing biases change over the lifetime? Lastly, how
do these psychological biases shape our social and economic interactions?

Lab Affiliations:

Newport Lab, Research Collaborator (with PI Elissa Newport)
Computational Language Lab (CoLaLa), Research Collaborator (with PI Steve
    Piantadosi)
Aslin Lab, Research Collaborator (with PI Richard Aslin)
Kidd Lab, Research Collaborator (with PI Celeste Kidd)

Research Experience

Current	Supervising the collection of primary field data in CHamoru, as well as its processing, transcription, and archiving
Current	Development of language tools for use with CHamoru (Guam orthography), including: spell-check and morphological analysis (see Products)
Current	Are iterated-learning models an accurate representation of historical change? Computer simulations suggest that chains of single individuals (that most models use) severely distort real-world learning processes
Current	Why do patients with radical cases of Broca's Aphasia tend to use a very reduced but specific set of phonemes? How do patterns of language acquisition interact with patterns of language loss?
Current	Models and simulations of free variation in pidginization / creolization. How do individual tendencies to stabilize variation [see dissertation below] interact with social pressures, like alignment or coordination, to produce observed historical trends?
Current	Classic probability-matching experiments suggest individuals act irrationally. Do people act more rationally when making probability-based choices in groups? If so, what are the social mechanisms that affect these choices?
2016-2014	*Incremental Representativeness Hypothesis* When individuals are faced with making probability-based choices, they tend to reproduce the probabilities in their input. Careful examination of participants' early choices and value judgments suggest they aim to make their sample representative of the input with every choice they make. Work with Habiba Azab (U-Minn) and Celeste Kidd
2014-2011	*Dissertation* As pidgin languages develop, they start out highly variable, but quickly become more stable. Individual learners in a series of laboratory studies were shown to restructure their input and make it more stable, but in a different pattern than historical trends. This suggests an additional role of social interaction. Advised by Elissa Newport
2010-2007	Early stages of pidgin formation are characterized by the interaction of speakers from several different languages. Do new learners track individual variation when learning how to speak this new language? Laboratory studies show new learners do track the sources of variation, but ignore this information in their own productions. Work with Elissa Newport
2007-2006	If the surface form of a noun sounds plural, does that activate morphosyntactic structures associated with plural nouns? A laboratory study examining participants' production of particular constructions suggests that phonological form does interact with knowledge of a word's syntactic function. Work with Maryellen MacDonald (UW-Madison)

Conference Presentations, Posters, Invited Talks:

Linguistic Society of America. Winter 2022 (Hybrid). Thomås Santos & David Ruskin. Presented in person by Thomås Santos. "Changes in Chamoru Gemintation." Based on work from Santos' thesis, which I advised. http://guamlinguistics.com/lsa2022/

7th International Conference on Language Documentation & Conservation. March 2021. "Adapting Hunspell Dictionaries for CHamoru for Web-based Morphological Analysis" Presented by David Ruskin. Co-Authored with other members of the NSF grant: Robert Underwood, Marciana Aguon, Jeremy Cepeda, Loretta Cruz, Roseann Pajarillo, Daniel Pangelinan, Janice Toves, Nolan Flores, Jeniece Hernandez https://icldc7.sched.com/
Talk: https://www.youtube.com/watch?v=iLwuZi6Beeo

Linguistic Society of America. Winter 2021 (Virtual). Fu'una Sanz & David Ruskin. (Co-Presented) "Changes in Chamorro Plurality." Based on work from Sanz' thesis, which I advised. http://guamlinguistics.com/lsa2021/

University of Guam's College of Liberal Arts and Social Sciences Annual Research Conference. March 2020. "Experimental Cultural Evolution and the Stability of Small Populations" Simulations: http://drdrphd.com/projects/ARC_2020.html

University of Guam's College of Liberal Arts and Social Sciences Annual Research Conference. March 2020. "Developing CHamoru Language Infrastructure: *Goggue Yan Chachalani Mo'na I Fino'-ta*." Co-presenter, Robert Underwood.

Linguistic Society of America. Winter 2020. Poster. "Sentimental Importance of Place in Oppressed Voices" http://drdrphd.com/projects/regionalism_sentiment.html

Society for Pidgin and Creole Linguistics. Winter 2020. "Decolonizing the CHamoru language."

Society for Pidgin and Creole Linguistics. Winter 2018. "Modeling the Collapse of Variation in Pidgin Development."

Cognitive Science Society. 2016. "Incremental representativeness biases explain adults' probability-matching in multiple-choice tasks and maximizing in single-choice tasks." Work with Habiba Azab and Celeste Kidd, Presented by Habiba Azab.

Society for Pidgin and Creole Linguistics. Winter, 2013. "Learning and maintenance of variation varies with grammaticization." Work with Elissa Newport.

University of Massachusetts – Boston. Invited Talks. January, 2013. "Pidgins and Creoles," and "Learning and maintenance of variation varies with grammaticization."

Society for Pidgin and Creole Linguistics. Winter, 2012. "Adults as creolizers: factors affecting regularization." Work with Elissa Newport.

University of Rochester. Spring, 2011. "Establishing their voices: experiments in speaker variation in creole formation." Work with Elissa Newport.

Products:

Archive
CHachalani Mo'na open archive of recordings and partial transcripts.
    Hosted at the Kaipuleohone Archive at University of Hawai'i – Mānoa
    Publicly accessible in perpetuity. Initials are by policy of the depositor. Note that some entries have multiple files (e.g.: DR1-007).
    https://scholarspace.manoa.hawaii.edu/handle/10125/75474

Teaching Tools
Live spectrogram tool for Phonetics
    http://guamlinguistics.com/spectrogram/

Live vowel analysis by formant (in progress, a little jumpy still)
    https://drdrphd.com/vowels/
    Try with [i] and [u] – typically most stable phones

Phonology Set Generator
    http://drdrphd.com/phones/
    Given a code, students could try to figure out a phonological rule or rules on continuously generated data, and could attach their own affixes to test hypotheses. For example, code for final devoicing: a0bf12b10c0

Simulations of feature spread in a community
    http://drdrphd.com/371/
    These simulations show how a new feature of language can spread through a community of speakers. Demos with both a simple binary (you know it or don't) and a graded feature (used n% of the time).

Public Use Tools
CHamoru Spell-Check (Guam orthography)
    This is in progress and the spell-check engine used by most modern web-browsers
    intentionally excludes apostrophes and dashes. This is a problem for CHamoru
    orthography, which we are still working out.
    [Demo plugin available for Firefox, but has to be side-loaded. Please ask for a demo]

CHamoru Morphological Analysis (Guam orthography)
    (Still in active development – but mostly working)
    http://guamlinguistics.com/morph/
    Given a CHamoru word, this will try and break it down into its affixes and root
    Example: try *mangaige* or *na'lage'hilu'i*

Publications:

Santos, T. & Ruskin, D. (in prep) Work derived from Santos' thesis, written up for
    publication. Includes some new analyses, new discussion, and new visualizations.

Ruskin, D. (in prep) Patterns of historical language change through learning, alignment,
    and regularization. New data as of 2022! Also introduces parametric analysis by
    Bezier curve, which has not been done before.

Azab, H., Ruskin, D., & Kidd, C. (2016) Incremental representativeness biases explain
    adults' probability-matching in multiple-choice tasks and maximizing in single-
    choice tasks. *Cognitive Science*. 2016

Ruskin, D., & Newport, E. L. (in prep) Regularization varies with grammaticization:
    closed-class lexical categories promote reduction of free variation

Ruskin, D., & Newport, E. L. (in prep) Sentence-wide variability promotes
    regularization: increasing loci of variation raises system-wide regularization

Ruskin, D., & Newport, E. L. (in prep) Variation conditioned by speaker does not affect
    learners' tendency to regularize