2018-2019 Annual Report to the Governing Committee of Deans

March 2020

THE UNIVERSITY OF BRITISH COLUMBIA

Language Sciences
Research Excellence Cluster

Executive Summary

Membership
- Membership increased to 268 members as of November 2019, from 202 in March 2018.

Leadership and staff
- Language Sciences (LangSci) welcomed four new Research Leads and two new Steering Committee members in 2019.

Financial support
- Founding donor Marietta Hurst committed to a second three-year gift in 2018 of $75,000/year.
- LangSci received a 2018 VPRI Grant for Catalyzing Research Clusters of $171,864.
- The Provost awarded LangSci an additional $75,000 over three years beginning in 2020 to support the Living Language: Science and Society course.
- LangSci supported, or was a collaborator, on a number of successful grants and funding applications.

Research strategy and projects
- LangSci continues to frame research around three broad themes and six sub-themes.

University-wide course, Living Language: Science and Society
- Twenty-eight students took part in the undergraduate course, Living Language: Science and Society, offered for the first time in September 2018.

Communication and knowledge mobilization
- LangSci hosted or co-hosted eight talks between June 2018 and November 2019.
- LangSci hosted its first film screening in 2018 in Vancouver and Kelowna.
- LangSci produced 17 stories including three press releases as of November 2019, as well as a monthly newsletter.
- Writing is in progress for the LangSci-supported *The ABCs of Language*, a book on early childhood language acquisition for new parents, to be distributed to families in BC.

Synergetic initiatives
- The Master of Data Science in Computational Linguistics program welcomed its first cohort of 27 students in September 2019.
- LangSci co-sponsored the third annual undergraduate-led Language Sciences Undergraduate Research Conference in February 2019.
- LangSci co-hosted a dinner and screening of the Haida language film SGaawaay Kʼuuna (Edge of the Knife) in May 2019.
- LangSci provided support for copyediting and indexing of a volume on language policy in the Himalayas, as well as for the book's launch.
- LangSci hosted a number of stakeholder meetings with the language teaching technology company Altissia International in 2019.

Graduate student and postdoctoral fellow professional development and training
- LangSci hosted its first Graduate Student and Postdoctoral Fellow Research Day in May 2019.
- LangSci held four events in early 2019 to support professional development and training.

Strategic plan
- LangSci undertook a strategic planning process in 2018 to clarify the Initiative's vision, purpose, and key priorities. The full strategic plan is published online here.

UBC Language Sciences

Contents

Contents

Organization

Steering committee

Language Sciences welcomed six new members to its Steering Committee in 2018-2019, including Department of Computer Science Professor Raymond Ng and Community, Culture and Global Studies Associate Professor Christine Schreyer.

Dr. Janet F. Werker (co-director)	University Killam Professor & Canada Research Chair	Psychology
Dr. Bryan Gick (co-director)	Professor & Head Director	Linguistics Master of Data Science in Computational Linguistics
Dr. Sidney Fels	Professor & Distinguished University Scholar	Electrical & Computer Engineering
Dr. Raymond Ng	Professor Scientific director	Computer Science Data Science Institute
Dr. Christine Schreyer (UBCO)	Associate Professor	Community, Culture and Global Studies
Monica Shank Lauwo	Doctoral student	Language & Literacy Education
Dr. Xuejun (Ryan) Ji	Doctoral student	Educational & Counselling Psychology & Special Education
Ashley Chand (Ex officio)	Undergraduate student Language Sciences Undergraduate Research Conference (LSURC) co-chair	Linguistics/Speech Sciences
Paris Gappmayr (Ex officio)	Undergraduate student LSURC co-chair	Linguistics/Speech Sciences

Former Steering Committee members

Dr. Mark Turin	Associate Professor	Anthropology and First Nations & Endangered Languages	January 2018-January 2019
Dr. Bonny Norton	Professor & Distinguished University Scholar	Language & Literacy Education	August 2016–November 2017

Research Leads

For a full summary of research themes and activities, see <u>Research</u>.

Language, Sustainability, and Transnationalism

Dr. Guofang Li	Professor & Canada Research Chair	Language & Literacy Education
Dr. Daisy Rosenblum	Assistant Professor	Anthropology, First Nations & Endangered Languages

The Communicating Mind and Body

Dr. Anthony Herdman	Associate Professor	School of Audiology and Speech Sciences
Dr. Janet Werker	University Killam Professor & Canada Research Chair	Psychology

Evolving Language in an Information Economy

Dr. Bryan Gick	Professor	Linguistics
Dr. Sidney Fels	Professor & Distinguished University Scholar	Electrical & Computer Engineering
Dr. Muhammad Abdul-Mageed	Assistant Professor	Linguistics, iSchool

Former Research Leads

Dr. Bonny Norton	Professor & Distinguished University Scholar Language, Sustainability, and Transnationalism Research Lead, July 2016-July 2019	Language & Literacy Education
Dr. Mark Turin	Associate Professor Language, Sustainability, and Transnationalism Research Lead, July 2018-July 2019	Anthropology and First Nations & Endangered Languages

UBC Language Sciences

Governing Committee of Deans

Dr. James Olson	Dean	Faculty of Applied Science
Dr. Gage Averill	Dean	Faculty of Arts
Dr. Blye Frank	Dean	Faculty of Education
Dr. Dermot Kelleher	Dean	Faculty of Medicine
Dr. Meigan Aronson	Dean	Faculty of Science

Staff (current)

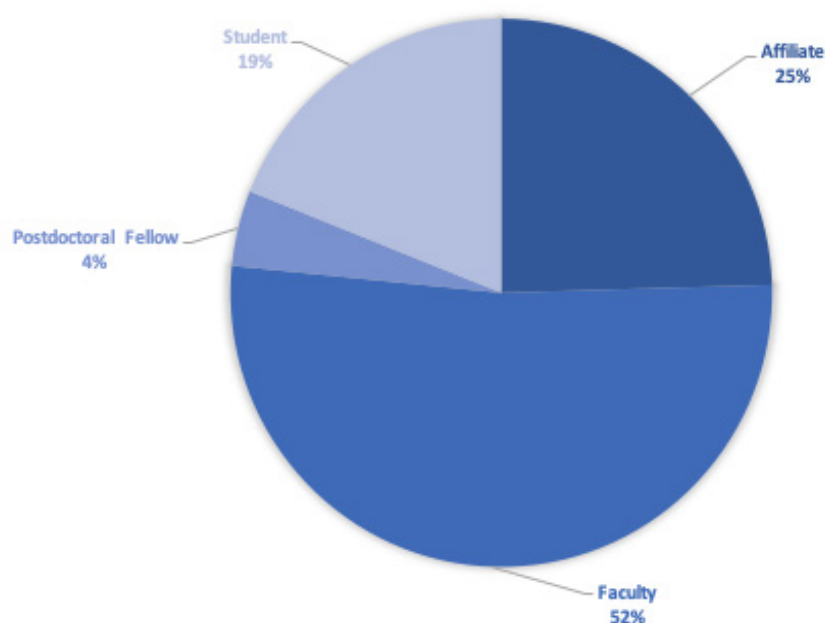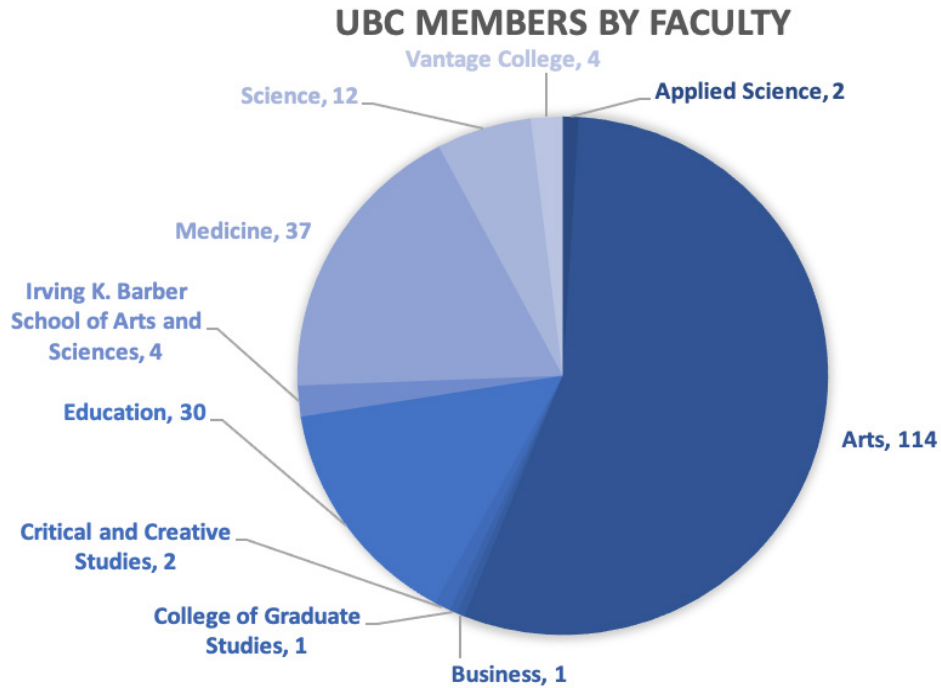|	
Ella Fund-Reznicek	Coordinator
Alex Walls	Communications specialist, November 2018-present

Former staff

Regina Wenk	Course administrative assistant, May 2018–May 2019
Sophia van Hees	Research facilitation officer, April 2018–November 2018

Language Sciences has hired graduate students and supported salary and benefits for existing research staff to support faculty-led research grants.

Members and Affiliates

LANGUAGE SCIENCES MEMBERS BY ROLE

UBC MEMBERS BY FACULTY

Vantage College, 4
Science, 12
Applied Science, 2
Medicine, 37
Irving K. Barber School of Arts and Sciences, 4
Education, 30
Arts, 114
Critical and Creative Studies, 2
College of Graduate Studies, 1
Business, 1

Summary of members

Language Sciences' membership includes 66 affiliate members, 50 student members, and 12 postdoctoral fellows, from 11 countries, and 28 universities or colleges.

LangSci members at UBC come from 10 different faculties and 40 departments at the Vancouver and Kelowna campuses. The bulk of our members are from the Faculty of Arts (113), followed by the Faculty of Medicine (37) and the Faculty of Education (30).

Member events

September 14, 2018: Welcome back to Language Sciences!

In September 2018, Language Sciences members gathered in the Dodson Room in the Irving K. Barber Learning Centre for updates on Initiative activities, funding opportunities for members, and roundtable introductions, followed by networking and informal discussion.

March 12, 2019: Teaching, learning, and training

In March 2019, Language Sciences members gathered in the Suedfeld Lounge in the Department of Psychology to hear updates from the LSURC organizing committee co-chairs Paris Gappmayr and Ashley Chand on the success of the conference, Dr. Abdul-Mageed on the Master of Data Science in Computational Linguistics (MDS-CL) program, Department of Linguistics Instructor Strang Burton about the Pronunciation Station, and Dr. Werker regarding the Living Language: Science and Society course.

September 16, 2019: Planning the future of the Initiative

In September 2019, 50 Language Sciences members met in the Dodson Room of the Irving K. Barber Learning Centre to take part in a workshop to plan the future of the Initiative. In a World Café-style format, members discussed five key areas of growth: interdisciplinary, collaborative research; a doctoral program in language sciences; undergraduate curriculum development; strategic research areas in Language Sciences; and community outreach. The outcomes of this discussion will inform LangSci as it develops plans for long-term funding. LangSci will publish a report on the meeting outcomes and proposed next steps in December 2019.

Funding

Donation from Marietta Hurst

Language Sciences continues to receive support from Marietta Hurst. Her second donation provides salary support for the full-time Language Sciences coordinator position, with a focus on development and support of the course Living Language: Science and Society, and future Language Sciences courses including a course to be offered in the greater Vancouver community.

Vice President Research & Innovation

The 2018 Grants for Catalyzing Research Clusters (GCRC) funds, to be spent by January 14, 2020, will support knowledge mobilization efforts, member engagement programming, graduate student and postdoctoral fellow training and professional development, community engagement programming, and funding proposals for new collaborative research projects.

Provost's Office

Funding from the Provost and Vice-President Academic continues to support the development of the university-wide course Living Language: Science and Society. In 2018, this funding supported the co-instructors' collaboration with instructional designers at the Centre for Teaching, Learning and Technology, and salary and benefits for a graduate academic assistant to support the co-instructors during the course design process. In 2020, this will support the delivery of the course Living Language: Science and Society and the development of a follow-up course.

Governing Committee of Deans

The LangSci co-directors met with Faculty of Applied Science Dean James Olson, Faculty of Education Dean Blye Frank, and Faculty of Science Associate Dean Research and Graduate Studies Mark MacLachlan on November 23, 2018; with Dean Gage Averill on December 11, 2018; and with Faculty of Medicine Executive Associate Dean Research Robert McMaster and Executive Associate Dean Education Roger Wong, representing Dean Dermot Kelleher, on March 12, 2019, to discuss renewed seed funding for innovative, interdisciplinary research projects led by LangSci members. In response to LangSci requests, Applied Science, Arts, Education, and Medicine each committed to providing renewed funding for three years (2019–2021), consisting of $8,000/year each from Applied Science and Medicine, and $5,000/year each from Arts and Education. LangSci is currently requesting a renewed funding commitment from the Faculty of Science.

Supported grants and applications

Language Sciences supported the successful application of Dr. Werker to the Stage 1 Social Sciences and Humanities Research Council (SSHRC) Partnership Grant for 'Ensuring Full Literacy in a Multicultural and Digital World' in February 2019. This provided $20,000 to support an application to the Stage 2 SSHRC Partnership Grant program in November 2019. This proposal builds on the 'Envisioning a Language Science of Literacy' workshop held in May 2018. This project has co-leads from across Canada and beyond and among co-investigators at UBC are members Dr. Li, Dr. Gick, Dr. Herdman, Dr. Abdul-Mageed, Dr. Turin, and Department of Linguistics Professor and Canada Research Chair Carla Hudson Kam. Collaborators include member Dr. Schreyer.

Language Sciences supported the successful application of Dr. Turin and Dr. Schreyer to the SSHRC Insight Development Grant 2019-20 competition for the project 'Relational Lexicography: New Approaches to Community-Informed Dictionary Work'. This grant is for $75,000.

Language Sciences supported the application by Dr. Rosenblum and First Nations and Indigenous Studies Assistant Professor David Gaertner to the Canada Foundation for Innovation (CFI) John R. Evans Leaders Fund for the creation of a Centre for Community Engaged Documentation and Research (CEDaR).

Language Sciences is a collaborator in, and provided funding for, the application of Dr. Herdman and Professor and Pacific Parkinson's Research Institute (PPRI)/UBC Chair in Parkinson's Research Martin McKeown to the CFI Innovation Fund for the project 'Magnetoencephalography (MEG) Unit at the Djavad Mowafaghian Centre for Brain Health'. Language Sciences committed funds in 2018 and 2019 to support preparation of the grant application and other related activities.

Research

Supported member projects

See Governing Committee of Deans, Appendix II: Supported Member Projects.

Visiting researchers

Autonomous University of San Luis Potosí, Mexico, Faculty of Social Sciences and Humanities Professor and affiliate member Anuschka van ´t Hooft presented at a Language Science Talks event on May 29, 2019 titled 'Storybook Mexico: Best practices to promote children's literacies in Indigenous languages.' Dr. van 't Hooft, who is working collaboratively with Dr. Norton, talked about ideas to promote children´s literacies in the Indigenous languages of Mexico, including Storybook Mexico, a project aimed to support Mexican Indigenous and non-Indigenous children, families, and communities' access multimodal stories in their ancestral languages. This talk addressed the development of best practices for collaborative work with the speech communities, linking the needs and interests of the (heritage) speakers themselves to the translation practice. This free event was open to the public and took place at the UBC Vancouver campus, with 30 minutes provided for audience questions and 30 minutes for networking. It had 24 RSVPs with an estimated 15 attendees.

Member research collaborations

Language Sciences members have published a number of joint research publications since April 2018:

1.	Breau, GM., Jenstad, L., Abel, J., Mason, G., Colozzo, P., Halas, G., Howe, T., Rieger, C., Simon, L. (2019, August). *How can healthcare providers tailor their communication in order to improve health outcomes in patients with Intellectual Disability? Results and implications from the Health Outcomes and Language (HOLa) study.* Poster presented at the International Association for the Scientific Study of Intellectual and Developmental Disabilities World Congress, Glasgow, United Kingdom.
2.	Chu, T. H., Marino, D., Elbaggari, H., Gick, B. & MacLean, K., (2018). Testing symmetry of temporal window of integration in vibrotactile and auditory speech information on phoneme perception. *Canadian Acoustics*, *4*, 46-47. DOI 10.1121/1.5067938
3.	de la Cruz Pavía, I., Gervain, J., Vatikiotis-Bateson, E. & Werker, J.F., (2019). Co-verbal speech gestures signal phrase boundaries: a production study of Japanese and English infant- and adult-directed speech. *Language Acquisition*, *26(4)*, 387-415. DOI 10.1080/10489223.2019.1659276
4.	de la Cruz Pavía, I., Werker, J.F., Vatikiotis-Bateson, E. & Gervain, J. (2019). Finding phrases: The interplay of word frequency, phrasal prosody and co-verbal visual information in chunking speech by monolingual and bilingual adults. *Language and Speech.* Advance online publication. DOI 10.1177/0023830919842353
5.	de la Cruz Pavía, I., Gervain, J., Vatikiotis-Bateson, E., & Werker, J.F. (2019, Nov. 11). Finding phrases: On the role of co-verbal facial information in learning word order in infancy. *PLOS ONE*. DOI 10.1371/journal.pone.0224786
6.	Radford, K., Taylor, R., Hall, J. & Gick, B. Aerodigestive and communicative behaviors in anencephalic and hydranencephalic infants. *Birth Defects Research, 111(2)*. 41-52. 2019. DOI 10.1002/bdr2.1424
7.	Saha, P., Abdul-Mageed, M., & Fels, S., (2019, September), *SPEAK YOUR MIND! Towards Imagined Speech Recognition With Hierarchical Deep Learning*. Poster presented at INTERSPEECH 2019, Graz, Austria. DOI 10.21437/Interspeech.2019-3041
8.	Marino, D., Elbaggari, H., Chu, T. H., Gick, B. & MacLean, K., (2018) Single-channel vibrotactile feedback for voicing enhancement in trained and untrained perceivers. *Canadian Acoustics*, *4*, 44-45. DOI 10.1121/1.5067937

LangSci members have also submitted collaborative grant proposals, such as Dr. Werker and Department of Psychology Professor Geoff Hall's successful 2019 SSHRC Insight Grant, 'Bilingualism as a lens for understanding lexical development in infancy', which will allow the team to investigate bilingual infants' word-meaning understanding, and whether their timeline for reaching certain milestones differs from monolingual infants.

Research Theme Initiatives

Language, Sustainability, and Transnationalism (LST)

Storybooks Canada

Language Sciences provided funds to help support a symposium and the public launch of Storybooks Canada, organized by members Dr. Norton and Educational and Counselling Psychology, and Special Education Professor Janet Jamieson, on November 2, 2018 at UBC.

The day began with the symposium, 'Our multilingual village: Supporting refugee children and families in BC', featuring four panels. Panelists included representatives of the Ministry of Education, the Ministry of Children and Family Development, and the Vancouver School Board. Language Sciences provided funds to support graduate students involved in the symposium, which facilitated relationship building with key stakeholders. Thirty-five people attended this symposium.

The launch commenced at 3:00 p.m., with opening welcome remarks by Department of Computer Science Professor and Vice President Research and Innovation Gail Murphy, Dr. Frank and Dr. Werker, and a panel presentation chaired by Dr. Norton and discussant Uchenna Okeja, Peter Wall Institute of Advanced Studies Invited Scholar. More than 100 people attended.

Details about the symposium and launch can be found in the event report.

The Communicating Mind and Body (CoMBo)

Opera training and motor learning

In partnership with Educational Neuroscience, Language Sciences members wrote and received a Peter Wall Institute for Advanced Studies grant for the Wall Opera Project in 2018. This grant will provide $424,000 over two years with a contingent third year of $241,750.

Growing from an earlier project on brain myelination, language, and motor learning, this project examines the impact of opera training on brain and cognitive functioning. The four Principal Investigators are Language Sciences members spanning three faculties at UBC: Professor and Chair of the Voice and Opera Divisions in the School of Music Nancy Hermiston, Professor and Canada Research Chair in Neurobiology of Motor Learning Lara Boyd, Instructor Rachel Weber, director of the Faculty of Education's Psychoeducational Research and Training Centre Neuropsychological Assessment Clinic, and Dr. Werker. The three co-investigators are also Language Sciences members: Department of Physics & Astronomy Professor Alex Mackay, Dr. Fels, and Dr. Gick.

The project commenced in spring 2019, with two postdoctoral fellows hired to help lead the project, Negin Motamed-Yeganeh and Anja-Xiaoxing Cui. Dr. Cui completed doctoral training in Music Psychology and Dr. Yeganeh in Cognitive Neuropsychology.

Health Outcomes and Language (HOLa)

This is a large, multidisciplinary, cross-jurisdictional team that includes patients, researchers, clinicians, and decision makers, led by member School of Audiology & Speech Sciences Associate Professor Lorienne Jenstad. The team is investigating the research question 'How is communication between health care provider and patient/caregiver linked to health outcomes?' and aims to end up with a map of the existing literature on the topic, along with recommendations for the level of description to use when researching 'communication.'

In 2017, the team developed a scoping review strategy to examine how communication between patients and care providers affects patient outcomes. In 2018, the project received a Canadian Institutes of Health Research (CIHR) Knowledge Mobilization Grant, supported by Language Sciences using 2017-18 GCRC

funds, and later in the year, published the protocol for its scoping literature review. In 2019, the group began screening articles for inclusion. The project presented its first poster at the International Association for the Scientific Study of Intellectual and Developmental Disabilities World Congress in Glasgow in August 2019.

Evolving Language in an Information Economy (ELIE)

Control strategies for articulatory speech synthesis for natural user interfaces

In October 2017, this research group (Dr. Fels, Dr. Gick, Dr. Herdman and University of Saskatchewan Computer Science Associate Professor Ian Stavness) received a $590,000 Natural Sciences and Engineering Research Council of Canada Strategic Partnership Grant alongside industry partner CTF to build the next-generation model of neural control of speech. This project has the three central goals of 1) improving an existing biomechanics-to-speech model based on finite differencing approach and mapping biomechanics to synthesis parameters 2) using machine learning techniques to develop neural control topologies to establish low degree of freedom control based on muscle synergies and 3) building control models for the coupled biomechanical-neural system to map MEG/EEG signals to control articulation through topological maps.

At the Acoustics Week in Canada meeting in October 2019, the team presented two papers on this project, the first using brain signals relating to arm movement to control the pitch of computer-generated speech, and the second using hand movements to control vowels. Both of these studies move the field towards new ways of using brain signals to control speech.

- Goyal, H., Saha, P., Gick, B., & Fels, S. (2019, October). *EEG-to-F0: Establishing Artificial Neuro-Muscular Pathway For Kinematics-Based Fundamental Frequency Control.* Paper presented at Acoustics Week in Canada, Edmonton, Alberta. Retrieved from https://awc.caa-aca.ca/index.php/AWC/AWC19/paper/view/606
- Liu, Y., Saha, P., Gick, B., & Fels, S. (2019, October).*Deep learning based continuous vowel space mapping from hand gestures.* Paper presented at Acoustics Week in Canada, Edmonton, Alberta. Retrieved from https://awc.caa-aca.ca/index.php/AWC/AWC19/paper/view/630

Avatar-mediated communication

This group includes Dr. Gick, Dr. Fels, and University of Groningen Associate Professor N. Pontus Leander.

The project is exploring the emotional and social components of avatar-mediated interaction (AMI), to determine the possibilities and limits of avatars for facilitating distance communication, helping to provide basic foundations for principles of AMI design. In April 2019, the group received a SSHRC Insight Grant to continue this work, titled 'Virtually speaking; how phonetic information affects communication in virtual reality'.
Past projects focused on multimodal sensory processing in VR. The goal of this work was to evaluate whether multimodal signal processing phenomena (visual speech processing and aerotactile speech integration) are utilized when communication takes place in a virtual environment, and whether sensory differences result in changes to cognitive processes such as learning and memory. Publications from this work include:

- Keough, M., Derrick, D., Taylor, R.C., Gick, B. (2019). Learning effects in multimodal perception with real and simulated faces. In S. Calhoun, P. Escudero, M. Tabain & P. Warren (eds.) *Proceedings of the 19th*

International Congress of Phonetic Sciences, Melbourne, Australia (pp. 1189-1192). Canberra, Australia: Australasian Speech Science and Technology Assoc. Inc.
- Keough, M., Taylor, R. C., Wong, E. Y., Prica, D., Schellenberg, M., & Gick, B. (2018). Perceiving Visible Speech Articulations in Virtual Reality. *Canadian Acoustics*, *46(4)*, 42-43.
- Keough, M., Taylor, R. C., Derrick, D., Schellenberg, M., & Gick, B. (2017). Sensory integration from an impossible source: perceiving simulated faces. *Canadian Acoustics*, *45(3)*, 176-177.
- Keough, M., Taylor, R. C., Prica, D., Wong, E. Y., & Gick, B. (2018). Perceiving audiovisual speech articulation in virtual reality. *The Journal of the Acoustical Society of America*, *144(3)*, 1799-1799.
- Taylor, R. C., Prica, D., Keough, M., & Gick, B. (2018). Perceiving prosodic prominence via unnatural visual information in avatar communication. *The Journal of the Acoustical Society of America*, *144(3)*, 1799-1799.

Current work is focused on further evaluating basic cognitive processes (i.e., learning and memory) underlying language processing in virtual reality.

Seeded Research Projects

Language Sciences held an internal funding competition in late 2018 to disburse funds remaining from the 2016 seed funding competition, providing some funding for eight member projects for a total of $14,750. Details on the projects funded by the Initiative can be found in Appendix II: Supported Member Projects.

Cross-theme projects

Envisioning a Language Science of Literacy

From May 22 to 24, 2018, Dr. Werker and co-Investigators Dr. Turin, University of Alberta Departments of Computing Science and Psychology Assistant Professor Alona Fyshe, and Dalhousie University Killam Professor in the Department of Psychology and Neuroscience Hélène Deacon held the workshop 'Envisioning a Language Science of Literacy' supported by funds from a SSHRC Connection Grant and the Language Sciences Initiative's GCRC funds. This workshop brought together researchers in the areas of spoken language acquisition, literacy acquisition, First Nations and endangered languages, and computational neuroscience, to bridge the gap between these disciplines and develop a new framework for empirical investigation of language and literacy acquisition. Participants included 22 faculty, four postdoctoral fellows, and four students from seven universities, one community organization, and one industry partner.

In the first two days of the workshop, the co-Investigators provided brief overviews of their respective fields, followed by flash talks from several of the attendees and open discussion. On the third day, attendees worked in small groups and as a whole to develop concepts and strategies for the Stage 1 SSHRC Partnership Grant application, 'Ensuring Full Literacy in a Multicultural and Digital World', submitted in February 2019. See Supported grants and applications for more.

Teaching and Training

Living Language: Science and Society

The three-credit undergraduate course, Living Language: Science and Society, is cross-listed in the faculties of arts, applied science, education, forestry, pharmaceutical sciences and land and food systems.

UBC Language Sciences

In Winter Term I 2018, the 'transition out' course was offered for the first time, with 28 students taking part: 17 from the Faculty of Arts, one from the Faculty of Applied Science, six from the Faculty of Forestry, three from the Faculty of Land and Food Systems, and one from the Faculty of Education. Student program specializations included Cognitive Systems, First Nations and Endangered Languages, Aerospace Engineering, Forest Sciences, Applied Physics, and Teaching English as a Second Language.

Reviews of the course were generally very positive. The Student Evaluation of Teaching, which had an 89.29 per cent response rate, showed students valued the interdisciplinary focus of the course and diversity in perspectives brought by the co-instructors and guest speakers. Students responded well to the flexibility and creativity in completing assignments and to the variety of readings and resources. Many students shared that they were provided with excellent support from the co-instructors and teaching assistant, both in and outside of the classroom.

Students expressed a wish for even more class time for discussion, group work, and to reflect on guest lectures. Some students also mentioned that they would have liked the co-instructors to provide more of a background on linguistics terminology, as well as clearer rubrics and expectations for assignments. These excellent suggestions were implemented in the second year of the course (2019W1), including creating a Wiki of definitions of linguistics terminology used in the course.

Examples of student feedback:

"This course has been one of my favourite courses taken at UBC and I was hesitant to take it as language is not my area of study but I am so grateful that I did. I found connections between language and my discipline that I would have never seen otherwise and I know this will help be [sic] in my future studies/work. I enjoyed the freedom that the types of assignments given in the course allowed."

"I definitely learn the best in courses with two instructors. This method not only gives me the opportunity to draw on the different knowledge of each, dependent on my inquiry, but the negotiation and collaboration I witness[ed] of two scholars sometime[s] agreeing, sometimes dynamically representing different perspectives, represents what in my view are the strengths of academia: engaging in conversation about ideas after overviewing [sic] what we so far know about them. Please keep hiring profs to co-teach! It's a practical way of augmenting interdisciplinarity in a system that tends to put us in silos."

An article detailing student experiences, 'Podcasts, policy, and the president: interdisciplinary course returns to teach the power of language', was produced by the Initiative and published by the Faculty of Arts.

In its second iteration in Winter Term 1 2019, the course has 19 students enrolled, drawn from four faculties at UBC. Enrollment in this young program was less this year than in the inaugural year. To help increase awareness of the course and boost enrollment, Language Sciences hosted a booth at UBC's Imagine Day in September, and will continue to promote the course to make it the first choice for students when selecting their humanities/social sciences electives.

Co-instructors Dr. Werker and Dr. Turin continue to teach the course in 2019W1, with future goals including increasing the number of faculties in which the course is offered, offering the course to non-university students, and developing a sustainable financial model. In 2020W, Living Language: Science and Society will

welcome new co-instructors, Department of Psychology Assistant Professor Darko Odic and Department of English Language and Literatures Assistant Professor Elise Stickles.

Visiting students and trainees

Language Sciences provided funds to offset the costs of travel for training for three students and the Canadian Linguistics Olympiad teams:

- Anthropology doctoral student Heather Dawn Burge received $1,935 to attend a Fluent Elder Language summit hosted by the Sealaska Heritage Institute in November 2018. This summit brought Tlingit, Haida, and Tsimshian elders together to discuss issues around language revitalization efforts, and how best to mentor new second language learners of Indigenous languages
- Psychology doctoral student Sheri Choi received $3,000 to take part in a research exchange between the UBC Infant Studies Centre and the laboratory of Pontifical Catholic University of Chile Professor Marcela Peña Garay from November 2018 to February 2019
- Speech-language pathology Masters student Veronica Letawsky received $3,650 to attend salivary bioscience training (Spit Camp), a three-day workshop involving lectures and laboratory components at the University of California, Irvine Institute for Interdisciplinary Salivary Bioscience Research in November 2018
- The two 2018 Canadian Linguistics Olympiad teams received $5,000 from Language Sciences to attend a four-day joint US/Canada training camp at Carnegie Mellon University and the International Linguistics Olympiad at Charles University and Czech University of Life Sciences in Prague

Community Outreach

Partner organizations

Existing partnerships

The Language Sciences Initiative is in the process of developing partnerships with a number of organizations beyond UBC:

- **Altissia, Int.** – Language Sciences hosted a number of stakeholder meetings with the language teaching technology company Altissia International in April, May, and June of 2019 with representatives of language teaching units at UBC, such as the Department of French, Hispanic, and Italian Studies; the English Language Institute; the Department of Language and Literacy Education; and Vantage College to explore interest in a possible university-wide language learning platform
- **KidCareCanada** – partnering with Dr. Hudson Kam to publish *The ABCs of Language Development*, for distribution to 30,000 families in BC
- **International Research Center on Neurointelligence at University of Tokyo/Harvard** – for cross-linguistic, neural and computational studies of language
- **Jacobs Foundation** – this organization sent a member of its research support team, program manager research Jessica Bühler, to the May 2018 workshop 'Envisioning a Language Science of Literacy'

UBC Language Sciences

New partnerships

Through the SSHRC Partnership Grant, in addition to expanding existing partnerships with Altissia, Int. and KidCareCanada, Languge Sciences formed a number of new partnerships:

- **Academic institutions** – University of Maryland, Language Science Center; Dalhousie University; McGill University; Simon Fraser University, SFU-TD Community Engagement Centre; University of Alberta; University of Calgary; University of Toronto OISE; Western University
- **Non-profit organizations and public institutions** - ABC Life Literacy, Access Alliance, Alberta Machine Intelligence Institute, Canadian Children's Literacy Foundation, Compute Canada, Delmore "Buddy" Daye Learning Institute, DIVERSEcity Community Resources Society, Halifax Public Libraries, H.appi, Mitacs, The Conversation Canada, Toronto District School Board, Vancouver School Board, West Vancouver Memorial Library, West Vancouver School Board
- **Industry partners** - Brain Vision Solutions, NIRx, Pearson Canada Assessment, Inc, Scholastic Inc, SMART Technologies ULC, Squiggle Park, Virtro Entertainment

Knowledge Mobilization

Language Science Talks

Language Sciences held two talks in June and December of 2018 and six Language Science Talks in 2019, including one co-hosted talk, with 11 speakers, six affiliate speakers, three international speakers, and two 'combination' talks featuring more than one speaker. These speakers represented the faculties of arts, science, and education. The average number of RSVPs was 53.

Communications

As of November 2019, Language Sciences produced 17 stories, including 10 about members' research, three press releases about members' work and research, one story in collaboration with X̱wi7x̱wa Library, one story about the Living Language: Science and Society course, two stories detailing members' awards, and one story about LSURC.

Stories were featured on eight UBC department or unit websites, and the websites of the Faculty of Arts, the Faculty of Science, and one affiliated research institute, and frequently on central UBC channels. Stories were shared on social media by the Faculty of Arts, Faculty of Science, Faculty of Medicine, Sauder School of Business, the dean of education, and the UBC president, among many others. Stories produced by Language Sciences were covered by *CBC News BC*, *Breakfast TV, the Vancouver Sun, the Province,* and *CiTR*. After the publication of Language Sciences' press release, 'Secret love letters and languages: UBC exhibit offers Pride Week history lesson', an individual offered to donate their collection of 11 early gay movement books to the UBC Library.

Language Sciences launched a newsletter in January, sent to 299 subscribers including members as of November 2019. This was a 38 per cent increase in subscribers since January. Top clicks were generally stories about members' work, with a 55 per cent average open rate, and an average click rate of 11 per cent.

Language Sciences developed and maintained a social media strategy, including producing regular content

pointing towards stories about members' work, interaction with members, and regular sharing of Indigenous content. Facebook and Twitter followings increased from December 2018, and Twitter impressions almost doubled (an average of 30,000 as of November 2019 compared with 16,300 in December.)

A list of stories and links can be found in [Appendix III: Language Sciences Stories](#).

Website re-design

The Language Sciences website was updated in June 2019 to project a more welcoming, member-oriented look and feel.

This revamp included using member photos across the website and particularly on landing pages, user friendly language site-wide, the creation of new pages such as Student Opportunities and Job Opportunities, linking member stories to profiles, an up-to-date Research page, a newsletter sign up button and embedded Twitter feed on the home page, and a donation button.

From July to November 2019 across the site, unique page views increased 45 per cent year on year and average time on page increased 14 per cent year on year. However, bounce rate increased 3.5% year on year.

Podcast

The Language Sciences communications specialist produced a project proposal in November 2019 for a multipart series podcast.

Synergetic Initiatives

Master of Data Science in Computational Linguistics

A new Master of Data Science in Computational Linguistics was approved by the University Senate in February 2018. This interdisciplinary, industry-facing Master's program, which grew out of discussions between Language Sciences members in the Faculty of Arts and Faculty of Science, will result in several new, cross-disciplinary faculty, and will aim to train 45 students a year. As part of the degree, the students will be working with the tech industry, resulting in greater links between BC's burgeoning technology sector and Language Sciences as a whole.

The Internet is built out of language and computation, and computational linguistics sits at this interface. Social media, Google searches, and predictive texting are all examples of language and computation working together, and examples of what makes computational linguistics a growth area within a growth area. The employment outlook for software designers is strong in BC and globally, and the field is projected to continue to grow for at least the next 10 years (US projections are for a 17 per cent increase, to over one million jobs, during this period), and as the overall field continues to grow, multiple sources indicate that specialization in computational linguistics will continue to be a leading growth area within the field.

Three new faculty members in the iSchool and Department of Linguistics, hired between 2016 and 2019, will teach in this area. Language Sciences will both contribute to and benefit from this program by connecting computational linguistics faculty and students with a community of researchers working on diverse languages, including Indigenous North American languages, and on diverse human conditions. Furthermore, collaboration

with the new faculty hires and students will provide Language Sciences researchers even more access to techniques such as machine learning, big data and computational automatization.

The program's first cohort of 27 students arrived in September 2019.

Language Sciences Undergraduate Research Conference

The 2019 LSURC was held from February 8-9, with 12 oral presentations and 11 posters by student presenters including from the Department of Linguistics, the Department of Psychology, and the Department of Biochemistry, and from UBC Vancouver campus, Simon Fraser University, and the University of Victoria. A number of Language Sciences faculty and graduate student members from UBC and University of Victoria assisted in reviewing abstracts and acting as adjudicators. The LSURC program is available online at www. blogs.ubc.ca/lsurc/past-conferences.

Plenary speakers were Linguistics postdoctoral fellow Ryan Taylor, Linguistics doctoral student Oksana Tkachman and School of Audiology & Speech Sciences Associate Professor Stefka Marinova-Todd.

Language Sciences also supported LSURC outreach and promotion, including through social media, the newsletter, taking photos on the day, and a website story, Showcasing undergraduate language research with LSURC.

eNunciate

eNunciate is a visual pronunciation tool that uses ultrasound technology to help students visualize what is happening with their lips, teeth, and tongue as they learn to speak a second language. The team that initially developed the eNunciate tool and resources included faculty and graduate students from the Department of Linguistics and the Department of Asian Studies, instructors of Japanese and other languages at UBC, and instructional designers – many of whom are Language Sciences members.

The eNunciate website hosts learning tools for students in phonetics courses, self-directed courses in Japanese and Cantonese, and resources for developing custom ultrasound video for language learning resources. In 2019, a group of UBC Engineering students created a Pronunciation Station, which creates the enunciate-style videos automatically, without the need for post-production mixing of the videos, and which also serves to give live biofeedback. The team is currently working to create a portable version of the station to share with interested instructors in linguistics and related areas.

Equity, Diversity, and Inclusion

With the new strategic plan, Language Sciences has undertaken new practices in order to increase equity, diversity, and inclusion (EDI) in its membership and leadership. In the coming months, Language Sciences will be developing a more explicit EDI plan. A number of measures have already been taken:

- LangSci provided $3,000 from our faculty seed funds to Dr. Turin in recognition of his service on the Language Sciences steering committee as an emerging faculty member. Funds supported the indexing and copy-editing for the volume *The Politics of Language Contact in the Himalaya*, co-edited by Dr. Turin and by University of Colorado Boulder Department of Political Science Affiliate Professor Selma Sonntag, to be

published through Open Book Publishers at Cambridge University

- LangSci provided $12,500 each in stipends to our two graduate student steering committee members in 2018-2019, recognizing the service burden of their contributions, especially in organizing the first Language Sciences Graduate Student and Postdoctoral Fellow Research Day (May 2019)
- The Initiative set aside $10,000 from 2019 GCRC funds for a course buyout for faculty who serve in Language Sciences leadership roles who are in the early stages of their careers, members of visible minorities, and women, in recognition of their disproportionate service burden at the university
- LangSci prioritized diversity and inclusion in our Language Sciences communication strategy, and set examples of inclusivity in our administrative and operations practice, by publicizing the research, teaching, and community outreach accomplishments of a diverse cross-section of our members, affirming members' gender identity in publications, striving for correct usage of Indigenous orthographies and terminology in stories, and by featuring members' research that supports marginalized populations
- LangSci ensured both American Sign Language (ASL) and close-vision ASL interpreters were available for our Language Science Talk 'Temporal Aspect in American Sign Language', where attendees required both

Appendix I: Language Science Talks

June 26, 2018: **Fantastic Internet comments and where to find them**
>Simon Fraser University Department of Linguistics Professor Maite Taboada

Abstract excerpt: I provide an overview of my current research on discourse and computational methods to analyze social media language. The first part of the talk will be devoted to outlining the two frameworks for this research: rhetorical relations and sentiment analysis. Rhetorical relations are the fundamental building blocks of discourse, connecting propositions to make coherent text. I will describe existing research on rhetorical relations, and present a study on how relations are signalled by discourse markers and other linguistic devices. Then I introduce my work on sentiment analysis, and on the role that rhetorical relations and other contextual factors play in the interpretation of sentiment and opinion.
Click here for the full abstract.

November 20, 2018: **Language, Culture, and the Environment: Thinking Out of the Silos**
>Terralingua co-founder and director Luisa Maffi

Abstract excerpt: What do language, culture, and the environment have to do with one another? Popping up in my mind twenty-five years ago as I was completing my doctoral studies, that question sent me on a quest for connections that, I soon realized, could not easily be found within the silos of individual disciplines. Thinking out of the silos meant stepping out of academia to pursue a path beyond established disciplinary boundaries. That unorthodox path led to the emergence of the idea of biocultural diversity—the interconnected and interdependent diversity of life in nature and culture—and of a nonprofit organization, Terralingua, devoted to fostering understanding of that idea and of its value for the future of life on earth.
Click here for the full abstract.

March 6, 2019: **Misinformation managed: how to have health conversations online**
>UBC Department of History Assistant Professor Heidi Tworek and Dr. Taboada

Talk description: Can you spot unreliable news? And once you have, how can you discuss it - not argue about it - online? Join us for Language Science Talks on March 6th, where UBC History Assistant Professor Heidi Tworek will outline how the internet has changed communications, and how Canada can address harmful online speech through policy reform. Then, SFU Linguistics Professor Maite Taboada will discuss her research into the language of misinformation and online conversation, including projects monitoring online comments on news stories and how to spot misinformation in the media.

April 10, 2019: **Indigenous Storybooks: Protocols & Educational Possibilities**
>University of the Fraser Valley Teacher Education Department Assistant Professor Sara Florence
>Davidson, Dr. Norton, UBC Department of Language and Literacy Education doctoral candidate Liam
>Doherty.

Abstract excerpt: Dr. Sara Florence Davidson, an Assistant Professor in Teacher Education at the University of the Fraser Valley, will discuss the complexities of honouring protocols in digital spaces. Specifically, she will focus on how the Indigenous Storybooks project is being used to support community Indigenous language revitalization efforts and how the platform is being used to support educators to honour existing protocols associated with the sharing of traditional Indigenous stories in their classrooms.

for the full abstract.

May 21, 2019: **From text analytics to predictive analytics enhanced by language sciences**
     Dr. Ng

Abstract: Computer Science professor Raymond Ng will present this talk, the first half of which will give a short overview of some of the research Dr. Ng has conducted, analyzing various types of text data, including sentiment analysis and abstractive summarization. In the second half of the talk, Dr. Ng will discuss how to build predictive models based on text and data of various kinds. He will use examples involving identifying patients with emotional needs, and stratifying children with potentially high risk for suicide. Finally, Dr. Ng will speculate as to how language sciences can enhance predictive models that are purely data-driven.

May 29, 2019: **Storybooks Mexico: Best practices to promote children's literacies in Indigenous languages**
     Dr. van 't Hooft

Abstract excerpt: In this talk we discuss ideas to promote children´s literacies in the Indigenous languages in Mexico. In Mexico, all Indigenous languages are minority languages, some of which have several linguistic variants that are in different situations and degrees of vitality and endangerment. Today, these languages are undergoing varying processes of standardization. Also, a portion of the Indigenous children learns to read and write in the native language during the first years of primary school. However, relatively few Indigenous speakers have developed literacies in their mother tongue. The unequal situation and position of Indigenous languages in Mexico creates a challenging situation for the support of indigenous literacies.
for the full abstract.

June 19, 2019: **How prenatal experience shapes speech perception**
     Centre national de la recherche scientifique (CNRS) senior research scientist Judit Gervain

Abstract: Experience with language starts in the womb. The prenatal speech signal is filtered by maternal tissues, preserving the rhythm and melody of speech, i.e. prosody, but suppressing fine details needed for the identification of individual speech sounds. The talk will examine the hypothesis that this prenatal experience with speech prosody might already shape how newborns perceive speech. In a series of NIRS and EEG experiments, I will show that basic auditory mechanisms such as envelope tracking are immune to prenatal influence, while more language-specific mechanisms, such as prosodic grouping, are already modulated at birth. I will discuss how these mechanisms lay the foundations for later language acquisition.

November 8, 2019: **Temporal Aspect in American Sign Language** (co-hosted with the UBC Department of Linguistics)
     Western Oregon University Professor and coordinator of Interpreting Studies Elisa Maroney

Abstract: In this presentation, I will discuss aspect in American Sign Language (ASL), demonstrating that ASL users have a range of options to produce aspectual meanings, including verb reduplication, aspectual verbs, adverbial signs and phrases, aspectual nouns, and combinations of the above.

Appendix II: Supported Member Projects

'Literature survey and transcription for analyzing the language of demented patients'
Awarded $2,000

Giuseppe Carenini, (Principal Investigator (PI)), professor, Department of Computer Science
Hyeju Jang, postdoctoral fellow, Department of Computer Science
Thalia Field, professor, Division of Neurology
Kyoungwon Seo, postdoctoral fellow, Department of Electrical and Computer Engineering

Excerpted from application:
The goal is to design and develop the "Narrative Discourse Test (NDT)" to analyze the language impairment of demented patients.

In this project, we propose to explore discourse abilities of patients with different types of dementia by leveraging machine learning techniques in artificial intelligence. We will begin with designing a narrative discourse test that aims to assess discourse abilities of patients. The test will ask subjects to tell a story based on a series of pictures that can reveal their discourse abilities not only related to wording and fluencies but also related to planning and semantic organization. After conducting the test, we will analyze the test results by formulating this problem as a machine learning prediction problem. By doing this, we will be automatically capturing language patterns of patients with different types of dementia.

Cross-Border Language Variation, Standardization, and Revitalization
Awarded $2,000

Rose-Marie Déchaine (PI), associate professor, Department of Linguistics
Heather Burge, doctoral student, Department of Anthropology
Rose Underhill, doctoral student, Department of Linguistics
Tim Hall, Tlingit language coordinator, Teslin Tlingit Council

Excerpted from application:
Using the principle of action-oriented community research, this pilot project has three goals:
1) Underhill will investigate how language sustainability is impacted by the tension between language variation (a feature of all human languages, e.g. the difference between inland and coastal varieties of Tlingit), or single village/family variability) and language standardization (a feature of many language revitalization efforts, which often privilege one variant of the language). A dialect feature survey will be conducted in consultation with existing descriptions of Tlingit language variation. This will involve linguistic elicitation with participating speakers based on loci of variation (such as the /m/~/w/ contrast, or vowel quality differences like /o:/ ~ /u:/), designed to better understand how differences in speech are distributed across and within communities. The results of this survey will be compared against the variation present in the Tlingit language corpus, particularly those corpora which are used as Tlingit language teaching tools.
2) Burge will investigate how transnationalism impacts linguistic consciousness (defined as how, when, and by whom the Tlingit language is acknowledged) and language ideology (defined as communal beliefs about language and its impact on the linguistic marketplace). Semi-structured (anthropological) interviews will be conducted with workshop participants individually or in small groups to give community members opportunities to reflect on language, its role in their lives, and what they envision its future to be. Similarly,

observation of the process, both the creation, execution and aftermath of the workshop will be documented from an anthropological perspective, with the goal of enriching the research team's understanding of ethical community-based partnerships.

3) Burge and Underhill, in collaboration with Tlingit language activists, will investigate how language sustainability and transnationalism impact the emerging partnership between four Tlingit speech communities, namely Teslin, YK; Carcross-Tagish, YK; Atlin, BC; Klukwan, AK. (Note that these speech communities interweave three layers of governance: the Canada/ US nation-state divide, the Yukon/BC territory/divide, as well as the traditional Tlingit ḵwaans.) Practically, this investigation will result in the development of a set of strategies for addressing the challenges that linguistic diversity and transnationalism may present the sustainability of the revitalization effort, as well as taking advantage of those advantages that these realities may provide.

Impact of Interprofessional Intervention on Social and Recreational Participation of Adults with Aphasia
Awarded $1,950

Tami Howe (PI), assistant professor, School of Audiology & Speech Sciences
Eavan Sinden, Speech-Language Pathology Clinical Instructor, School of Audiology & Speech Sciences
Tricia Rachfall, program co-coordinator, Therapeutic Recreation Department, Douglas College
Brent Page, National Manager for Community Services Western Canada and Conductive Education, March of Dimes Canada

Excerpted from application:
The proposed project involves obtaining funding for a new research collaboration between the UBC School of Audiology and Speech Sciences, Douglas College Therapeutic Recreation, and March of Dimes Canada. The study aims to explore the impact of participating in a unique interprofessional intervention (an aphasia camp) on the social and recreational participation of adults with aphasia. Aphasia, a language disorder that affects an estimated 30 per cent of individuals who have had a stroke, can have significant negative effects on an individual's everyday participation and quality of life. Nine years ago, Christy Campbell, an individual with aphasia, and Associate Professor Barbara Purves, a School of Audiology and Speech Sciences faculty member, established an annual Sea-to-Sky Camp for individuals with aphasia and their families. Each year, approximately 30 individuals with aphasia and 30 students from a range of health and human service programs such as nursing, occupational therapy, therapeutic recreation, pharmacy, dental hygiene, and speech-language pathology participate in the camp. The camp aims to create a communicatively-accessible environment that provides opportunities for: 1) individuals with aphasia to participate in social and recreational activities specially adapted for their needs, 2) people with aphasia and their families to learn from each other about living successfully with the language disorder, and 3) health care students to learn about the experience of living with aphasia and how to communicate more effectively with these individuals.

'Perception of Iconicity'
Awarded $2,000

Carla Hudson Kam (PI), professor, Department of Linguistics
Oksana Tkachman, doctoral candidate, Department of Linguistics
Emily Sadlier-Brown, doctoral candidate, Department of Linguistics

Excerpted from application:
[Thus] previous work shows that arbitrariness is not a necessary feature of language, but instead, may be a result of how specific modalities work. It also suggests that non-arbitrariness results from aspects of language production interacting with aspects of how producers conceptualize meanings and/or then translate the conceptualizations into forms. However, real language is interactive, and so real languages also have the potential to be influenced by perception as well as production.

The goal of the current project is to determine whether, like producers, sign perceivers converge on a subset of motivating features and moreover, whether the subset perceivers converge on is the same as the subset that producers converge on. This result would provide support for the hypothesis that the commonalities we see in iconic forms across languages and individuals are at least partly cognitively motivated-- and cannot be explained by production constraints such as some forms being more easily articulated than others.

To investigate this, we will show a set of four signs to sign-naïve participants, asking them to select the sign that best matches a given meaning, in both (1) artificial sign and (2) natural sign conditions. In a third condition, participants will be asked to rate novel-created signs on their level of iconicity to determine whether participants' choices in the first condition correlate with the most cross-linguistically common feature of the referent or with the more iconic signs in general. In summary, our goal is to see whether iconic motivations most common in producers will also be most preferred by perceivers.

'Sound Change in Pirahã'
Awarded $2,000

Lisa Matthewson (PI), professor, Department of Linguistics
Raiane Salles, doctoral student, Department of Linguistics
Emily Sadlier-Brown, doctoral student, Department of Linguistics
Martón Soskuthy, assistant professor, Department of Linguistics

Excerpted from application:
This project investigates sound change in Pirahã (Mura), an under-described language spoken by approximately 1000 speakers in the Brazilian Amazon. The project asks (1) whether well-known patterns of linguistic change are universal and (2) whether the role of societal factors in existing computational simulations of sound change are borne out by actual data. Pirahã offers a unique opportunity to answer these questions because it is spoken in a society whose social structure is fundamentally different from any society in which sound change has been studied. The generated dataset will be a comprehensive inventory of all the vowel and consonant allophones in Pirahã as spoken by speakers of different ages and genders. The data will be used to train a forced aligner (a program that facilitates the alignment of orthographic with acoustic data), which will be used in the pursuance of (1) but will also be available to future researchers invested in documentation and revitalization efforts. As such, the project contributes to the important goal of documenting the phonetic and phonological aspects of an under-described language. This project presents a singular opportunity to bridge at least three different disciplines: the social sciences, computer science (in the simulation and forced alignment components), and language documentation, all of these in service of answering significant questions about how languages change. This combination of sociolinguistic, computational and documentation work is rarely undertaken and may in fact represent the first effort in this direction.

'Just look it up? Navigating disputed definitions in endangered language dictionaries'
Awarded $1,150

Patrick Moore (PI), associate professor, Department of Anthropology
Daria Boltokova, doctoral student, Department of Anthropology
Leda Jules, Kaska Elder and language consultant, Liard First Nation

Excerpted from application:
When the language is English or French, lexicographers have a near-infinite number of websites, journals, articles, and expertise to consult. But when a language is less widely spoken, or even endangered, there are no authoritative resources to settle disagreements. Our proposed research seeks to fill this gap. By drawing together an interdisciplinary team of language specialists, including Patrick Moore (linguist and anthropologist, UBC), Daria Boltokova (linguistic anthropologist, UBC and Harvard University) and Leda Jules (Kaska Elder and language consultant, Liard First Nation), we aim to develop strategies for resolving definitional disputes in contexts of dictionaries for endangered languages. We ask: what resources should scholars and language consultants use to verify the 'correct' meaning of endangered language words or phrases? Who should be involved in resolving these disagreements? What software should scholars choose to make endangered language dictionaries? How should scholars involve the community at large in the dictionary-making process (not only Indigenous language consultants)? And finally, how can they make dictionaries user friendly?

Our starting point for this project is data and experiences collected while creating an online dictionary for the Kaska language. Kaska is an endangered language spoken by Indigenous communities in the Yukon, Canada. Based on this expertise we propose to conduct a review of existing literature on the challenges of dictionary-making for endangered languages worldwide. Our goal is to use these findings to create open source instructions on how to meet these challenges, including a set of recommendations for resolving disputes or disagreements among lexicographers working on languages with a few remaining speakers. The UBC Language Sciences is committed to promoting research that furthers language sustainability in transnational contexts, as well as digital innovations in language preservation. Since dictionary-making for endangered languages is a nascent field of study, our project will require bringing together a new team of international researchers. Our plan is to initiate a virtual dialogue between local and global Indigenous language activists and other experts from around the globe who are in the process of creating endangered language dictionaries. We will propose to host a database including a list of different dictionary makers as well as our open source instructions on the UBC Language Sciences website to attract more collaboration between different Indigenous communities and language experts worldwide.

Transnational Experiences of Luso-Canadians
Awarded $1,150

Christine Schreyer (PI), associate professor, Department of Community, Culture, & Global Studies
Sara Vieira, doctoral student, Department of Community, Culture, & Global Studies

Excerpted from application:
My research seeks to analyze the transnational experiences of Luso-Canadians (Portuguese descent) who have lived in both Central Portugal and the Greater Toronto Area (GTA). This includes their language use

and fluency as bilinguals, linguistic preferences, social capital derived from their transnational networks, and connection to a sense of belonging and place within the GTA. For this, I have interviewed eighteen Luso-Canadians in both the GTA and central Portugal. Further, this study aims to understand the representations and re-presentations of Portuguese language and culture within the GTA's diverse and established Portuguese community. To date, I have conducted 49 questionnaires/surveys with leaders in the Portuguese community. I aim to compare the experiences of the 18 Luso-Canadians including their needs once in the GTA with what is currently available within the Portuguese community. This includes a detailed list of language programs, food and cultural promotion, employment, folklore, and Portuguese sport centres.

Since commencing fieldwork in August 2016, I have developed a close relationship with the Federation of Portuguese Canadian Business and Professionals (FPCBP) where I was recruited by the community to become a board director and have served on their board since December 2016. In this capacity, I am currently initiating a mentorship program to align with the FPCBP's hugely successful scholarship gala. In collaboration with fellow FPCBP directors, we aim to bridge the gap between donors and recipients by creating a mentorship program whereby community members who donate scholarships will be given the opportunity to become mentors to the scholarship recipients. We aim to build connections between students of Portuguese language descent and successful members of the Portuguese speaking community through this program. It is a critical component of the community that is lacking, and we seek to rectify some of the barriers facing Luso-Canadian students including poor academic underachievement and difficulty accessing white collar networks through this mentorship program. This project is ongoing and will expand and continue post-dissertation.

'Storybooks Tibet'
Awarded $2,500

Mark Turin (PI), associate professor, Department of Anthropology
Patrick Dowd, doctoral student, Department of Anthropology, Himalaya program
Sonam Chusang, Senior Instructor, Department of Asian Studies

Excerpted from application:
The Himalayan region is one of the most linguistically diverse places in the world, home to an estimated one sixth of all human languages (Turin 2005). To both affirm and celebrate this tremendous diversity, we propose to expand on the Global Storybooks portal (https://globalstorybooks.net/) to create a Storybooks Himalaya. For the purpose of this grant, we will begin with Tibetan. Though as a convention we refer to the 'Tibetan language', scholars note that there are 25 distinct languages and more than 220 dialects spoken across this highest plateau in the world (Tournadre 2008). The three largest varieties of Tibetan equate to the three provinces of cultural Tibet: U-Tsang, Kham and Amdo. While the written language is identical, the spoken varieties are so divergent as to be mutually unintelligible. In close consultation with the Tibetan Cultural Society of British Columbia (TCSBC), Sonam Chusang and I will select five existing stories from the Global Storybooks platform and translate them from English to written Tibetan. We will then work with local Tibetan community members who are fluent, native speakers of these three major Tibetan varieties and record them reading the stories. A single platform will thus allow users to read the same literary Tibetan text and hear the three principal spoken varieties.

Appendix III: Language Sciences Stories

Stories

[Camels and Compliments: How Language, Culture and Nature Are Interconnected](#) (Dec 4, 2018) featuring Dr. Maffi

[Language Sciences Members Win Prestigious Awards in 2018](#) (Dec 18, 2019) featuring Khia Johnson (graduate student, Department of Linguistics), Kiley Hamlin (associate professor, Department of Psychology), Michael Griffin (associate professor, Department of Philosophy), Dr. Gick, Dr. Werker

[Helping to Preserve a Language 1,200 Kilometers From Home](#) (Jan 17, 2019) featuring Vincent Gogag (Gitksan Laboratory language consultant), Lisa Matthewson (professor, Department of Linguistics), Henry Davis (professor, Department of Linguistics)

[Showcasing Undergraduate Language Research with LSURC](#) (Jan 30, 2019), featuring organizers Ashley Chand (undergraduate student, Department of Linguistics), Paris Gappmayr (undergraduate student, Department of Linguistics), Terrance Gatchalian (undergraduate student, Department of Linguistics)

[Good Vibrations: How Vibrating Devices Can Help Wearers Understand Speech](#) (Mar 4, 2019), featuring David Marino (alum, Cognitive Systems)

[Redefining 'Lazy Eye' and Investigating Its Effects on Reading Ability](#) (Apr 8, 2019), featuring Deborah Giaschi (professor, Ophthalmology & Visual Sciences)

[Helping At-Risk Children Develop Their Cognitive Skills Can Aid Success in Life – and Language Plays a Role](#) (May 1, 2019), featuring Dr. Weber

[Podcasts, Policy, and the President: Interdisciplinary Course Returns to Teach the Power of Language](#) (May 15, 2019), featuring Dr. Turin, Dr. Werker, undergraduate student experiences

[No, It's Not Skynet: You've Probably Encountered Machine Learning Today](#) (May 28, 2019), featuring Mark Schmidt (associate professor, Department of Computer Science)

[Looking Behind the 'Model Minority Mask' to Help Educationally At-Risk Multilingual Students](#) (Jun 12, 2019), featuring Dr. Li

[Learn About the History of BC's Indigenous Languages This Month With the Xwi7xwa Library](#) (Jun 30, 2019)

[Language Sciences Congratulates Our Award-Winning Members!](#) (Sep 2, 2019), featuring Steven Barnes (senior instructor, Department of Psychology), Dr. Turin, Katherine Bowers (assistant professor, Department of Central, Eastern, and Northern European Studies), Dr. Schmidt, Anne Murphy (professor, Department of Asian Studies), Márton Sóskuthy (assistant professor, Department of Linguistics), Eric Margolis (professor, Department of Philosophy), Dr. Griffin, Barbara Dancygier (professor, Department of English Language and Literature), Florence Yoon, (assistant professor, Department of Classical, Near Eastern and Religious Studies), Dr. Werker, Dr. Hall, Dr. Schreyer, and Vicki Sear (doctoral student, Department of Anthropology).

UBC Language Sciences

Computers Can Work Out Your Bus Journey – and Predict Dementia (Oct 2, 2019), featuring Giuseppe Carenini (professor, Department of Computer Science), Thalia Field (professor, Department of Neurology), Hyeju Jang (postdoctoral fellow, Department of Computer Science).

How a New UBC Program is Tackling the Booming Field of Computational Linguistics (Oct 8, 2019), featuring Dr. Gick, Dr. Abdul-Mageed.

Press releases

Let's Talk About Love, Baby – and Why We Should Define It (February 13, 2019), featuring Carrie Jenkins (professor, Department of Philosophy)

Babies Can Learn Link Between Language and Ethnicity, Study Suggests (June 25, 2019), featuring Lillian May (lecturer, Department of Psychology) and Dr. Werker.

Secret Love Letters and Languages: UBC Exhibit Offers Pride Week History Lesson (July 29, 2019), featuring Kyle Frackman (associate professor, Department of Central, Eastern, and Northern European Studies)

Articles from other units

Understanding Word Learning in the Growing Brain (April 15, 2019) written by the Department of Psychology, featuring Maria Arredondo (postdoctoral fellow, Department of Psychology), Drew Weatherhead (postdoctoral fellow, Department of Psychology), and Dr. Werker.