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Linguistics for Everyone: Engaging a Broader Public for the Scientific Study of Language

**Barbara Zurer Pearson¹, Jeffrey Lidz³, Cecile McKee², Elizabeth A.
McCullough⁴, Leslie C. Moore⁴, Colin Phillips³, Shari R. Speer⁴, Laura
Wagner⁴, and Elly Zimmer²**

1. Rationale

The “Linguistics for Everyone” (LfE) project grew out of a desire to share our excitement about communicating the importance and fascination of linguistics to diverse public audiences, and to encourage our colleagues to do the same. Too often, we find a lay person’s response to learning that we study language is to ask how many foreign languages we speak, and then worry that we will correct their grammar. Few people outside the field appreciate their own implicit knowledge of grammar and the central contribution the scientific study of language makes in our daily lives and in many fields of knowledge. In order to change the public perception of linguistics and spark greater interest in it, we suggest that linguists collaborate across subfields and with different disciplines to create opportunities to share what they do and why they do it with general audiences. To make programs in venues outside academia as effective as possible, scholars need to equip themselves with tools that help them communicate clearly and vividly and make their messages relevant to diverse audiences (See Alda Center; also AAAS, 2013; 2014; Bigham et al., 2015). We hope our symposium helps fellow acquisition scholars see how their own work can create greater public awareness of their science, and shows them how engaged research does not take them away from their work, but rather can advance it.

LfE efforts also respond to increasing pressures on the research community to emphasize the societal relevance of their work and when possible, to use their research to further a public agenda (“America competes,” 2010; NSF, 2014). They are also enjoined to communicate what they do to policy makers, tax payers, and youth, so these constituents can appreciate the importance and relevance of their fields. For example, the National Science Foundation (NSF) has been working for at least the last 18 years (Holbrook, 2009) to encourage

* 1. Barbara Zurer Pearson, University of Massachusetts Amherst, bpearson@research.umass.edu (Corresponding author). 2. University of Arizona. 3. University of Maryland. 4. The Ohio State University. Travel for the symposium was funded in part by NSF grant BCS-1452266 to Colin Phillips, P.I.

and help its awardees to translate what they do for a general audience. Foremost among the foundation's outreach goals is to improve science education and general science literacy, and especially to find ways to engage traditionally excluded groups so their untapped talent can add to our reservoir of scientific and creative brainpower. Since knowledge about language systems is an effective way to combat prejudice against stigmatized groups, the scientific study of language has special tools to advance this agenda (Mallinson & Charity Hudley, 2010; Wolfram, 2009, among others).

Aside from the public benefits of outreach activities, we as linguists (like other scientists) have also found that we reap benefits for ourselves from these activities. Our effort to communicate with the public forces us to step back and take a broad view of our field. Scientists who collaborate on outreach activities learn through communicating with the public how to better communicate with each other, which can be an important enabler for interdisciplinary research (Lidz & Konrod, 2014). We have also seen our outreach activities help us bridge the divide often found between language science and closely related fields like Communication Disorders and Education, who very often see little relevance of linguistics to their work.

In order to increase our own capacity to achieve engaged research and outreach goals and to communicate our experience and enthusiasm for them to fellow acquisition scholars, our BUCLD Poster Symposium called on groups across the country with complementary expertise in engaging the public in linguistics research--in diverse venues and with innovative tools. The aim of the symposium was to provide interactive experiences for conference attendees with the tools we have used and for us to receive feedback and hear new ideas from colleagues engaged in similar pursuits. With an eye toward the longer term, we in the LfE group have begun to collate and disseminate our goals and tools through diverse media. This article reaches out specifically to child language researchers and brings to the fore print and electronic resources provided by a growing community of engaged linguistics researchers.

2. The Linguistics for Everyone (LfE) Committee

The Linguistics for Everyone (LfE) committee includes faculty and student representatives from four large state universities, all of which have taken seriously their mission to engage with the public. We emphasize that students are an integral part of the outreach activities. In turn, the outreach activities contribute to the students' career development, and reinforce the notion that being an engaged scientist is a key part of being a successful scientist.

University of Maryland (UMD). This team draws from a large community of linguists and language scientists at UMD who are very active in outreach activities, particularly involving K-12 schools. The outreach program is overseen by Jeffrey Lidz, Colin Phillips, Ellen Lau and a number of other faculty, together with a group of around 20 graduate students from diverse

departments and a handful of undergraduate volunteers. The outreach activities have become so popular among UMD graduate students that it is now standardly assumed that new students will join in with outreach programming. The events include partnerships with schools that serve diverse populations. UMD researchers go to high schools regularly to talk with large groups of students, and high school students from the minority-majority schools come to UMD for half-day activities in which students rotate around a series of activities that demonstrate science and scientific reasoning in action. The UMD group has also reached into middle and elementary schools with its activities.



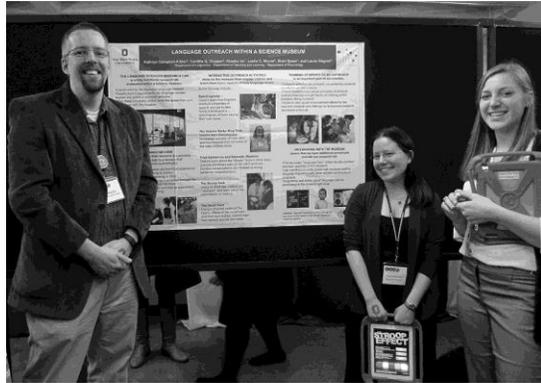
Computer scientist Alvin Grissom leads a discussion during a high school visit to UMD



UMD language science students at the Maryland Day, campus-wide community festival

The Ohio State University (OSU). This team is coordinated by the Buckeye Language Network, which is comprised of language science researchers from over a dozen different departments across campus. OSU's outreach centerpiece is a highly innovative research-in-real-time exhibit at the Center of Science and Industry (COSI) in Columbus, OH. The OSU Language Sciences Research Lab is a fully equipped state-of-the-art research lab, including two eye-trackers, three PC stations, and a variety of other AV equipment. Faculty, graduate and undergraduate researchers collect data at the lab, and museum visitors have the opportunity to participate as research subjects themselves, or they can watch the research happening through glass walls. The research itself acts as a form of outreach since it allows visitors to get a first-hand view of real science in action. In addition, the lab conducts a variety of interactive demonstrations on the museum floor with the visitors. These demonstrations educate and excite people about how language works.

For example, one demonstration uses an iPad app of the Stroop effect to discuss the automaticity of reading; another demonstration explores the speech production system using a model of the larynx, videos showing the vocal folds in action, and MRIs of the articulatory tract of singers. The floor demonstrations are largely facilitated by students, who are enrolled in an OSU course called "Training in Science Education Outreach." Beginning in summer 2015, the Language Sciences Research lab became an NSF-funded Research Experience for Undergraduates Site, and runs a summer internship program that



Left to right: Mike Phelan, Elizabeth A. McCullough, and Lauren Boyce (OSU) with outreach poster and iPad tools.

trains students to both conduct language science research as well as communicate it to the public. The lab is directed by Laura Wagner, along with an interdisciplinary executive committee of language researchers: Kathryn Campbell-Kibler, Cynthia Clopper, Kiwako Ito, Leslie C. Moore, and Shari R. Speer. Elizabeth A. McCullough serves as an ad-hoc committee member.

In addition, the OSU Linguistics department also runs a week-long summer program for high-school and pre-college students. The Summer Linguistics Institute for Youth Scholars (SLIYS) provides these students with an opportunity to explore their interest in languages and linguistics and to gain training and encouragement in the language sciences.

University of Arizona (UA).

This team's focus is festivals of any type, including local and national events as well as events emphasizing science and ones with no disciplinary emphasis. Science examples include these: In April 2014, the UA team was the only representative of the social and behavioral sciences in the National Science Foundation pavilion at the USA Science and Engineering Festival in Washington DC. The event attracted over 350,000 attendees, and NSF estimated that 20,000 went through its pavilion. (See the YouTube of their booth at



UA team member Elly Zimmer and undergraduate volunteer Emily Pendell do mini-experiment on lateralization with mother and daughter at the Tucson Festival of Books.

<https://www.youtube.com/watch?v=6kXK6W8s0II>.) In February 2015, the UA team led the Linguistic Society of America's (LSA) booth at the American Association for the Advancement of Science (AAAS) Family Science Days festival. Scholarship on informal science learning (Fenichel & Schweingruber,

2010; Center for the Advancement of Informal Science Education, CAISE) strongly influences this work. The team aims to spark interest in linguistics and science in general by engaging festival-goers in hands-on activities. Festival environments are fast-paced and often chaotic, so exhibit activities must be short and fun. One activity uses a mini-experiment to demonstrate which hemisphere language is located in. Another teaches that sentences have underlying structure by having festival-goers match pictures to the tree structures of a syntactically ambiguous sentence. Yet another uses Praat to show festival-goers details in their own names. Visitors can then take a print-out of their name home. This is an example of the many giveaways that the team brings to festivals. Others include temporary tattoos, brain headbands, candy, and linguistics puzzlers. These help attract visitors to the booth and helps them remember what they learned. This team is led by developmental psycholinguist, Cecile McKee. It includes a diverse group of graduate students, undergraduates, and community volunteers. For example, one of our now-regular volunteers first met us as an eighth-grader attending a science festival. He is now in high school and has volunteered to help at many festivals since.



Top left: UA volunteer, currently in high school, does name activity on Praat with child.



Right: UA team member, Elly Zimmer, trains for a festival by practicing with Praat.

3. Resources generated by the LfE committee

We invite interested parties to the project URL:

<http://languagescience.umd.edu/beyondUMD/language-science-everyone>

At the website, one will find news and discussion about strategies and tools for bringing language science to different constituencies. The committee shares how

work with these resources has deepened their own and their students' ability to "talk real science with real people." Among the materials under the subheadings for Interactive Activities, Online Resources, and Video Resources, we direct BUCLD colleagues, in particular, to a resource specifically focused on child language, a list of video and internet resources compiled by committee member Laura Wagner to accompany a leading language acquisition textbook.

Further information about OSU's museum lab can be found at

<http://bln.osu.edu/LanguagePod.php>

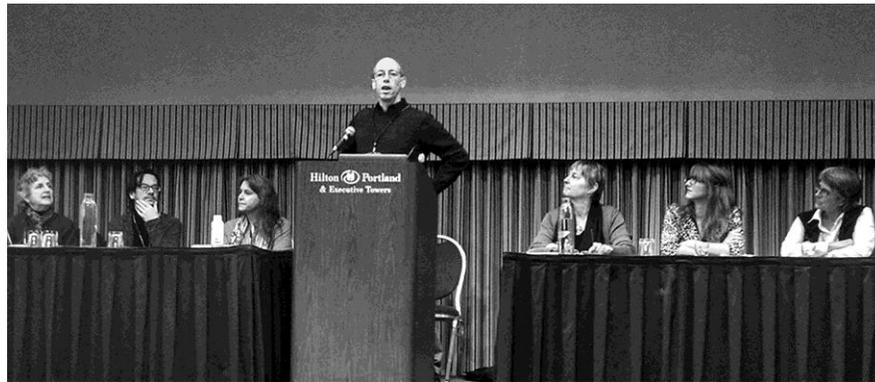
And information about OSU's summer program for high school students can be found at the linguistics department website,

<http://linguistics.osu.edu/sliys>

Finally, the LSA, one of our partners, has devoted a section of its website to tips and tools for scholars who want to engage in activities like the ones described here.

<http://www.linguisticsociety.org/content/eventsguide>

Together these websites collate mainstream media channels and internet resources for popularizing linguistics, and pedagogical resources to use with diverse populations through K-12 programs and informal venues for lifelong learners.



Top left: Bottom: 2015 LSA panel discussion on linguistics outreach. Left to right, Barbara Pearson (UMass), Jeff Lidz (UMD), Laura Wagner (OSU), Colin Phillips (UMD), moderator LSA president Joan Maling, Elly Zimmer and Cecile McKee (OSU).

4. Conclusion

The goal of the symposium was to present ideas for ways linguists in many subfields—such as psycho-, computational, and socio-linguistics--can educate the public about the kinds of things we study and why they matter. These programs aim to dispel myths about language, deepen the public's appreciation of language science, communicate our enthusiasm about our work, inspire a future generation of language scientists--and to have fun with it in the process.

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