

Ask an Acoustician: Sandra Gordon-Salant

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Meet Sandra Gordon-Salant

In this edition of “Ask an Acoustician,” we hear from Sandra Gordon-Salant. Sandy is a professor in the Department of Hearing and Speech Sciences at the University of Maryland, College Park (hesp.umd.edu). She is well known for her studies on speech perception and aging. Sandy is a Fellow of the Acoustical Society of America (ASA) and a Fellow and Honoree of the American Speech-Language-Hearing Association (ASHA) and has won numerous awards for her research and teaching activities. Sandy can tell you the rest.

A Conversation with Sandra Gordon-Salant, in Her Words

Tell us about your work.

My position as professor of Hearing and Speech Sciences at the University of Maryland encompasses the three prongs of academia: research, teaching, and service (administration), although the majority of my time is devoted to research. My research program broadly examines factors that contribute to speech perception difficulties of older people in everyday listening situations (Gordon-Salant and Fitzgibbons, 1993, 2001). The underlying theory driving much of this work is that auditory temporal-processing deficits of older people contribute to altered perception of speech (Gordon-Salant et al., 2008). Work in the lab also examines the impact of reduced audibility associated with age-related hearing loss and age-related cognitive decline in specific cognitive domains to understanding fast speech, accented speech, reverberant speech, auditory-visual asynchronous speech, and speech in a background of competing talkers (e.g., Gordon-Salant et al., 2010, 2017). References and links to all of my published work can be found on my lab website at umdhearinglab.com. Also, see the article in this issue of *Acoustics Today* by Anderson, Gordon-Salant, and Dubno that talks about some of our work.

Describe your career path.

I grew up in an era in which the double standard was firmly entrenched in our society and in my parents’ home in Plainview, NY. There were three professions that women could pursue: teacher, nurse, or secretary. My parents decided I would become a speech-language pathologist in the public schools, which in their view was the best teaching job possible. I was not the rebellious type and followed my parents’ plans for me. As an undergraduate at the University at Albany, State University of New York (SUNY), however, I was completely mesmerized by my courses in audiology and hearing science and was decidedly unenthusiastic with the curriculum in speech-language pathology. Following my new-found passion, I obtained a master’s degree in audiology at Northwestern University (NU), Evanston, IL, and completed a one-year clinical fellowship at Gallaudet University, Washington, DC. During that year, I had a chance encounter at an ASHA convention with one

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of my former professors at NU, Tom Tillman, that changed my path. He convinced me to return to NU for a PhD and I jumped at the chance. I always thought I would obtain a PhD, but this single discussion with Dr. Tillman was all the encouragement I needed to pursue my further education straightaway. On returning to NU, I chose to work with Fred Wightman, who taught me how to be an experimentalist and an independent thinker. I became good friends with the other students working in Fred's lab, especially Pete Fitzgibbons and Larry Humes. When I was ready to defend my dissertation, Pete informed me of a faculty position at the University of Maryland. I got the job, which has been my one and only academic position for my entire career.

What is a typical day for you?

This is not an easy question to answer because every day is different and varies between the academic year versus summer or winter sessions. Nonetheless, many days have commonalities. I start each day checking email (who doesn't!) to learn what calamities may be awaiting me in the lab (usually first thing Monday morning), what tasks someone wants me to do, etc. I often spend time in the lab to troubleshoot problems and develop new experimental protocols. Typically, I have advising appointments with students, ranging from undergraduates considering graduate school options to PhD students planning their dissertation research. It is a rare day when I do not meet with at least one student. Much of my time each day is spent designing studies, reviewing pilot data, analyzing final datasets, and writing or revising manuscripts. These research-related activities are often in consultation with students and colleagues and are the best part of any day. I tackle at least one administrative task each day. As director of the Doctoral Program in Clinical Audiology, I monitor student progress, the quality of the instructors in the program, course scheduling, and the graduate curriculum and respond to emerging issues as they arise.

As codirector of a T-32 Institutional Training Grant (ccebh.umd.edu), I may plan a workshop, prepare an annual report, or monitor the budget. During the academic year, I prepare for teaching my class one or two days/week to keep the material current and engage the students through new techniques. I also attend at least one meeting a day, which, like for most of us, is the least favorite part of my day. These can range from department-wide faculty meetings to administrative meetings at the college or university level. I serve on promotion and tenure-review committees, curriculum committees, and award selection committees. At home in the evening, I often write reference letters for students or

colleagues, review manuscripts, and review grant applications. Each and every day goes by incredibly fast.

How do you feel when experiments or projects do not work out the way you expected them to?

The results of our experiments often do not yield the results we expect. I am no longer surprised or disappointed by an unpredictable outcome because it is inherent in conducting empirical research. Our strategy is to design experiments in a way that the results tell us something important and new, even if the outcome is unexpected. We often are prepared for the possibility of unanticipated findings as a result of collecting and monitoring a considerable amount of pilot data, and we may alter the experimental protocol as a result of these pilot data, such as adding measures to help us explain the data.

Do you feel like you have solved the work-life balance problem? Was it always this way?

Work-life balance is difficult to achieve, especially for women who are early in their academic careers while at the same time raising young children. When my children, Brian and Maida, were young, my strategy was to focus on work when I was at work and focus on my family when I came home. I prioritized important events in my children's lives. I also had a lot of support from my husband, Steve, but as his own career as attorney, magistrate, and judge became more demanding, the time he could devote to family life was considerably reduced. But in looking back, I realize it was extremely stressful to have a productive academic career while at the same time enjoying a rich family life. There really aren't easy answers, but one approach is to say "no" to requests to serve on committees or write manuscripts that are not valued in academia. Now that my children are grown and living independently, I have a new work-life balance, namely, taking advantages of opportunities to enjoy my personal life while working on an increasing number of research activities. I still feel guilty saying no to work requests, but I am finally learning how to protect my time after decades in academia.

What makes you a good acoustician?

I think a lot about the acoustic characteristics of the signals we present to participants in our studies and how the individual's auditory capabilities will enable them to process these signals. We prepare many new speech materials in my lab. I insist on equalizing the levels of the speech signals within a stimulus set and characterizing the temporal properties of these signals. My students and I listen to the speech materials we develop to ensure that they are free of distortion and accurately represent the intended signal. We also collect

pilot data from naive listeners to verify speech intelligibility, list equivalence, and perceived degree of accent. Finally, we calibrate our signals daily in the lab before presenting them to listeners. Knowing the acoustic attributes of signals, signal presentation levels, and auditory capacity of listeners enables me to have confidence in the experimental results.

How do you handle rejection?

I say a few expletives and set aside the rejection letter/review for at least a few days. Then I start to consider the reasons specified for the rejection and whether they can be addressed in a revision either as a manuscript sent to another journal or as a resubmitted grant application. Inevitably, the comments stated in the rejection letter are quite helpful in revamping the submission, and, as a result, I have often been successful in overhauling the submission.

What are you proudest of in your career?

I am proudest of three aspects of my career: the impact of my research on improving our understanding of age-related hearing loss, my influence on students, and my success in obtaining external funding to support my work. My entire research career has been focused on elucidating the mechanisms underlying age-related hearing loss (as mentioned in *Tell us about your work*), and I believe that our theories about age-related decline in auditory temporal processing have now become broadly accepted. It is quite remarkable to see my work referenced in articles that advance the scientific premise I espoused, and I am also gratified to learn that some of my work has impacted audiology practice. My students are a great source of pride for me. I have watched some of them develop from eager but uninformed undergraduates to knowledgeable and insightful PhD candidates with publications of their own. I am quite honored to have worked with so many students and to have helped launch their research careers. My success in obtaining external grant support is frankly beyond my imagination. Perseverance and unusual ideas, coupled with collegial support, have helped me achieve continuous funding for nearly my entire academic career. I am humbled and proud of this record.

What advice do you have for budding acousticians?

My first piece of advice is to follow your passion. If you are excited about a particular area of research, then chan-

nel your energy into that research focus. Excitement about your research program is evident in talks, manuscripts, and grants and will motivate you to think deeply about your research questions.

My second piece of advice is to aim high. Budding acousticians should submit manuscripts to the premiere journals in the discipline such as *The Journal of the Acoustical Society of America*. Gaining acceptance in these journals requires more work than acceptance in other journals but is well worth the effort in bolstering your reputation. You should start early and often to submit grant applications to federal agencies. Expect rejection and grow a “thick skin,” meaning, don’t take the rejection personally but learn from it and submit a better application next time. My observation is that young investigators who consistently write grant applications ultimately get funded. You just need to persevere! Third, volunteer to serve as a reviewer for top peer-review journals and federal grant agencies. These are invaluable learning experiences for writing a better manuscript or preparing a better grant. Finally, say “no” to requests of your time that don’t advance your career or that interfere with your work-life balance. How do you say no? My advice is to reply that you will think about the request and will give a response within a week. This provides an opportunity to ponder whether you really want to do what is asked of you and whether it is a task that will advance your career. It’s also easier to give a definitive “no” after some time has passed.

What do you want to accomplish within the next 10 years or before retirement?

Most of us think in terms of a 5-year plan; mine includes several objectives. I hope to accomplish continued success in carrying out the work outlined in my grants and contracts and in submitting one grant renewal. As part of this objective, I would like to see a number of manuscripts published describing work that has been conducted in my lab over the years but hasn’t yet been published. I aim to work with my current group of PhD students toward completion of their degrees. I am committed to helping them begin successful careers in research. Finally, I would like to inspire junior colleagues toward a successful career in academia by advising them on grant applications and consulting with them on career choices.

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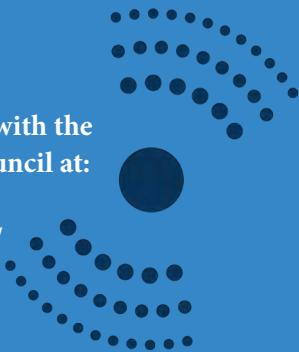
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