Communicate Your Science: Engaging Public Audiences with Acoustics

Allison B. Coffin

Science without communication is silent. We study acoustics. Let's make some noise!

Introduction

Nothing generates excitement like sound! From the iconic guitar riffs in Led Zeppelin's famous song "Stairway to Heaven" (see bit.ly/3iH2HGp) to birds energetically singing (way too early in the morning) outside my bedroom window, nonscientists can relate to acoustics. Many of us entered the field because we love music, a passion evident at the jam sessions that accompany many meetings of the Acoustical Society of America (ASA). Science communication enables us to share that enthusiasm with nontechnical audiences.

The goal of this article is to introduce fundamental ideas in science communication and resources for further exploration. The National Academies of Science, Engineering, and Medicine (2017, pp. 1-2) define science communication as "the exchange of information or viewpoints to achieve a goal or objective such as fostering greater understanding of science and scientific methods or gaining greater insight into diverse public views and concerns about the science related to a contentious issue." This article largely holds to this definition, with a focus on the exchange (communication is not one way) and the goals or objectives that can be as diverse as the communication medium and audiences.

I focus primarily on verbal communication, formal and informal presentations for nonexpert stakeholder groups. I draw from both published work around the science of science communication and my own experience as a communicator and leader of Science Talk (see sciencetalk.org), a professional society for science communicators. However, the principles discussed here apply to many settings, including multimedia communications. For more focused information on multimedia communication, I highly recommend the American Association for the Advancement of Science (AAAS) multimedia toolkit (available at bit.ly/2VQYyXv). I also recommend the website "Discovery of Sound in the Sea" (DOSITS; see dosits.org). The DOSITS site is one of the best examples I have seen of online acoustics communication and serves as an excellent model for websites on other acoustics topics.

Why Communicate?

Scientists generally cite one or more common reasons for wanting to communicate (Burns et al., 2003; Simis et al., 2016). We communicate to stimulate public understanding of science, including the process and the end result, our data. We communicate to increase public support for science. We communicate so our findings can influence policy, such as testifying at a hearing about anthropogenic sound regulations and whale migration. We also communicate for more deeply personal reasons: to excite future scientists and to see how our work can make a difference in society.

These latter reasons are particularly important for early-career scientists. Graduate school is often a lonely endeavor, and as students dive deeply into the minutiae of their thesis research, it can be easy to lose sight of why the research matters. Taking time for communication and outreach activities can reenergize students, helping them reignite their passion for research and reminding them why their work matters (Bartel et al., 2019).

Creating opportunities for science communication also directly aligns with the ASA goals to increase diversity in acoustics fields. More than 50% of STEM students of color say they want their work to advance positive social change (Block, 2020). Communicating research impacts is critical to enacting the social change that these students seek.

https://doi.org/10.1121/AT.2021.17.4.12

Science communication is increasingly expected by grant agencies, specifically, the National Science Foundation (NSF). NSF grants require a section on Broader Impacts, the benefit of the science to society. Broader Impacts are often centered on science communication and public engagement activities such as museum exhibit partnerships, public science talks, nontechnical website development, or presentations to policy makers (see nsf.gov). By communicating our science, we not only engage with diverse audiences but we can also increase funding for our work! The NSF-funded center on Advancing Research Impact in Society (see researchinsociety.org) is an excellent resource to learn more about creating meaningful and fundable Broader Impacts activities.

Trust Matters

Surveys demonstrate a positive view of science in the United States. Consistently, over 70% of Americans think that scientific research has a net positive benefit to society and scientists are generally viewed as trustworthy (National Science Board, 2018; American Academy of Arts & Sciences, 2020). Recently, that trust has increased. A Pew Research Center survey of over 10,000 adults in the United States found that public trust in scientists increased during the period spanning January 2019 to November 2020, likely as a result of the pandemic that has placed science in the center of public discourse.

However, this trust differs based on demographics such as race, education, and political affiliation (American Academy of Arts & Sciences, 2020). Trust is a key factor in the acceptance of scientific information, particularly trust in the communicator (Fiske and Dupree, 2014; American Academy of Arts & Sciences, 2020). As scientists, it is up to us to engender trust from our audience while being sensitive to the legitimate mistrust from historically marginalized groups. One of the best ways to promote trust is to communicate authentically, to show up as ourselves, and to share our experiences.

Audience and Goals

Although it is critical to understand our own motivations for communication, our communication should center on our audience. Often, the word "audience" brings to mind the old "sage on a stage" model of the scientist talking *at* people. Here, I use the term audience to describe our nontechnical communication *partners*, often thought of as "publics." I deliberately avoid the singular public because this term implies a monolithic other, a faceless sea of nonscientists at the opposite end of the room. Publics are diverse, and we need to understand their motivation, perspective, and values to engage in authentic communication activities. Are you talking to a group about a community science project on noise pollution in their neighborhood? This group may already be deeply concerned about the topic, so you don't need to convince them that noise pollution matters. Instead, they may want to learn about using a smartphone app to collect data on local noise levels or get involved crafting local noise ordinances. Talking to a group of music lovers about the history of guitars? Again, you likely have a self-selected group (barring the occasional friend or relative who was talked into attending!), so you don't need to convince the audience why your topic matters. In these examples, you already have interest; it is up to us to hold that interest.

For other audiences, we may need to convince them that our topic is interesting. Someone channel surfing the radio or TV isn't looking for science content, but if our story is interesting enough, these audiences might stop and listen. Enthusiasm is key in these situations. Ed Jahn, the executive editor for science and environment at Oregon Public Broadcasting (see opb.org), was once asked about his favorite piece for the TV program *Oregon Field Guide*. He instantly recalled an episode about lichens, plantlike symbiotes that artfully grace trees in the Pacific Northwest. Although lichens are interesting, the episode was memorable because of the scientist. She was engaging, funny, and excited about lichens! By bringing our authentic selves to our communication activities, we humanize science and create opportunities for nonscientists to engage with us on a personal level.

How do we learn about our audience so we can tailor our communication to meet their goals? In formal communication situations, like a media interview or a talk for the local Lions Club, the host is our best resource. Ask questions in advance such as length of the presentation or interview, level of interactivity expected, and audience background, values, and interests. I once gave a talk to the Humanists of Greater Portland, with a focus on how the ear works, how we lose our hearing, and how studies in animals like fish can help us understand hearing regeneration. After the talk I was bombarded with questions about hearing aids! Turns out the group was mostly senior citizens who were interested in assistive-listening

technologies. If I had asked more careful questions of my host, I would have been better prepared to address the core needs of this audience.

Not all communication is formal. Often, it is the casual conversations, those chance encounters that stimulate excitement for science and create lasting impact. As a graduate student, I was on a research trip in Florida and encountered a long wait for a table for dinner. Rather than staring blindly at my phone, I struck up a conversation with a mother and daughter nearby. When asked why I was in Florida, I excitedly explained that I was studying fish ears. Of course, this led to the usual question, "fish have ears?" Rather than giving a long, technical explanation of the physics of underwater sound and why fish don't need external ears, I instead reached in my purse and pulled out a small tube containing a pair of otoliths, fish ear stones. The little girl was so excited that I gave her those otoliths. I have always hoped that our brief meeting sparked a lifelong interest in science.

You don't need fish otoliths to spark up a conversation and potentially create change. I have had several engaging (and noisy!) conversations with bartenders at nightclubs when I take out my earplugs to place my order. On seeing the earplugs in my hand, the bartender will often remark about the noise levels, inviting a conversation. This is my chance. Thirty seconds to explain that noise levels in those clubs can cause permanent hearing damage and inexpensive earplugs are a great tool. Next time you are on a plane or at a live music event, take the time to talk to people around you. Shared experience is a great foundation for a brief science conversation. Are you an introvert who tends to avoid conversations with strangers? Talk to friends and family instead and empower them to help share your science. Post about your work on social media or start a blog. Or practice "playing extrovert." See **Where to Find Training** for resources on how to grow your communication skills.

Finally, we can build on shared experiences to encourage critical behavioral changes. During the pandemic, many scientists have become on-demand sources of information for our family and friends. We have been bombarded for explanations about RNA and questions on mask effectiveness, topics for which we may feel ill-prepared. These communication opportunities matter. Research shows that people are more likely to listen to and act on vaccine information from trusted sources like friends and family (Kirzinger et al., 2021). Although an expert on binaural hearing isn't a virologist, we are trained scientists with the expertise to read complex information, discriminate facts from misinformation, and help our loved ones understand the changing nature of scientific evidence during this trying time.

How Not to Communicate

By this point, you hopefully have a sense of the diversity of communication situations, and I suspect you intuitively know that you would explain your science differently to a sixth-grade science class versus a Congressional committee. Still, there are some common science communication misconceptions that hinder effective communication regardless of the audience.

When I lead science communication trainings, I often hear the statement, "I want to learn to *dumb down* my talks." The idea that we need to "dumb it down" creates an artificial barrier between us and our audience by setting us on a pedestal. Just because someone doesn't know the jargon of your specific field, that doesn't mean they are unintelligent. Think about another specialized field, like patent law or cybersecurity. I suspect that most ASA members would have trouble following the specialized jargon in these fields, and I think we consider ourselves to be a generally intelligent group. In your communication activities, I urge you to *use accessible language*, words and phrases that enhance communication to create a shared meaning.

Another common misconception is that science communication exists to increase public science literacy, specifically knowledge of science facts. This concept, called the deficit model, posits that nontechnical publics have a deficit in scientific knowledge and that the primary goal of science communication is to fill the deficit (Miller, 1983; Seethaler et al., 2019). The deficit model is intuitive for many scientists who consider themselves rationale and objective thinkers (Simis et al., 2016). If people only understood more scientific information, they would appreciate science and follow scientific recommendations, right? Not exactly.

A fascinating study showcases the importance of scientific interest rather than factual knowledge (Kahan et al., 2017). In the United States, there is a sharp political divide in the acceptance of human-caused climate change.

Among self-identified conservative Republicans, knowledge of scientific facts is negatively correlated with the acceptance of human-caused climate change, whereas liberal Democrats with scientific knowledge are more likely to agree that human activity causes climate change. However, the pattern shifts when researchers examined scientific curiosity. In this case, more scientific curiosity equated to greater acceptance of climate change *regardless of political affiliation*. Low-stakes topics like acoustic properties of unusual materials or the cocktail party effect are a great way to stimulate curiosity without bumping up against emotionally charged issues. In turn, this curiosity can increase receptivity to high-stakes scientific information in the future.

How to Communicate: A Few Basics

If we start from the assumptions that our audience is *not* dumb and that our job isn't to fill the hole in their brains labeled "scientific knowledge," how do we communicate? Here I briefly highlight a few points and tools. This is not an exhaustive list!

- *Be engaging.* Scientists are often seen as highly intelligent but cold. Show your human side, including your enthusiasm about your work. Talk not just about facts but about those "ah-hah" moments when your data suddenly made sense. Share the fascinating observation that reinspired you or the conversation that helped you think differently about your work.
- *Use metaphors to illustrate complex topics.* The concept of DNA as the genetic code is not completely accurate, but it is so useful that it is now part of the common vernacular. We commonly talk about sound as a wave. Use metaphors to bring that wave to life.
- *Favor concepts over details.* Most audiences won't appreciate the nuance of your acoustics equations. However, they can enjoy learning how you use those equations to solve everyday problems.
- *Lead with the "why?"* In scientific papers, we save the best part for last, the conclusion. Flip that model around and start with the take-home message and why it matters. Your audience wants to know WIIFM, What's In It For Me?
- *Respect your audience.* As I mentioned in **Audience and Goals**, our audience is intelligent, just unfamiliar with our jargon. Use positive and affirming language to demonstrate respect and help people lean into our message rather than tuning out.
- *Use audience-appropriate examples.* Pop-culture references are a great way to grab attention. Just be sure the reference fits the demographic; teens may not know classic rock songs or 1980s TV shows, whereas older audiences might miss a reference to Megan Thee Stallion.

The Message Box is a great tool designed specifically to help us prepare for science communication opportunities. Created by Nancy Baron at COMPASS, each Message Box begins with a specific audience in mind and centers on a single issue (see acousticstoday.org/messagebox) (see **Figure 1**). The Message Box starts by asking us to identify our audience for a specific communication situation (K-6 school group? Radio interview? City Council?). Then, we identify the general issue our work addresses and the specific problem we want to discuss with that exact audience. The Message Box then helps us define our solution to that problem, showcase the benefits of our solution, and highlight why our topic matters (the So What?). For example, the issue might be acoustic resonance of a building material used for bridge construction,

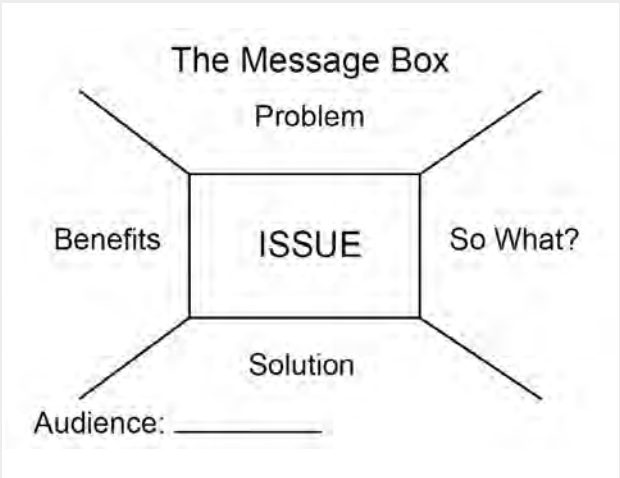

Figure 1. *The Message Box tool for planning science communication engagements. Each Message Box is tailored for a specific audience and communication scenario. The cue words in each part of the Box ask us to consider specific aspects of our message: problem, solution, immediate benefits, and the big picture "So What?" that lies at the heart of successful communication. The Message Box was developed by Nancy Baron. Visit the COMPASS website (compasscicomm.org) to learn more about the Message Box and see examples of how to apply this useful tool.*

Figure 2. *And, But, Therefore (ABT) examples for* The Wizard of Oz *(**top**) and my research on noise-induced hearing loss (**bottom**). **Red text** highlights the ABT transitions in each statement. "And" statements present background information, "But" identifies the gap in knowledge (or the plot twist for* The Wizard of Oz*), and "Therefore" tells the audience what action is needed and why. The background image for* The Wizard of Oz *shows Dorothy's shoes, a key element in her quest to return home. The background for the research example is a scanning electron micrograph of a lateral line organ from a larval zebrafish, which is the primary animal model used in my lab. Figure drawn from ideas in Olson, 2015.*

but the specific problem, solution, and other aspects of our communication will change depending on the audience. If we are presenting to the City Council, our goal might be to convince them to fund a bridge upgrade, so our solution is a specific building material and the benefits are about the wise use of taxpayer money and a safer commute for local residents (the So What). For a school group, we would focus less on bridge safety (don't scare the kids!) and instead more on our thought process and how we approach solving real-world problems. The COMPASS website offers excellent examples of how to apply the Message Box to different communication scenarios (compassscicomm.org/examples).

Another personal favorite is the And, But, Therefore (ABT) tool developed by Olson (2015). In scientific presentations, we often use an "And, And, And" format (and we found this, and this, and this) that leads to an early rush for the coffee break at a conference. The ABT challenges us to place our work in context. We know this and this but here's what we don't know. Therefore, here's how we found something out (or will find something out; try this technique for your next grant proposal!). The ABT method forces us to consider not just what we already know (the facts and context of our work), but why we do the research, the gaps in knowledge and how we fill in those gaps. This method is great for demonstrating the scientific process in action; we have an observation (And), then we formulate a hypothesis to explain that observation (But), and we perform an experiment to test our hypothesis (Therefore).

The ABT works equally well for classic Hollywood stories as it does for science. **Figure 2** shows two ABT statements one example from *The Wizard of Oz* and one example from my own research that I use in my workshops.

Tell a Story

Storytelling is such a fundamental tenant of communication that I wanted to highlight it separately. Stories are "facts wrapped in emotions" (Joubert et al., 2019). By tapping into emotions in a narrative, our audience is more likely to remember the facts. Stories are also an excellent persuasive tool; we can use narrative elements to weave facts into personal experiences and help convince our listeners to accept a scientific idea or take a particular course of action (Green et al., 2018). A story contains the fundamental elements of characters, a plot, and a setting and uses the classic story arch with a rising action (we needed to solve the scientific puzzle or find the missing equipment), a climax, and a resolution (see **Figure 3**). Stories are highly effective when we weave them into a longer talk: brief vignettes to highlight a point and provide a real-world view of our scientific experiences. The ABT method is another way of thinking about a story; "And" is the plot and setting, "But" is the rising action (the plot twist), and "Therefore" is the climax.

Stories are a great way to share the excitement of science and inspire the next generation. K-12 teachers are often looking for scientists to come to their classes and talk about what we do. These are amazing opportunities, particularly for students, to show that scientists come from diverse backgrounds and experiences. In a classroom, stories are paramount. How did you first get interested in your field? What successes and failures have you encountered during your career?

When I give talks to high-school groups, I often share that I didn't get into grad school the first time I applied. This apparent failure is a pivotal moment in my own scientific story; I wasn't admitted to the programs I thought I wanted but instead discovered Art Popper's research and joined his lab for my PhD, changing the direction of my research career. Talk to your local school teachers about opportunities to share your science story or volunteer with Skype a Scientist to connect with students around the world (see skypeascientist.com).

A Note About Slides

Not all talks need slides. I'll say that again, not all talks need slides! As scientists, our instinct is often to launch PowerPoint, Keynote, or our other favorite slide software and immediately start pulling up old talks, rearranging slides, and creating new ones.

Instead, just like we should tailor our presentation to the needs of our audience, we should design any visual aids with that specific audience in mind. Sometimes, it is best to leave the visuals out entirely and just tell a story. As a graduate student, I attended an evening talk by Jelle Atema about prehistoric flutes (see Atema, 2014, in *Acoustics Today*). Atema showed us different bone flutes and then played them. I still remember this talk years later for the haunting notes of each instrument and the unique stories he shared about how he discovered ways to play the ancient instruments.

I am not saying we should never use slides; they are great visual aids for the right opportunity. For example, giving a Science Café talk about ultrasonic communication by mammals (see the *Acoustics Today* article by Kruger et al., 2021)? In that case, you'll want a few slides with pictures of those mammals or, better yet, embedded videos showing mice or bats engaged in acoustic communication behaviors. Talking to senior citizens about hearing aid technology? Your slides could show basic diagrams of some different technologies and cost comparisons to aid consumers.

If you choose to use slides, I highly recommend showing them to the event organizers or a nonspecialist friend to check the clarity and ease of understanding. As scientists, we are accustomed to taking in large amounts of information through complicated graphs. For nonspecialist audiences, graphs can sometimes reduce clarity rather than increasing it. A simple bar chart with two or three bars can be a great way to make a point but a graph overlaying audiograms of several species can get confusing. And please, don't use a table. Tables are great for technical publications but, in my opinion, have no place in a talk. Not even a conference talk. You can argue this point with me later.

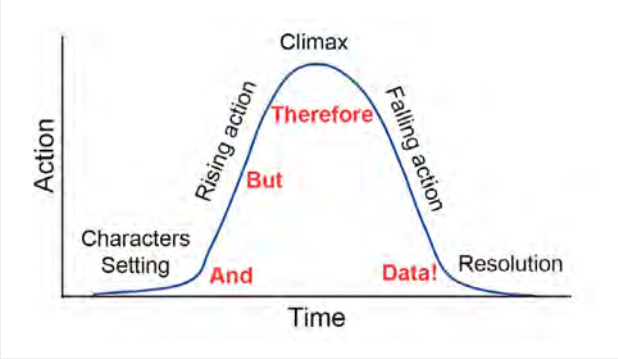

Figure 3. *Classic story arc. In the beginning of a story, we describe the setting and characters. Then the action starts, rising toward a climax. Finally, the issue e.g., (quest, need for data) is resolved.* ***Red words*** *show how Olson's (2015) ABT concept (see* ***Figure 2****) applies within a story framework.*

Where to Find Training

An increasing number of US universities now offer science communication training. For example, some universities have courses specifically for graduate students, whereas others hold in-house workshops or offer science communication certificates or degrees. Courses and certificates are generally geared for graduate students, but faculty can also benefit from workshops and may find them a welcome break from endless meetings! Universities without internal training programs can hire professionals from organizations such as the Alan Alda Center for Communicating Science (see aldacenter.org), AAAS (see aaas.org), or COMPASS (see compasscicomm.org) to lead training events. The Scicomm Trainers Network (see

sctn.online) also offers a dispersed group of experienced science communicators for virtual or on-campus training.

Many scientific societies such as the Society for Neuroscience (see sfn.org), the American Geophysical Union (see agu.org), and the Association for Research in Otolaryngology (see aro.org) hold science communication workshops as part of their annual conferences or offer online classes throughout the year. The Portal to the Public program (see bit.ly/3jNFTEh) offers training and outreach opportunities at science museums around the country; this program is also a great fit for the Broader Impacts component of an NSF grant.

Creative scientists can also tap local communication resources. I started my communication journey by joining a Toastmasters club (see toastmasters.org). Community colleges and universities offer public speaking courses. Local theater groups offer opportunities to practice communication skills through improvisational theater classes. These classes may seem scary, but after fumbling your way through a scene using the words "hang gliding" and "golden retriever" as your only cues, imagine your confidence when you tackle a talk about your area of expertise! Challenge yourself to try a communication experience outside of science, then use your new skills and confidence in your science communication activities.

Finally, there are many organizations that cater to specific subsets of science communicators. Students can join communities such as ComSciCon (see comscicon.com) or SciCommers (see acousticstoday.org/scicommers) to connect with other early-career scientists. Another resource is Science Talk, the professional society for science communicators, which hosts an annual conference and year-round online courses and activities. Many regions also offer local science communication groups, such as the Science Communicators of North Carolina (see sconc.org) or the Capital Science Communicators in Sacramento, California (see capscicomm.org). These independent resources complement formal training programs to create a holistic environment.

Last Words About Science Communication

Science communication isn't just about engaging with nontechnical audiences. Let's respect our fellow scientists and put our communication skills to use in our conference and departmental presentations. I am not saying that we use the same language for our peers as we would for a school group; jargon has a place when we all understand the meaning. However, technical talks are often given without enthusiasm or humanity. We did the work; if we aren't excited about it, why should our audience care? I once had a colleague (I will not mention names) who threatened to give an ASA meeting talk about whale bioacoustics entirely using whale song rather than human speech. I don't recommend this approach, but he had an unusual idea to grab his audience's attention! There are stories behind our science; maybe you had a unique encounter with a bear while trying to record birdsong in Alaska or met a multilingual research subject with a fascinating personal story. At the next ASA meeting, try injecting more of your personality and enthusiasm into your talk.

My hope is that this article is the start of a conversation as we each explore new ways to bring acoustics to life and communicate authentically. Share your experiences and not just your success! Tweet out your science communication experiences using #AcousticSciComm to join the conversation. For further information about science communication, read the essays in *Acoustics Today* by Jones (2017, 2020, 2021) and Piacsek (2020).

Acknowledgments

Thanks to Tamasen Hayward for her expert editing of this article.

References

American Academy of Arts & Sciences (2020). *The Public Face of Science in America: Priorities for the Future.* American Academy of Arts & Sciences, Cambridge, MA.

Atema, J. (2014). Musical origins and the stone age evolution of flutes. *Acoustics Today* 10(3), 26-34.

Bartel, B., Agopian, M., and Bohon, W. (2019). The unexpected benefits of science communication training. *Eos* 100. Available at https://acousticstoday.org/eos-sci-comm.

Block, D. (2020). Why STEM needs to focus on social justice. *Washington Monthly*. Available at https://acousticstoday.org/stem-social-justice.

Burns, T. W., O'Connor, D. J., and Stocklmayer, S. M. (2003). Science communication: A contemporary definition. *Public Understanding of Science* 12, 183-202.

Fiske, S. T., and Dupree, C. (2014). Gaining trust as well as respect in communicating to motivated audiences about scientific topics. *Proceedings of the National Academy of Sciences of the United States of America* 111(Suppl. 4), 13593-13597.

Green, S. J., Grorud-Colvert, K., and Mannix, H. (2018). Uniting science and stories: Perspectives on the value of storytelling for communicating science. *FACETS* 3, 164-173.

Jones, L. K. (2017). ASA education and outreach program. *Acoustics Today* 13(4) , 69-71. Available at https://acousticstoday.org/asa-ed-outreach.

Jones, L. K. (2020). Science communication training. *Acoustics Today* 16(1), 73-74. Available at https://doi.org/10.1121/AT.2020.16.1.73.

Jones, L. K. (2021). ASA outreach in an online world. *Acoustics Today* 17(2), 73-74. Available at https://doi.org/10.1121/AT.2021.17.2.73.
Joubert, M., Davis, L., and Metcalfe, J. (2019). Storytelling: The soul of science communication. *Journal of Science Communication* 18(5), E1-E5.
Kahan, D. M., Landrum, A., Carpenter, K., Helft, L., and Jamieson, K. H. (2017). Science curiosity and political information processing. *Political Psychology* 38, 179-199.
Kirzinger, A., Sparks, G., and Brodie, M. (2021). KFF COVID-19 vaccine monitor: In their own words, six months later. *Kaiser Family Foundation*. Available at https://acousticstoday.org/kff-covid-19.
Kruger, M. C., Sabourin, C. J., Levine, A. T., and Lomber, S. G. (2021). Ultrasonic hearing in cats and other terrestrial mammals. *Acoustics Today* 17(1), 18-25.
Miller, J. D. (1983). Scientific literacy: A conceptual and empirical review. *Daedalus* 112(2), 29-48.
National Academies of Sciences, Engineering, and Medicine (2017). *Communicating Science Effectively: A Research Agenda.* National Academies Press, Washington, DC.
National Science Board (2018). *Science and Engineering Indicators* 2018. NSB-2018-1, National Science Foundation, Alexandria, VA.
Olson, R. (2015). *Houston, We Have a Narrative: Why Science Needs Story*. University of Chicago Press, Chicago, IL.
Piacsek, A. (2020). Communicating your research to journalists (and your relatives). *Acoustics Today* 15(3), 80-83.
Seethaler, S., Evans, J.H., Gere, C., and Rajagopalan, R. M. (2019). Science, values, and science communication: Competencies for pushing beyond the deficit model. *Science Communication* 41(3), 378-388.
Simis, M. J., Madden, H., Cacciatore, M. A., and Yeo, S. K. (2016). The lure of rationality: Why does the deficit model persist in science communication? *Public Understanding of Science* 25(4), 400-414.

About the Author

Allison B. Coffin
Allison.coffin@wsu.edu
Department of Integrative Physiology and Neuroscience
14204 NE Salmon Creek Avenue
Washington State University Vancouver
Vancouver, Washington 98686, USA

Allison B. Coffin is an associate professor of neuroscience at Washington State University Vancouver, Vancouver. Her research interests include cell signaling regulation of hearing loss and regeneration and hormonal modulation of auditory plasticity. She earned her BS in marine biology at Florida Tech, Melbourne; her MS in fisheries at the University of Minnesota, St. Paul; and her PhD in biology at the University of Maryland, College Park. She is the coeditor in chief of the *Springer Handbook of Auditory Research* series and a passionate science communicator and communication trainer. In 2017, she cofounded Science Talk, the science communication professional society, where she serves as the president.