From the Editor

Arthur N. Popper

As you have no doubt heard, D. Keith Wilson will be the new editor of *Acoustics Today* (*AT*) starting January 1, 2025. I am a bit saddened to be giving up the magazine but delighted that we could entice Keith to take over. He has written several excellent articles for *AT* (e.g., see bit.ly/3W7SlSn) and has a broad understanding of acoustics and a strong devotion to the Acoustical Society of America (ASA).

As for my plans, I'm still cogitating. I was thinking of fully retiring, (e.g., stop all research, editing, writing) and look for new things to explore. But when I shared this idea with my family, and particularly with our grandkids, the laughter and disbelief was rather raucous. And the truth is, I still enjoy ties to science and colleagues, and so while I will slow down and do other things, I'm still planning on keeping my hand on several projects. And I've promised Keith that I'd be around to share experiences as he gets involved with *AT*, and if he wants.

Serendipity in Acoustics

Before I talk about this issue of *AT*, I want to mention that the next issue is going to be rather different, and I hope, quite interesting and fun. One of the ideas I've been most intrigued with in my career is serendipity, how things just happen in life. And I've particularly been intrigued with how you recognize a serendipitous event, and how following up on it can lead to whole new directions in your scholarly and personal lives. Just think about it; how many times in your life, from a very young age, did something unexpected happened that, because you recognized it, changed your life path?

Just to give one example to get you thinking about serendipity. One day, while in my third year in college, I walked into a new pet store in my neighborhood and wandered among the fish tanks. I "discovered" a tank of fish that had no eyes. They were Mexican blind cave fish (see bit.ly/4bXYHtx). I was totally fascinated. Seeing these fish was a serendipitous moment for me, particularly since once I started to think about them, I could not get them out of my mind.

As soon as I got to campus (the now-defunct Heights Campus of New York University, Bronx, New York), I walked into the office of my undergraduate mentor, a biologist by the name of Douglas Webster and asked if he knew anything about the fish. Doug (we later became good friends and even published a book together) said he'd not heard of these fish, but he suggested that I do some research about them, and he offered me a place in his laboratory to do that work. Had I not serendipitously seen those fish, my whole life from that day on would likely have been very different!

But the influence of that serendipitous moment went on. Because of doing work on Mexican blind cave fish, Doug introduced me to the curator of ichthyology at the American Museum of Natural History, New York, New York, who then offered me a part-time research job in the department. One day while working in the laboratory, I was visited by another curator who was interested in a parrotfish I was working on. He did a brief dissection and showed me a dense structure in the head called the otolith, and he told me that it was part of the ear.

And that serendipitous encounter with a fish ear let me to discover Willian N. Tavolga, a faculty member just three floors above where I worked. Tavolga was a pioneer in the study of fish hearing, and when we discussed a research project for my doctoral work, we had the idea that my Mexican blind cave fish would be perfect subjects!

I tell this story as a prelude to our winter issue. Perhaps, as you read of my serendipitous moment (and I have had many more), you will start to think about how serendipity has impacted your career and how many times this has taken place. But keep in mind that serendipity impacted your nonscholarly life as well — perhaps how you picked your college, how you met your spouse, how you found your first job, and even how you moved forward in your career! Indeed, serendipity is a fascinating, and critical, part of the paths of our lives.

This Issue

This issue of *AT* has five articles, and although I did not ask the authors, I would "bet" that any number would agree that various serendipitous events in their lives led to the work that they write about.

In our first article, Philip Blom and Jordan Bishop introduce us to infrasound and its role in detecting nuclear testing. The article focuses on the history of using infrasound in monitoring nuclear tests but also shares insights into some of the difficulties of doing this (and solutions to problems) as nuclear testing has changed. Related articles are found at bit.ly/3xY6KIT.

Going to the other extreme in the size of sound waves, Matthew R. Lowerison, YiRang Shin, and Pengfei Song share insights into the use of ultrasound in the imaging of microvessels in humans. They point out that understanding the flow of blood in these very tiny parts of the circulatory system provides invaluable insights into the monitoring and treatment of a wide range of diseases from cancer to dementia. See bit.ly/AT-ultrasound for other articles on use of ultrasound in medicine.

Our third article moves from using sound to listening for it to understand the behavior of dolphins and whales. Here, Eduardo Mercado III describes many cetacean sounds. But he goes well beyond simple description and considers the perceptual world of these animals from communication to echolocation. Related articles are at bit.ly/ATC-Bioacoustics.

Over my years as editor of *AT*, we have had a few articles that considered sound in other parts of the solar system and universe (see bit.ly/3Wr8V0S). In this issue, David Mimoun, Ralph Lorenz, and Sylvestre Maurice take us onboard a Mars lander to learn about, and actually hear, the sounds of the Red Planet. Although many of our articles include sounds, I don't often encourage readers to make sure to listen to them, but in this case, hearing the sounds of another planet is "something else."

In our last article, we return to the use of ultrasound in medicine when Natasha D. Sheybani introduces us to the use of sound for cancer therapy. Although this article focuses on ultrasound, it also gives a broad introduction to a variety of cancer treatments and shows how ultrasound is becoming an important tool in fighting disease. Other articles on biomedical uses of ultrasound are at bit.ly/AT-ultrasound.

This is followed by my last Conversation with a Colleague (CwC) essay, and features Michael R. Haberman, a long-time contributor to *AT*. Of course, CwC has been developed and edited by our associate editor, Micheal L. Dent. Over the past 10 issues of *AT*, we have tried to feature one member of ASA from as many Technical Committees (TCs) as we could. Micheal and I thank not only the authors, but also the TC chairs who have guided us in selecting colleagues to invite to participate. You can see the complete CwC series at bit.ly/AT-CwC. (And to learn about other ASA members, see bit.ly/3FjTCeL.)

There is a growing interest in the archives of biological sounds on the web. In his essay, Jack Greenhalgh gives a perspective on these archives and includes a table that gives links to 14 such archives. I particularly appreciate Jack pulling together this listing because the original intent of his essay was to focus on an archive on freshwater fishes that he works on, I suspect that this essay will be of greatest interest to a very wide range of scholars and students.

Our final "Sound Perspective" essay is another in our series from the ASA Student Council. The essay, by Marissa L. Garcia, focuses on student researchers who won awards at the 2023 Sydney meeting. You can see many other interesting essays about students at bit.ly/ATC-Students.