

When research goes viral

June 8 2015, by Heidi Appel



Credit: AI-generated image (disclaimer)

We researchers all wonder whether reaching a broader audience for our academic work is worth the time and effort. Here's a recent experience that may help you decide.

On July 1 2014 I published a paper with Rex Cocroft showing that <u>plants</u> <u>can identify vibrations</u> caused by caterpillar chewing and respond with increased chemical defense. That day, The New York Times <u>carried the</u>



story online; five days later a <u>feature length story</u> about our research appeared in the Washington Post; and a week later I <u>did an interview</u> with Robert Siegel on National Public Radio's All Things Considered.

The story quickly developed a life of its own, getting picked up by <u>newspapers</u> internationally and by major <u>online-only media outlets</u>. Even Rush Limbaugh covered it (more on that later). When National Geographic put <u>the story</u> on their Facebook page July 10, it accumulated over 12,000 likes in four days. Within a month, over 4,300 media outlets had carried the story.

What happened to make this story go so far?

1. Our subject has broad public appeal

Plants are perennially underestimated by humans. They're largely immobile and most of their behavior is invisibly chemical. When plants are shown to have complex responses to their environment, we are surprised. Even delighted. The 1973 publication of Tompkins and Bird's <u>The Secret Life of Plants</u> captured the public imagination with its reports of plants responding with human-like emotions. Although most of the research reported in the book has been discredited, its popularity reflected the public's interest in botanical similes of their own experience.

This presented Rex and me with both an opportunity and a challenge – do we ignore the analogy with human senses or address it upfront in the news release to control the message? Do plants "distinguish among vibrational signals" or do they "hear"? We <u>chose the latter</u>.





The author sitting down for her n-teenth interview. Credit: Roger Meissen, CC BY

2. A little science communication training goes a long way

Twenty years of teaching science to honors students – science majors and not – has provided me with great experience in explaining science concepts well, but it was no preparation for the simplification required for the news media. At a 2013 <u>Becoming the Messenger workshop</u> offered by the National Science Foundation, I gained experience and some confidence in describing my research to the general public. At several symposia on <u>Science Communication</u> at the AAAS Annual



Meeting in 2014, I learned tips for communicating with the public and, perhaps most importantly, I listened to science news reporters describe how they find their stories.

3. My institution encourages explaining research to the public

The <u>Bond Life Sciences Center</u> at the University of Missouri has its own media team that develops news releases with video content and serves as a liaison between the center's scientists and the great <u>science news</u> writers at the Mizzou News Bureau. It also hosts a program to cross-train life science undergraduates and journalism students, communication workshops for faculty, and science lectures and symposia for the general public. In total, these things provided a basic understanding of the news landscape, news cycle and best practices in interacting with journalists and the public.

4. It pays to be proactive in promoting a story

At the AAAS meeting, science reporters said that they get their stories mostly from personal contacts and not from the hundreds of university news releases filling their in-boxes daily. So I emailed a brief description of our research with the subject line "plants can hear" to a New York Times reporter. I received a reply in a couple hours, and did a phone interview the next day for the Observatory Column in the Tuesday Science Section.

It was at this stage that I made a mistake in the process misunderstanding the journal's embargo date. These dates exist to coordinate news coverage closely with the publication of a paper, and the journal had told me they were hoping for a publication date of July 1. In my mind, I turned this into the definite publication date, which resulted



in frantic emails with the journal when I learned that they weren't ready to post the article July 1. On the evening of June 30, I emailed the Times reporter asking to hold the story, and went to sleep that night not knowing whether I'd violated an embargo date. (Reporters are careful to observe embargoes as well.) Relieved to find no mention of the work online the next morning, I heard from the journal midmorning that a big push by the production staff had gotten the publication online, and the Times posted it a little later that day. Whew.

5. Devote time to the interview requests

This meant not only answering all requests for interviews, but answering them within a few hours. The contemporary news cycle means that significant delays in response – a day or more – can turn your newsworthy work into no news, depending on the media outlet. Often the interviews themselves could be scheduled a day or two out, or accomplished by email. Rex and I decided from the beginning to do all interviews together if possible, initially because of our complementary expertise and later because it was simply more interesting. All but NPR obliged, and as time went on we learned the necessary depth of each other's work and found ourselves finishing each other's sentences and even answering what had previously been questions directed to the other. Interviews became fun exchanges with each other and the journalist.

I'd do it all again

Were there downsides to all of this media attention? Of course. The significance of the research was taken in unexpected directions. The enhanced sensory ability of plants was used by ardent carnivores to counter what they see as the self-righteousness of vegans ("<u>Nice Try,</u> <u>Vegans</u>"). Unfortunately, this is the context in which Rush Limbaugh weighed in with "Some wacko scientist claims that certain plants maybe



know and feel when a caterpillar is eating them," soon followed by "I don't have time to read it." Sigh. More important, though, we spent a lot of time doing dozens of phone and email interviews on short notice, and made multiple trips across campus to the studio of our university radio station.

Was it worth it? You bet. My research is now more widely known in academic circles than it was before, and the media attention has <u>opened</u> <u>up</u> new professional opportunities and collaborations, <u>as predicted</u>. If there was an undertow of damage to my academic reputation due to receiving the media attention, I haven't felt it yet. Capturing the public's imagination with a <u>research</u> story was immensely gratifying because it broadens their appreciation of what scientists do. It was also great fun.

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