

By C. Neal Stewart Jr.

Songwriting and science

Each week, articles in *Science* and friends in science-related careers remind me how competitive the grant and paper scenes have gotten. One National Science Foundation (NSF) panelist, for example, recently told me that the panel's funding rate in the last competition was 3%. I don't need these reminders; my own steady diet of rejections from prospective funders and journal editors keeps the message vivid and personal.

So 3 years ago, when I rebooted my songwriting "career" after a 30-year hiatus, I felt battle-hardened enough to think big. Not only did I dive right into writing and recording my songs, but I became enamored with breaking into the Nashville market as a songwriter. I naively thought that my songs were at least as good as what I heard on country radio, and on my most optimistic days, I judged my tunes better than average. Certainly, I reasoned, my experience with rejection in science would steel my resolve to get my songs recorded by the latest country stars.

What I didn't realize then was that rejection in science is nothing compared to the Fort Knox-like exclusion that the Nashville fortress foists on newcomer-wannabes. I gained an appreciation for NSF: At least it reviews my grant proposals and tells me if I win or lose. The agency even gives me feedback. In contrast, the music industry is a sort of black hole where songs disappear forever. I haven't been totally unsuccessful; I've had a few cuts on small record labels. But between the minor triumphs, it's discouraging not knowing the outcome of a pitch most of the time and not hearing from publishers and producers—the reviewers—about how I can improve a song. Science is much kinder than the music business in this regard.

Pitching songs, however, has taught me a few practical lessons about pitching papers and grant proposals:

You have to tell your story in 3 minutes. If the paper or proposal (or song) doesn't grab the audience's attention pretty quickly, it won't be a hit. This is especially true for grant proposals: If the first page doesn't compel the reviewer's interest in 3 minutes, the proposal is toast.

You need a memorable hook. In a song, the hook is the phrase or melodic line that the listener hums and sings in the shower. A science story also needs a memorable hook that relays a simplified message about why a piece of science is important.



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minutes, but most songs are rewritten several times. The same should be true for papers and grant proposals. When I'm reviewing proposals, it's usually obvious when the principal investigator thinks he's Jimmy Buffett. Most hits are the product of close examination and rewriting.

Finally, in music, it goes without saying that the most successful songs are those that people like the most. It's less obvious in science, but it's equally true. I now pay more attention to which papers are cited most and which talks my audiences react best to. It helps to know what works and what doesn't.

I don't plan to give up my day job anytime soon, but I also don't intend to give up songwriting. It has been good for my soul as well as my science. ■

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Keep it fresh. Most hit songs have predictable structure but include surprises and interesting turns. Similarly, the best papers are well structured but include unexpected and novel results.

Don't go solo. Although I would like to think I can do all the songwriting, playing, and singing to express a song in a pitch, for me that is almost never the right decision. Most hit songs have two or more co-writers, and the demos are played by extraordinarily fine musicians. In science, collaborators bring unique expertise and make a project stronger. Science and commercial music are both so competitive that the right team is needed to produce winners.

Inspiration isn't everything. Supposedly, Jimmy Buffett wrote most of "Margaritaville" in a few

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