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National Association of Science Writers, Inc.

Spring 2012

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Editor
Lynne Friedmann

Editorial Board
Robert Lee Hotz
Paul Raeburn
Deborah Blum

Proofreader
Judith Schwartz

Design
Carol Kerr Graphic Design
www.carolkerr.com

Advertising
Tinsley Davis
510-647-9500
director@nasw.org

NASW Policy
Nancy Shute
nancy@nancyshute.com

Editorial Submissions
Lynne Friedmann
P.O. Box 1725
Solana Beach, CA 92075
editor@nasw.org

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NATIONAL ASSOCIATION OF SCIENCEWRITERS™
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P.O. Box 7905
Berkeley, CA 94707
Phone 510-647-9500
www.nasw.org

Executive Director
Tinsley Davis
director@nasw.org

President
Nancy Shute
Freelance

Vice President
Peggy Girshman
Kaiser Health News

Treasurer
Ron Winslow
Wall Street Journal

Secretary
Beryl Lieff Benderly
Freelance

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From The Editor

My goal for every issue of ScienceWriters *is to provide NASW members with information and resources that they might not otherwise come across in their reading and/or online viewing.*

Meeting this goal means constantly selecting, scouring, and scanning myriad sources in a systematic and methodical process.

And then, there is serendipity.

At a luncheon honoring this year's AAAS Kavli Science Journalism Award recipients, a single sentence uttered by Children's Science News winner Jeanne Miller caught my attention. She credited Children's Writer's Word Book *as being invaluable in her writing.*

This led to a discussion at a social event that evening, which led to her contributing a book write-up (page 12) and a new volume added to my reference library.

Wishing you productive writing days ahead and satisfying moments of serendipity. ■

Lynne Friedmann

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FRIEDMANN COURTESY OF KEN JACQUES

Their So-Called Journalism, *or* What I Saw at the Women's Mags

by Hillary Rosner

I've been needing to get this out in the open since the excellent Science Online 2012 session that Maryn McKenna and Elizabeth Devita-Raeburn organized, on writing about science for women's magazines.

A few years back, I went to Borneo to report on efforts to save the rainforest there, which people are hacking and burning into oblivion in the mad quest to grow oil palm trees. In the process, they're obliterating wildlife—including the orangutan, which is sliding toward extinction. Palm oil is ubiquitous in American life. It's in all sorts of processed foods—Oreos, Reese's Peanut Butter Cups, Ritz crackers, margarine—as well as soaps, make-up, and many other beauty products.

One destination on my Borneo trip was an orangutan sanctuary run by an incredible Danish woman, who was passionate and unflappable and very photogenic. Maybe, I thought, I could interest a women's magazine in a short profile of this woman, as a way to inform readers about the palm oil problem—which, despite sporadic publicity over the years, very few people seem to know about or understand. So I contacted a friend of a friend, a smart and lovely editor at a high-profile women's magazine that from time to time runs articles about strong women doing worthwhile work. Her reply was quick, honest, and upsetting: The magazine couldn't tackle the palm oil issue head on, because half its advertisers were beauty companies guilty of destroying the very same forests my Danish woman was trying to save.

Collectively, women's magazines—by which I mean the whole field, from fashion titles like *Vogue* and *Elle* to health publications like *Self* and *Women's Health* to the more general sex-and-diet-tips mags like *Glamour* or *Cosmopolitan* (does that even still exist?)—reach millions upon millions of readers each month. So the lack of willingness to cover globally important topics is dismaying. It's a colossal missed opportunity. That's why I was heartened to hear some success tales of writing about science for women's magazines, at the *Science* online session. Maryn and Elizabeth write frequently for women's mags and had largely positive experiences to share. I know enough about Maryn to know that she's a serious, sharp, ethical reporter. (I'm not familiar with Elizabeth's work, but I assume the same is true.) So clearly there's some solid journalism getting out there via women's mags.

But there are also some serious institutional problems, and these can lead to 1) lack of coverage of important topics, 2) less-than-completely-truthful coverage of important topics, and 3) complete and utter bullshit coverage of important topics. My experiences working for women's mags have been incredibly frustrating and disheartening—and I've long wanted to share them publicly but haven't, for fear of alienating potential clients. The absurdity of this is a testament to the tough economics of freelancing. Few experiences are so bad that we won't accept a lucrative repeat assignment when it's dangled in front of us. But as I started thinking back on some of my horror tales, spurred by the Science Online session, I realized I no longer give a shit. I feel like this stuff needs to air out.

A couple of years ago, with the economy tanking and magazine budgets going the way of orangutans, an editor at a women's magazine called me with an assignment. I'd already sworn off these mags forever after my last debacle but, as I was in no position to turn down $5,000 or whatever it was, I agreed. Anyway, this editor insisted that this was to be a serious science story (albeit written in the publication's from-one-girlfriend-to-another voice), for which I should conduct many interviews and extensively scan the literature. So I did.

It soon became clear that the editor had had a specific thesis in mind from the start, one that wasn't borne out by the research. Then one day I got an email saying the story was going to press that day, and could

…the lack of willingness to cover globally important topics is dismaying. It's a colossal missed opportunity.

Hilary Rosner is a freelance journalist specializing in science and the environment, and a 2012 Alicia Patterson Fellow.

I please give it one last read to make sure it was okay. I was confused, as I hadn't been contacted by any fact-checkers. But upon reading it, I noticed a few instances in which scientists' quotes had been altered. The points they made were roughly the same, but the words simply weren't theirs.

That's not okay in serious journalism. When I asked the editor, she said the quotes had been tweaked for clarity, and that I shouldn't worry—that a fact-checker would read the quotes back to the scientists, and if the scientists weren't happy with the way they sounded, they could change their wording. Setting aside the ethics of this, I felt concerned for my own reputation. If I interviewed you, and then someone read you back your supposed quote, you would likely recognize immediately that the words weren't yours. And your immediate thought would be that I misquoted you, and am therefore a shoddy journalist. And you would rightfully decide not to speak to me again, and possibly tell your colleagues to do the same. As a freelance journalist, my reputation for professional integrity is paramount; take it away, and I'm just some girl with a laptop who likes to ask questions.

...I noticed a few instances in which scientists' quotes had been altered. The points they made were roughly the same, but the words simply weren't theirs.

The editor and I had an email argument, I left her a voicemail, she never replied, and that was that; in the end, I think we just stopped communicating. I never saw the final version of the story and I tried to move on with other work and forget about it. A few months later, after the check came, I saw the magazine on the newsstand. I picked it up, saw my article in the table of contents, and put it back without reading it. I have no idea of the editor worked in her own spurious thesis, or what the researchers "said" in their quotes.

This was only the last of a string of bad scenes, though. I was told multiple times by editors at another women's mag to feed a source a quote—as in, "Can you call this source back and see if they'll make this specific point in these exact words?" These were stories about health, in a magazine women turn to for actual, truthful, information. (I refused.)

Years ago, another women's mag so badly mangled a story I'd done for them on young breast cancer survivors that one of the interviewees called me in tears. I hadn't yet seen the printed article, which had been cut down—without my knowledge—from a feature of several thousand words to a quarter page of little more than a "chartricle," featuring four of the eight women I'd profiled, with nothing other than a thumbnail photo, a single quote, and their name, age, and how they'd learned of their illness.

And yet, the magazine had even bungled that. The tearful woman calling me was devastated because the magazine had completely altered the facts about how she'd discovered a lump in her breast.

I dialed my editor in despair, and she blamed it on the fact-checker.

This same story had begun with instructions to find a dozen breast cancer survivors under 35 who might be good candidates to profile, from which the editors would select the ones they wanted. Presumably, I thought, they'd select the women with the most interesting or relatable stories. After I sent the list to my editor, she told me to go back and ask each woman to send a photo. Like, a headshot. Because, I don't know, stories about unattractive cancer survivors don't sell?

I could go on, but remembering all this has made me need some bourbon. I'll just mention one more very quick thing, which is that for the first women's magazine story I ever wrote, the editor told me outright that if I couldn't find anyone who'd 'fess up to the behavior that was supposed to be a trend (the whole point of the story), I was free to invent characters. For the record, I did not. And the story never ran because the real people I talked to just weren't outrageous enough. (This wasn't a science or health story, but nonetheless.)

I know that there are amazing and talented editors at these magazines who would love to publish an expose on palm oil or a profile of a 27-year-old breast cancer survivor who doesn't look like a supermodel. But often their hands are tied—whether by advertisers or the institutional structure or the status quo. I think women who shell out hard-earned money to buy these magazines deserve better. They at least need to know that much of what they're reading isn't entirely true.

Or maybe I'm being naïve? Maybe the readers all know this already, and I'm the rube who's clinging to some goody-two-shoes rules. One thing seems clear, in any case: I probably won't be offered any more assignments by women's magazines. ■

"Their So-Called Journalism, or What I Saw at the Women's Mags," PLoS Blog, posted Feb. 9, 2012.

In the Eye of the Storm, Two Rivals, Two Strategies

BY MARTIN ENSERINK

The two influenza researchers whose work has triggered a far-reaching debate on the limits of scientific freedom could hardly have handled their publicity more differently.

Ron Fouchier, who has a paper under review in *Science*, welcomed reporters to his lab at Erasmus MC in Rotterdam last month, donned a lab coat for the cameras, and helped the center's spokespeople prepare statements in Dutch and English on why he created what he believes to be a virus with the potential to cause a pandemic and why the full details of the study should be published. He landed on the front page of the *New York Times*, was attacked by bloggers, and news anchors mangled his name. (It's foo-SHAY.) But Fouchier had a point to make: He had nothing to hide.

Yoshihiro Kawaoka, meanwhile, appeared to be in hiding. He didn't, as reporters say, respond to multiple requests for comment, including for this story; it was hard to know whether he was at his lab at the University of Wisconsin (UW), Madison, where his H5N1 study now under review at *Nature* was done, or at the University of Tokyo's Institute of Medical Science, where he has an appointment as well. As a result, he literally managed to stay out of the picture. News stories focused on Fouchier; many didn't even mention Kawaoka.

Some scientists say that may reflect different personalities and backgrounds. Fouchier is known to be open and direct—to the point of bluntness—"a wonderful Dutch quality," says mathematician Derek Smith of the University of Cambridge, in the United Kingdom, a close friend and coauthor of many of Fouchier's papers. Kawaoka's silence bespeaks his origins, says his former mentor, Robert Webster of St. Jude Children's Research Hospital, in Memphis, Tenn. "In Japanese culture, saying nothing is often a more powerful statement," Webster says. "You smile and take it."

Others aren't so sure. "I think Kawaoka has lived in the U.S. long enough to have lost his Japanese roots," says virologist Andrew Pekosz of Johns Hopkins University, in Baltimore, Md., "and he's not shy in public." Daryl Buss, the dean of UW Madison's veterinary school, says Kawaoka doesn't want to imperil his paper in Nature by discussing it. But he concedes that, as Fouchier did, Kawaoka could discuss the background of the work or the policy questions without jeopardizing publication. "He has chosen not to do that," Buss says.

Their media strategies aside, most scientists say they're more struck by the commonalities between Kawaoka, 56, and Fouchier, 45. Both are "truly top-notch, fantastic scientists," Pekosz says. They're also competitors and rivals, he says—"in a healthy way." Both have taken a strong interest in avian influenza, and at meetings they often speak in the same session. "Their labs both run the gamut from amino acids to transmission between humans, which is fantastic," Pekosz says. "It's no accident" that both came up with major new findings on H5N1 transmissibility, Smith adds.

Extremely hard workers, both have built up impressive publication records. Fouchier's name is on almost a dozen papers and reviews in *Science* and a few in *Nature*; for Kawaoka, it's the other way around. For both, the controversy swirling around their recent work has made the past few months a particularly intense period. "All these different opinions create a lot of stress," says Fouchier's collaborator, Adolfo García-Sastre of Mount Sinai School of Medicine, in New York City. Kawaoka "is wiped out, I gather," Webster says.

Kawaoka, who grew up in Kobe and trained at Hokkaido University, learned the ropes at Webster's lab in Memphis, where he worked for 14 years. ("My best postdoc ever," Webster says.) He started his own lab in Madison in 1997 and soon became recognized as a scientific superstar; the university invested millions in a new lab and additional staff to retain him when he received a grandiose offer from the University of Pittsburgh in 2004. Kawaoka frequently travels to Tokyo to keep his group there running and lure the brightest Japanese students to Madison. Rather than wearing him out, the 16-hour trips across the dateline "seem to energize him," Buss says.

Fouchier, meanwhile, has built his career at Erasmus MC under the wings of Albert Osterhaus, a prolific virologist who has worked on a plethora of viruses. So far, Osterhaus has been the lab's omnipresent spokesperson; the current controversy marks the first time Fouchier has stepped into the global limelight.

Ron Fouchier…welcomed reporters to his lab…(helped) prepare statements in Dutch and English. Yoshihiro Kawaoka, meanwhile, appeared to be in hiding.

Both Kawaoka and Fouchier have a long history with H5N1. In 1997, Osterhaus's lab discovered that a 3-year-old boy in Hong Kong who had died of pneumonia was infected with the virus—the first recorded human infection with the avian strain, which was wreaking havoc in Hong Kong poultry at the time. Kawaoka spent several months in Hong Kong as part of a team studying the outbreak, which eventually killed 18 people. Fouchier, who had been mostly working on HIV, switched to influenza soon after.

Since then, H5N1 has infected birds in dozens of countries and killed more than 500 people. And Fouchier and Kawaoka have been fascinated by what Pekosz says is "the most pressing question" about the virus: Could it become transmissible between humans—in other words, does it have the potential to become pandemic—and if so, what does it take?

Fifteen years after that first encounter, their unpublished studies may begin to answer those questions. ■

"In the Eye of the Storm, Two Rivals, Two Strategies," Science, *Jan. 6, 2012.*

SCIENCE WRITER MARTIN ENSERLINK IS A CONTRIBUTING EDITOR FOR *SCIENCE*.

Filing Time Reminders for Freelancers

BY JULIAN BLOCK

When tax time rolls around, most filers receive refunds. Just because you receive one for tax year 2011, doesn't mean your return passed muster and you can forget about an audit. All it means is that IRS computers checked arithmetic and other basic items.

So make sure to file away those checks and other records that back up deductions and other items, as well as a copy of your return. Keep your records at least until the statute of limitations runs out for an audit—generally, three years after the filing deadline. But the IRS gets six years to check if you understate your income by 25 percent or more. And there's no time limit if the IRS shows you failed to file or you filed a fraudulent return.

Despite what you may have heard, the risk of an audit doesn't decrease by filing late rather than early. All returns, whether filed early or late, go through IRS computers that scan them for arithmetic errors and single out returns for audit on the basis of a top-secret scoring system. The agency then scrutinizes high scorers, as well as some Form 1040s chosen purely at random, to determine which ones should actually be examined. One important element in the selection process is how the amount of your itemized deductions on Schedule A of Form 1040 compares with the total taken by others with comparable income levels.

Errors of fact or judgment on your return for tax year 2010 shouldn't still be causing you cold sweat. A recalculation on IRS Form 1040X usually takes very little time, plus whatever money is involved if you feel you owe something. You can also use 1040X if you now discover that you overpaid, provided you do so within three years after the return's filing deadline. (1040X is discussed in *SW*, winter 2011-12).

All returns, whether filed early or late, go through IRS computers that scan them for arithmetic errors and single out returns for audit on the basis of a top-secret scoring system.

For instance, you're not stuck if you take the standard deduction and later discover that itemizing for such expenditures as mortgage interest and real estate taxes would've been more advantageous. Use 1040X to amend your return and switch to itemizing.

If you get a computer-generated notification of unreported income, don't send a payment to the IRS without first checking on whether you actually omitted income. Every year, without fail, the IRS sends out many erroneous notifications concerning, for example, 1099 forms that reflect payments received by writers from publishers, interest from savings accounts, and dividends from stocks.

If you move or otherwise change your address after filing your return, it's advisable to notify the IRS. Use IRS Form 8822 (Change of Address). Reporting the change should ensure that you receive and are able to respond to mail the IRS later sends— for instance, a bill for additional taxes or a notice that it has selected your return for an audit. Expecting a refund? Also notify the post office for your old address. This will help in forwarding your check to your new address (unless you authorized the IRS to directly deposit the refund into your checking account).

All that Form 8822 asks you to provide is your old and new addresses, your full name and social security number, and, if you're a joint filer, your spouse's full name and social security number. Mail Form 8822 to the IRS Service Center that received your return, not the Service Center for your current address. ■

JULIAN BLOCK is an attorney and author based in Larchmont, N.Y. He has been cited as "a leading tax professional" (*New York Times*), "an accomplished writer on taxes" (*Wall Street Journal*) and "an authority on tax planning" (*Financial Planning Magazine*). For information about his books, visit julianblock taxexpert.com.

LIGHTBULB BY CAROL KERR GRAPHIC DESIGN

Idea Grants Update: $140,000 Awarded

In the past seven months, the National Association of Science Writers has awarded an additional five Idea Grants, totaling $67,000, bringing the total awarded since the grant program's inception one year ago to almost $140,000. Funding is provided by income from the Authors Coalition, and the grants are intended to help science writers in their professional lives or to benefit the field of science writing.

NASW is excited to be able to assist with projects and programs that serve science writers in a variety of creative ways. Congratulations to the following grantees on their successful proposals and hard work on behalf of the field:

- **$10,000 to University of Wisconsin-Madison** in August 2011 to fund Science Writing in the Age of Denial workshop (Proposal submitted by Terry Devitt, Sharon Dunwoody, Deborah Blum, and Jill Sakai)
- **$2,000 to Madeline Bodin** in November 2011 to fund a wiki that will serve as a database of funding sources for journalism projects
- **$35,000 in February 2012 to EXPLORE Utah Science**, a project to bolster scientific literacy among Utahns, provide jobs to freelance writers, and train new science writers (Proposal submitted by Julie Kiefer, Kim Schuske, Ross Chambless, and Jennifer Napier-Pearce)
- **$10,000 to Science Writers in New York, The Hastings Center, and the City University of New York Graduate School of Journalism** in December 2011 to fund a one-day spring Bioethics Bootcamp workshop (Proposal submitted by Carol Milano).
- **$10,000 to ScienceOnline2012** to fund travel scholarships and 450 complementary copies of *A Field Guide for Science Writers* for ScienceOnline2012 attendees (Proposal submitted by Anton Zuiker and Bora Zivkovic)

A CLEARINGHOUSE FOR IDEAS

NASW's program committee, formed in late 2010 with the goal of making NASW's many funding efforts more coordinated, transparent, and inspired, serves as a clearinghouse for the Idea Grant Program. The committee evaluates proposals on a rolling basis, typically in the order that they are received. Due to the detailed discussions undertaken by this all-volunteer group, the committee reviews about one per month. Special thanks to the program committee chair Robin Lloyd and members Melissa Blouin, Peggy Girshman, Rob Irion, Rosie Mestel, and Jeffrey Perkel for their hard work.

Of the proposals submitted thus far, 10 have been funded, 11 have been turned down, and 10 await evaluation.

YOU ARE ENCOURAGED TO APPLY

Inspired? Applications remain open, and the deadline is rolling (Please note, however, the increased time for review due to the time required for our volunteers to give each proposal proper consideration). We especially support the efforts of regional science writing groups to make their professional development activities available to all NASW members and beyond via webcasts, transcription, live blogging and other online or digital resources. ■

(source: NASW program committee)

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For examples of successful grants, visit
https://www.nasw.org/how-win-idea-grant

For details and instructions, visit
https://www.nasw.org/idea-grants

AAAS Meeting Coverage

This year's AAAS Annual Meeting took place in Vancouver, Canada, from Feb. 16 to 20 and encompassed the theme "Flattening the World: Building the 21st Century Global Knowledge Society."

The following are selected reports from the NASW 2012 Travel Fellows to the meeting. Learn more about them on page 23. Read all their articles at https://www.nasw.org/taxonomy/term/76.

Panel Peers Into the Future of Peer Review

BY MICHELLE SPEKTOR

Peer review has long been the standard for quality science, but recent concerns about fraud among authors, bias among reviewers, and possible hindrance of scientific progress has led some to question the effectiveness of a process that relies on anonymous experts and occurs behind closed doors.

Panelists addressing the topic agreed that peer review needs improvement, but offered different perspectives on whether a more open system is the answer.

"There is more of a demand for transparency in the peer review process," said Linda Miller, a professor at the New York University Langone Medical Center and a former editor at Nature Publishing Group. Miller noted the mismatch between the confidentiality of peer review and emerging societal values of information sharing.

Some journals have already adopted more transparent peer review processes. *Atmospheric Chemistry and Physics* engages in "open peer review" by disclosing the identities of reviewers. The two-year-old *EMBO Journal* is even more transparent, as its editors publish written comments and correspondences from all rounds of the review process along with the articles themselves.

Miller believes that a system like *EMBO Journal*'s would encourage reviewers to produce better reviews and put pressure on editors to hold reviewers to higher standards.

Emilie Marcus, the CEO of Cell Press and editor of *Cell*, was more skeptical of the benefits of a system that holds reviewers accountable to the public in addition to their editors.

"I am a little less convinced of the value that comes from unearthing all the comments and leaving it up to individuals—whether they are journalists or readers—to then sort out, essentially, did the editor make the right decision in deciding to publish this?" she said.

Additionally, Marcus noted that reviewers may not feel comfortable with the publication of their reviews. An open peer review process like *EMBO Journal*'s would also require publications to develop a process for editing and releasing reviewer comments—a task that Miller said many journals might find difficult to take on.

Meanwhile, journals and scientific disciplines that engage in traditional peer review have developed their own ways to optimize the process. The 29 publications of Cell Press are among the few that use a two-tier review process; papers are first internally reviewed by staff editors and then externally peer reviewed by scientific experts. In addition, reviewers can look at and evaluate other reviewers' comments. That method that helps reduce reviewer bias, Marcus said.

Articles submitted to journals in the astronomical and physical sciences are usually pre-reviewed by other members of the field through a pre-published paper database called ArXiv.

> ***Some journals have already adopted more transparent peer review processes.***

"There is a culture of preprints in a number of the physical sciences, so a lot of research reaches the community before it's published in the formal journals," said Chris Biemesderfer, the director of publishing for the American Astronomical Society. "That's one of the ways we know we're not concerned about peer review slowing down the access to new results."

While peer review faces challenges, scientists who partake in the process generally approve of it. A 2007 Sense About Science survey of peer review showed that 91 percent of scientists think peer review improves their own work.

Panelists also agreed that peer review is still the most preferred method of ensuring that only the most impactful, innovative and scientifically legitimate research reaches publication—at least for now.

As Miller asked: "There are dissatisfactions with peer review, so what would you change in regard to trying to improve a system that we all acknowledge isn't perfect but is the best one so far that we've come up with?"

■ ■ ■

MICHELLE SPEKTOR WILL GRADUATE FROM CORNELL UNIVERSITY IN MAY WITH A BACHELOR'S DEGREE IN BIOLOGY AND SOCIETY. SHE IS ALSO AN INTERN AT *CORNELL CHRONICLE*.

Food Production and Environmental Conservation

by Aviva Hope Rutkin

We need more food, and we need it fast.

But how do we continue to produce enough food for a burgeoning population and at the same time make sure we're protecting Earth's limited natural resources and using them wisely?

The world's population will increase by two billion within the next 40 years, the United Nations projects. And with one billion people already malnourished and a growing middle class demanding a more diverse diet, food production will have to double to keep everyone fed.

Figuring out how to do that in ways that promotes sustainability and conservation doesn't just fall to farmers, but also to experts in a wide range of fields from agronomy to public policy.

"That's going to be the defining challenge of not only this century but perhaps the next several," said ecologist Jonathan A. Foley, director of the Institute on the Environment at the University of Minnesota. "Nothing else comes close. Nothing."

Harmful agricultural practices such as deforestation, over-irrigation and greenhouse gas production already need to be dramatically curbed in order to protect the environment. One way to do that is to prevent agricultural expansion, the panelists said.

Ruth DeFries, a professor of sustainable development at Columbia University, has had some success working with soy farmers to limit deforestation in the Amazon rainforest by encouraging the use of abandoned pastures rather than the cutting down of untouched forests. The approach seems to have worked well for the farmers: Several years after the initiative began, soy production in the region was at an all-time high.

"Thinking about making it fit is not so much about the technical aspects," DeFries said. "What really matters is that we have the policies and the political will in place to work out usable solutions at the scale at which they matter."

Effective communication between scientists and politicians is key. And international agreements such as The Stockholm Memorandum—a call by Nobel laureates for global leaders to take action on a number of sustainability priorities—can convey urgency and potentially inform government policies.

Corporations must also be part of the solution, the researchers said. A consortium called The Natural Capital Project is trying to help corporations become more environmentally responsible. Jointly run by Stanford University, the University of Minnesota, The Nature Conservancy, and the World Wildlife Fund, the group develops tools for assessing how a particular business venture might affect the surrounding environment. Companies can analyze their own projects using free software provided.

But the greatest task ultimately will be to convince companies to adopt important projects or sustainable practices, said economist W. Michael Hanemann, a professor of public policy at UC Berkeley. For example, companies may be deterred by the high cost of complex projects such as building pipelines to carry fresh water to at-risk communities, especially when the health and economic benefits are not immediately apparent.

"The largest issue is the lack of interest in providing capital," Hanemann said.

Aviva Hope Rutkin studies neuroscience and Chinese at Union College. She is the editor-in-chief of the weekly student newspaper, *Concordiensis*.

■ ■ ■

Talking Dictionaries Give Endangered Languages a Global Audience

by Signe Brewster

Eight endangered languages are now immortalized in online talking dictionaries, researchers announced in Vancouver.

The dictionaries, part of National Geographic's Enduring Voices project, include more than 24,000 recordings of words and phrases pronounced by native speakers. They represent a growing trend to preserve some of the world's disappearing languages with digital media.

"Language extinction is not inevitable," National Geographic fellow David Harrison said. "Savvy communities do not see technology as a threat, but rather as a means to expand their presence to have a global audience and to connect far-flung speakers."

Most of the world's 6,000 to 7,000 languages are oral, meaning they are rarely or never written. Up to 50 percent are close to extinction, according to the National Science Foundation. Some have dwindled to fewer than 1,000 users, such as Papau New Guinea's Matukar Panau, which has less than 600 speakers. Others are struggling to return from the brink; Siletz Dee-ni, a language of the Siletz Native Americans in Oregon, has only one known fluent speaker.

Eight endangered languages are now immortalized on online talking dictionaries.

The dictionaries, plus other media like YouTube videos, phone applications, Facebook pages, and software suites, allow formerly off-the-grid communities to establish an online presence and become advocates for their language's preservation. Resources like the dictionaries can be used in classrooms for free, opening up learning opportunities to local children and a broader global audience.

Some communities benefitting from digital media had never used the Internet, let alone taken the time to come up with a word for it. Others, such as the speakers of Matukar Panau, immediately saw technology as a means to keep their language alive, Harrison said.

Harrison, an associate professor of linguistics at Swarthmore

Signe Brewster is a senior studying life sciences communication at the University of Wisconsin-Madison. She is the editor-in-chief of the independent daily student newspaper *The Badger Herald*.

College, said the digital tools are a positive outcome of globalization, but they present the need for balance between what one native speaker deemed "cultural identity" and the modern world. While younger speakers might consider text messaging a "cool" way to use their linguistic skills, older generations sometimes take issue with casual use of their language.

Panelist Margaret Noori, a researcher at the University of Michigan, grew up as a part of the Ojibwe tribe of the northern Midwest. She said there is a "vast divide" between those in favor of adapting to modern technology and others wanting to maintain traditional means of transferring knowledge.

"I knew elders that told me, 'You shouldn't write,'" said Noori, who is also a poet. "That's a hard thing to overcome because I also now have kids who tell me, 'I'm going to text you in the language.' We have to look at how we can use new things in ways that don't change us."

Noori closed with a song in her tribe's language: Anishinaabemowin. High and low notes oscillated over a steady drumbeat before she stopped to explain the grammatical structure of the song.

She said teaching the true structure is eased with singing.

"You get the full resonance of the language, all the things that it can mean," Noori said.

■ ■ ■

Climate Change Observations by Indigenous Cultures

BY RACHEL FELTMAN

Science has invested heavily in assessing and predicting the potential manifestations of climate change, but the newest frontier in climate science may emerge from the collective experiences of those people most affected by a changing world.

By looking back instead of forward, it may be possible to better assess the true impacts of climate change through a perspective that researchers often lack—gaps in knowledge that can be filled by the observations of indigenous cultures. A panel of experts in anthropology, atmospheric physics, and paleoclimatology discussed the value of these often ignored sources.

…the newest frontier in climate science may emerge from the collective experience of those people most affected by a changing world.

Though they shared perspectives from vastly different areas of research, the panelists agreed that indigenous cultures, specifically groups of native Indian tribes in North America, can provide a wealth of information on climate change. When scientific researchers and tribal elders collaborate, the panelists explained, science gains meaningful new insight into both the physical manifestations of climate change in the Arctic and the real-life effects on daily life of indigenous peoples.

Panelists focused on changes in the Arctic, where the observations of indigenous peoples may lend special insight.

Elizabeth Weatherhead, an atmospheric physicist from the University of Colorado, explained that current research depends on satellite images to estimate changes in ice coverage in the Arctic. This allows for a good estimate of the overall coverage in an area, but does nothing to observe changes in the characteristics of that ice coverage.

Cultures such as the Yupik people on Alaska's St. Lawrence Island, just south of the Bering Strait, are experts on this subject by pure necessity, said Igor Krupnik of the Smithsonian Institution in Washington, D.C.

"They routinely make observations that scientists only make in teams," Krupnik said of

RACHEL FELTMAN IS A SENIOR AT BARD COLLEGE AT SIMON'S ROCK, WHERE SHE STUDIES ENVIRONMENTAL SCIENCE AND WRITING. SHE WRITES A SCIENCE COLUMN FOR HER SCHOOL PAPER, *THE LLAMA LEDGER*, AND BLOGS AT RACHEL DOES SCIENCE.

AAAS Launches New Quarterly:

Science & Diplomacy

In an effort to promote a deeper dialogue on the intersection between science and diplomacy, the AAAS Center for Science Diplomacy has launched a new quarterly publication: *Science & Diplomacy*. With editorials, articles, perspectives, and letters, *Science & Diplomacy* (available at **www.sciencediplomacy.org**), will provide a forum for rigorous thought, analysis, and insight to serve stakeholders who develop, implement, and teach all aspects of science and foreign policy. The publication is available free of charge; registration is required.

Topics covered in the inaugural March 2012 issue include:

- Science and Diplomacy: The Past as Prologue
- Science Diplomacy and Twenty-First Century Statecraft
- Nunn-Lugar: Science Cooperation Essential for Non-proliferation Efforts
- South African Science Diplomacy: Fostering Global Partnerships and Advancing the African Agenda
- International Fusion Energy Cooperation: ITER as a Case Study in Science and Diplomacy
- From Cold War to War Relations: Fertile Ground for Science Diplomacy in Central Asia
- Rediscovering Eastern Europe for Science Diplomacy

(source: AAAS news release)

Arctic hunters and elders. "It's not holistic knowledge, but persistence…the observations are made over generations of experience."

The Yupik, he explained, began to record the disappearance of floating icebergs in the early 1990s. Hunters in the Arctic rely on a very consistent pattern in the circulation of ice packs each winter. The "winter that is locally born" is a phrase elders use to describe the thin, unreliable ice that now surrounds them. This presents new risks and diminishing returns that must be factored into hunting trips, threatening their long-term way of life.

These changes are about more than overall temperature changes, both Krupnik and Weatherhead explained. Weatherhead showed that the unreliability of temperature in a given day or year is a growing issue in the Arctic. The Yupik word for this unreliable weather is "uggianaktuk." It represents a problem often neglected in the data of climate scientists.

Krupnik shared a sad anecdote to emphasize the point, saying the Yupik had blamed a lack of cold in past winters for thinning ice. When a stretch of weather occurred in January of 2012 that was more reminiscent of times past, the hunters expected thick ice to return and allow them to hunt safely. The ice stayed thin.

The presentations focused not on the lifestyle-altering decline of conditions in the Arctic, but on the importance of the observations of these conditions that had been made by local, indigenous peoples. Krupnik emphasized that the Yupik and other Arctic cultures are eager to share their experience with researchers who are respectful of it.

"The more people know," he said, "the more open they are to the knowledge of other people." Perhaps, Krupnik observed, we have finally learned enough about climate change to respect and welcome the perspectives of indigenous laymen who have a personal, generational understanding of it.

■ ■ ■

Tobacco, Nuclear Power and GMOs, Oh My

BY RAECHEL I. KELLEY

European representatives from nuclear power, tobacco, and genetically modified organism (GMO) industries pleaded for more transparency and public engagement from global policy makers. The symposium titled "Exploding Myths on Reactor Security, Harm Reduction and Genetically Modified Organisms" included speakers Roland Schenkel, a nuclear energy consultant; David O'Reilly of British American Tobacco; and Guy van den Eede from the Joint Research Center. Panel moderator, Ireland's Chief Science Adviser Patrick Cunningham, addressed problems with science communication and called on scientists to "rethink and resell to society the basic integrity of science."

Schenkel argued that implementing standardized policies globally would avoid further crises involving nuclear power.
AAAS MEETING continued on page 29

RAECHEL I. KELLEY IS STUDYING SCIENCE JOURNALISM AS A FRANCES PERKINS SCHOLAR AT MOUNT HOLYOKE COLLEGE. SHE IS CURRENTLY WORKING AS AN OUTREACH ASSISTANT AT THE U.S. FISH AND WILDLIFE SERVICE AND OCCASIONALLY FREELANCES FOR THE *DAILY HAMPSHIRE GAZETTE*.

NASW Mentors Student Writers

NASW members helped provide guidance and encouragement to the next generation of science writers during this year's AAAS annual meeting, in Vancouver. Students members participated in a travel fellow program, a mentoring program, and an internship fair, all organized by NASW's education committee co-chaired by Rob Irion and Jeff Grabmeier.

Eight top undergraduate students were selected to receive travel fellowships to the meeting (see page 23). Once there, each fellow was matched with a volunteer mentor who provided advice to help them begin their science writing careers. Most came away with an appreciation not only of science writing, but of NASW itself.

"NASW should be very proud of the opportunities they provide young writers," wrote one travel fellow in a thank-you note.

An additional 23 students were paired with mentors. All gathered at a meeting Feb. 17 to network, receive advice from veteran science writers, and hear from freelancer Mark Schrope about his outdoor adventures reporting for magazines like *Sport Diver* and *Surfer*, as well as his more science-related stories for *New Scientist* and *Popular Science*. He also discussed the book he is currently writing on the Gulf of Mexico oil spill.

The final NASW event at AAAS was the annual internship fair, held Feb. 18. More than 40 students attended and had five-minute "speed-dating" sessions with 16 recruiters representing organizations from magazines to wire services to federal labs.

Overall, most students left Vancouver energized and encouraged about their career path.

"I knew that this would be a good opportunity for me as a fledgling writer," one student wrote. "But, I had no idea just how good."

2012 MENTORS

Melissa Lutz Blouin	Roberta Kwok	William Schulz
Alan Brown	Jessica Marshall	James Swyers
Emily Caldwell	Carl Marziali	Kate Travis
Terry Devitt	Molly McElroy	Erik Vance
Rachel Ehrenberg	A'ndrea Elyse Messer	Karen Weintraub
Josh Fischman	Steve Miller	Alexandra Witze
Lynne Friedmann	John Moir	Corinna Wu
Virginia Gewin	Mark Schrope	■

Mark Schrope explains the myths, realities, and rewards of freelance writing.

Featured Column

Scholarly Pursuits

Academic research relevant to the workaday world of science writing

by Ben Carollo and Rick Borchelt

It's All in Your Head or Maybe Not.

People make judgments about science based on many factors, and many of these factors may be well outside of our control.

As readers of this column likely experience on a regular basis, the way other people perceive our work can be quite context dependent. We are particularly sensitive to contextual variables like scientific literacy level and socioeconomic background in our audience. However, when it comes to science communication, we probably won't get off the hook looking at things so simply (as if those were simple tasks in and of themselves). We are featuring three pieces this issue that reinforce the importance of context in science communication.

■ ■ ■

Kahneman, Daniel. Two Systems in the Mind. *Bulletin of the American Academy of Arts & Sciences* 65(2) (2012) 55-59.

In this piece, Kahneman focuses on the way in which humans process thoughts and interact with the world. This work is generally interesting at a global level, but we think it has particularly important ramifications in the field of science communication. These implications become even clearer when viewed through the lens of the additional featured pieces.

Kahneman discusses how there are two kinds of thinking—intuition and computation (referred to as System 1 and System 2, respectively). We will start by describing System 2, which reflects higher order thinking skills. Finding the answer to a math problem like 245 x 587 requires that you stop other thought processes and perform a computation. This level of effort is consistent with System 2 thinking and would also come into play if you need to do something like remember a new 10-digit telephone number. Attention is a limited resource, and being asked to perform multiple complex tasks at one time will usually result in impaired ability to continue performing all of those functions. For instance, you are unlikely to be able to recall the new telephone number somebody just told you if you are then asked to solve the complex math problem.

The defining characteristic of System 1, or intuitive thinking, is automaticity. It does not require that you do anything; it just happens to you. For example, when we make judgments about a person's mood based on a facial expression. It also happens when we develop an intuitive expertise. For instance, a chess master can look at a chess board and instantly know the right move to take next. Additionally, most people can look at the math problem 2+2 and intuitively know that the answer is 4. This happens because System 1 is a repository of all of the information that we have accumulated over the years. System 1 is a huge network of ideas, and it is activated by the most minimal of stimuli in order to prepare us for additional ideas. System 1 is also where context comes into play quite significantly.

System 1 automatically generates causal connections between the things we experience. That is, we automatically develop stories in response to stimuli that help us

Scholarly Pursuits features articles from journals produced in the United States and abroad. If you read an article you think would make a good candidate for this column, send it along to rickb@nasw.org.

Ben Carollo leads the issues analysis and response team at the National Cancer Institute at NIH. Rick Borchelt is special assistant for public affairs to the director at the National Cancer Institute at NIH.

understand what is happening. System 1 also seeks to suppress ambiguity and will draw on whatever context exists in one's knowledge repository to create a coherent background story. This is great when we have accurate contextual information, but what will likely strike most readers of this column as disturbing is that System 1 will still generate a story in absence of expertise on a matter. Kahneman describes this process as "judgment by heuristics," whereby we answer difficult questions by substituting them with an easier, seemingly related question. We're not generally aware that we do this and consequently are not aware there could be an alternative, possibly more accurate, narrative.

…we answer difficult questions by substituting them with an easier, seemingly related question.

We expect that this will make most of you reflect deeply about your audience and the approaches you take to engage their audience about science issues: What is my audience's preexisting context? Is it the right context!? Can I create enough context in 140 characters so that my audience does not jump to an erroneous conclusion? The answer is probably "no" to all of those questions, unfortunately, which underscores the need for us to be careful about how we engage people in discussions about science and continue to create new, innovative approaches that can provide the appropriate context for general audiences to develop accurate personal narratives about science.

■ ■ ■

Hanson, Valerie. Amidst Nanotechnology's Molecular Landscapes: The Changing Trope of Subvisible Worlds. *Science Communication*, published online 19 May 2011. [Accessed online 2/10/12 at http://scx.sagepub.com/content/34/1/57]

One very important contextual cue is an image. In our experience, science communicators often are the strictest about whether a particular image will work with a story or not. Even though the general observer would never know the difference, we never want to put a picture of an osteosarcoma cell in a story about melanoma on the off chance that there is a pathologist who will see the image and yell bloody murder. Science is a field where accuracy is important, and our credibility as communicators on the subject also depends on our ability to represent the science accurately. However, it turns out that there may be broader implications for choosing one scientific image over another.

In this paper, Hanson explores the scientific metaphors associated with nanoscale phenomena and compares these metaphors to the metaphors associated with simple microscopy. One argument of this paper is that the images that have been used to represent nanoscale phenomena meaningfully change the perspective that people develop in relation to the nanoscale world. In particular, the paper notes that the visualization techniques used for nanoscale images are more closely associated with familiar images of "participatory" worlds like computer-generated graphics or virtual reality programs. Hanson notes that this promotes a way of understanding the nanoscale that is quite different from how we understand the microscopic world.

By creating images that are reminiscent of familiar interactive environments, and often explicitly noting when artistic rendering has taken place, these images reinforce how nanoscale worlds are not observed or discovered like microscopic worlds, but are created through human manipulation.

The context of a built world provided in nanoscale images is subtle and came to be without explicit intent.

The context of a built world provided in nanoscale images is subtle and came to be without explicit intent. However, these subtle cues reinforce a critical aspect of nanotechnology. If we look at this through the System 1 framework discussed by Kahneman, this type of data is critical to understanding an advanced concept. We suspect that image cues alone will not lead to a complete understanding of nanotechnology and the nanoscale environment, but this additional detail clarifies the ambiguous context inherent in a new advanced concept.

■ ■ ■

Scientists have a very specific role in the minds of most people which may not be consistent with participating in the policy process.

O'Brien, Timothy L. Scientific authority in policy contexts: public attitudes about environmental scientists, medical researchers, and economists. Public Understanding of Science, published online 22 February 2012. [Accessed online 2/23/12 at http://pus.sagepub.com/content/early/2012/02/22/0963662511435054]

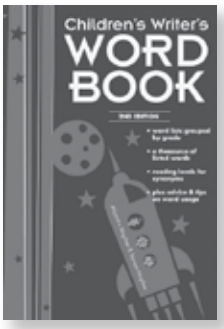
The final article we're highlighting in this column has some fascinating implications. The statistical analysis underlying the work is complex, but the observed outcomes are fairly simple. Using data from the U.S. General Social Survey, the author explores several variables that contribute to an individual's feelings about how much influence scientists should have over public policy decisions.

The paper notes that a majority of adults support some level of reliance on scientific expertise in political decision making. However, there is a significant amount of variation in the extent to which people believe that scientists should influence

SCHOLARLY PURSUITS continued on page 29

A Way With Words for Children

by Jeanne Miller



Children's Writer's Word Book, 2nd Edition, by Alijandra Mogilner and Tayopa Mogilner (Writers Digest Books)

"A zebra's stripes may protect it from blood-sucking insects."

May I say that in an article aimed at second graders?

That wouldn't be appropriate. "Protect" and "insect" are words that fourth graders understand, but not those in lower grades. I know that because when I write for young people I always keep the *Children's Writer's Word Book* close at hand. This book's thesaurus is invaluable when writing for the children's market. The book suggests "save" as a first-grade-level synonym for "protect" and "bug" for "insect." But there's a lot more to the book than a thesaurus. "Blood-sucking" isn't in the book's thesaurus, but the authors provide word lists by grade level, each preceded by a discussion of concepts introduced in that grade and guides to word usage and sentence length. There I find that readers learn about compound words in second grade, so "blood-sucking" should present no problem for them.

"A zebra's stripes may save it from blood-sucking bugs."

That works for me (and for second graders).

The *Children's Writer's Word Book* also details national reading and comprehension standards and points to sources for science and technology standards. The authors describe publishers' expectations and current trends in categorization of children's literature, and they discuss the special requirements of the field.

This book's thesaurus is invaluable when writing for the children's market.

When writing for young readers, it's important to know your audience and their capabilities. This book makes targeting that audience easy. As a children's writer, I find it's the reference work I use the most. ■

READING PHOTO COURTESY OF CAROL KERR GRAPHIC DESIGN

Jeanne Miller is a freelance writer and book author. Her article "Skywalking for Science: Aloft in Redwood Space" (*ODYSSEY* magazine, April 2011) received the 2011 AAAS Kavli Science Journalism Award for Children's Science Writing News.

BOOKS
BY AND FOR MEMBERS

Ruth Winter
44 Holly Drive, Short Hills, NJ 07078
or email ruthwrite@aol.com

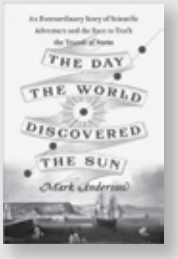
Send material about new books

Microsoft Word files only. Include the name of the publicist and appropriate contact information, as well as how you prefer members get in touch with you.

The Power of Habit: Why We Do What We Do in Life and Business
by Charles Duhigg (NASW), published by Random House

New York Times investigative reporter Charles Duhigg takes us to the edge of scientific discoveries to explain why habits exist and how they can be changed. At its core, *The Power of Habit* contains an exhilarating argument: The key to exercising regularly, losing weight, raising exceptional children, becoming more productive, building revolutionary companies and social movements, and achieving success is understanding how habits work. Habits aren't destiny. We learn why some people and companies struggle to change, despite years of trying, while others seem to remake themselves overnight. We visit laboratories where neuroscientists explore how habits work and where, exactly, they reside in our brains. We discover how the right habits were crucial to the success of Olympic swimmer Michael Phelps, Starbucks CEO Howard Schultz, and civil rights hero Martin Luther King, Jr. We learn how implementing "keystone habits" can earn billions and mean the difference between failure and success, life and death. As Duhigg shows, by harnessing this new science, we can transform our businesses, our communities, and our lives. ■ *Reach Duhigg at charles@charlesduhigg.com.*

The Day the World Discovered the Sun: An Extraordinary Story of 18th-Century Scientific Adventure and the Global Race to Track the Transit of Venus
by Mark Anderson (NASW), published by DaCapo

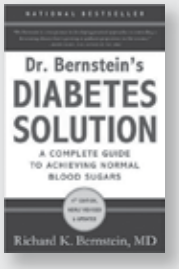


Mark Anderson, a Massachusetts freelance writer, tells an epic story of the enduring human desire to understand our place in the universe. He describes the 18th century scientific race to tract the transit of Venus. On June 3, 1769, that planet briefly passed across the face of the sun in a cosmic alignment that occurs twice per century. Anderson reveals the stories of three Venus Transit voyages—to the heart of the Arctic, the New World, and the Pacific—that risked "every mortal peril of a candlelit age." With time running out, each expedition struggled to be in place on that momentous summer day when the universe suddenly became larger than anyone dared to image. [FYI–The next transit of Venus occurs June 5 or 6, 2012, depending on your location.] Anderson has covered science, history, and technology for many media outlets, including *Discover* and National Public Radio. ■ *Contact him at mka@markkanderson.com. The book's publicist is Lara Simpson Hrabota at lara.hrabota@perseusbooks.com or 617-252-5202.*

A Planet of Viruses
by Carl Zimmer (NASW), published by University of Chicago Press

We are most familiar with the viruses that give us colds or the flu, but viruses also cause a vast range of other diseases, including one disorder that makes people sprout branch-like growths as if they were trees. Viruses have been a part of our lives for so long, in fact, that we are actually part virus: The human genome contains more DNA from viruses than our own genes. Meanwhile, scientists are discovering viruses everywhere they look: in the soil, in the ocean, even in caves miles underground. Freelance science writer Carl Zimmer presents the latest research on how viruses—the smallest living things known to science—hold sway over our lives and our biosphere, how viruses helped give rise to the first life-forms, how viruses are producing new diseases, how we can harness viruses for our own ends, and how viruses will continue to control our fate for years to come. In this eye-opening tour of the frontiers of biology, where scientists are expanding our understanding of life as we know it, we learn that some treatments for the common cold do more harm than good; that the world's oceans are home to an astonishing number of viruses; and that the evolution of HIV is now in overdrive, spawning more mutated strains than we care to imagine. Contact Zimmer at carl@carlzimmer.com. The book's publicist is Elizabeth Fischer at efischer@press.uchicago.edu.

Dr. Bernstein's Diabetes Solution: The Complete Guide to Achieving Normal Blood Sugars
(4th Edition) by Richard K. Bernstein (NASW), published by Little Brown

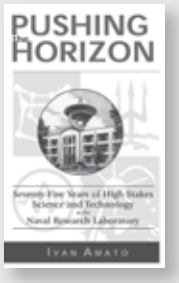


The author is a physician and has been a type 1 diabetic for 64 years. His book is a practical and informative guide on both adult- and childhood-onset diabetes that explains step-by-step how to normalize blood-sugar levels and prevent or reverse complications, and offers detailed guidelines for establishing a treatment plan. Readers will find a comprehensive discussion of diet, obesity, and new drugs to curb carbohydrate craving and overeating, together with fifty recipes that cater to a low-carb diet. The book presents up-to-the-minute information on insulin resistance, blood-testing devices, measuring blood sugar, new types of insulin, gastroparesis and other issues. ■ *Contact Bernstein at md@diabetesscientist.com. Press representative for the book is Theresa Giacopasi at theresa-giacopasi@hbgusa.com or 212-364-1436.*

The Forever Fix: Gene Therapy and the Boy Who Saved it
by Ricki Lewis (NASW), published by St. Martin's Press

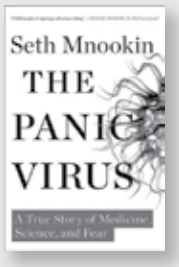
Lewis is a long-time college textbook author and magazine freelancer with a Ph.D. in genetics. Her new book, *The Forever Fix: Gene Therapy and the Boy Who Saved It*, tells the true story of 8-year-old Corey Haas, cured of hereditary blindness with gene therapy in 2008 in just four days, when the sunlight at the zoo hurt his eyes, for the very first time. Corey's story is set against the backdrop of other tragedies and triumphs of this biotechnology that began in 1990. *The Forever Fix* is told through the voices of the children, parents, physicians, and scientists at the forefront of the field. A starred review in *Publisher's Weekly* calls the book an "impressive, meticulously researched study of the exciting new developments in gene therapy." Lewis' goal is to bring attention to the plights of families with rare diseases. ■ *Contact Lewis at rickilewis54@gmail.com. The book publicist is Nadea Mina at Nadea.Mina@stmartins.com.*

Pushing the Horizon: 75 years of High Stakes Science and Technology at the Naval Research Laboratory
by Ivan Amato (NASW) published, by the Government Printing Office



Pushing the Horizon explores the origin, development, and accomplishments of the Naval Research Laboratory (NRL) over its first 75 years. Science writer Ivan Amato analyzes the personalities, institutional culture, and influences of what has become one of the preeminent research laboratories within the United States. Tracing the laboratory from its small and often inauspicious origins (it opened in 1923, a brainchild of Thomas Edison) to today's large, multidisciplinary research center and sets in context many of the important research events and fronts of modern military science and technology. Included in the narrative are little known episodes in the history of the atomic bomb, chemical warfare, the Global Position System, and the American space program. Amato had just published *Stuff: The Materials the World is Made Of* when he learned the NRL was seeking a writer to write this institutional history. "I saw this as a great opportunity to keep my new activity of book writing going," he said. "My track record of writing accessibly about high technology, chemistry, materials science, and deeply geeky topics helped land the assignment." The book is available as a free PDF download (3.3MB) at http://www.nrl.navy.mil/content_images/horizon.pdf. ■ *Reach Amato at ivanamato61@gmail.com.*

The Panic Virus: The True Story Behind the Vaccine-Autism Controversy
by Seth Mnookin (NASW), published by Simon & Schuster

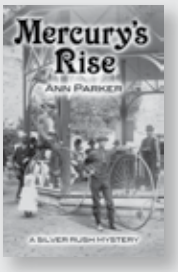


In 1998 Andrew Wakefield, a British gastroenterologist with a history of self-promotion, published a paper with a shocking allegation: The measles-mumps-rubella vaccine might cause autism. In the years to come, Wakefield would be revealed as a profiteer in league with class-action lawyers, and he would eventually lose his medical license. Meanwhile, one study after another failed to find any link between childhood vaccines and autism. Yet the myth that vaccines somehow cause developmental disorders lives on. Despite the lack of corroborating evidence, it has been popularized by media personalities such as Oprah Winfrey and legitimized by journalists who claim that they are just being fair to "both sides" of an issue about which there is little debate. Most tragic of all is the increasing number of children dying from vaccine-preventable diseases. In *The Panic Virus*, Seth Mnookin draws on interviews with parents, public-health advocates, scientists, and anti-vaccine activists to tackle a fundamental question: How do we decide what the truth is? *The Panic Virus* is a riveting and sometimes heartbreaking medical detective story that explores the limits of rational thought. It is the ultimate cautionary tale for our time. ■ *Mnookin can be reached at seth@sethmnookin.com.*

DIY Satellite Platforms: Building a Space-Ready General Base Picosatellite for Any Mission **by Sandy Antunes (NASW), published by O'Reilly Media**

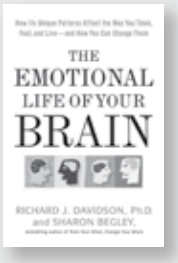
Want to build your own satellite and launch it into space? It's easier than you may think. The first in a series of four books, this do-it-yourself guide shows you the essential steps needed to design a base picosatellite platform—complete with a solar-powered computer-controlled assembly—tough enough to withstand a rocket launch and survive in orbit for three months. Whether you want to conduct scientific experiments, run engineering tests, or present an orbital art project, you'll select basic components such as an antenna, radio transmitter, solar cells, battery, power bus, processor, sensors, and an extremely small picosatellite chassis. This entertaining series takes you through the entire process—from planning to launch. The book is available as an e-book or a print edition. Alexander "Sandy" Antunes is a Maryland-area astronomer, author, and role playing game designer who holds a Ph.D. in computational astrophysics. ■ *Reach him at sandy.antunes@gmail.com.*

Mercury's Rising **by Ann Parker (NASW), published by Poisoned Pen Press**



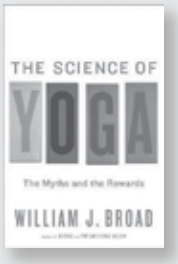
In summer 1880, many come to the fast-rising health resort of Manitou, Colo., at the foot of Pike's Peak to "chase the cure" for tuberculosis. But Inez Stannert, part-owner of the Silver Queen Saloon in Leadville, travels for a different reason. After a long separation, she's reuniting with her young son, William, and her beloved sister, Harmony. However, the stagecoach journey to Manitou turns lethal when East Coast businessman Edward Pace mysteriously dies under the horrified gaze of Inez and Pace's wife and children. After they arrive at the hotel, Pace's widow begs Inez to make inquiries into her husband's untimely death. As Inez digs deeper, she uncovers shady business dealings by those hoping to profit from the coming bonanza in medicinal waters and miracle remedies, medical practitioners who kindle false hopes in the desperate and the dying, and deception that predates the Civil War. Northern California freelance Ann Parker is a science writer by day and a fiction writer by night. This is the fourth book in her Silver Rush historical mystery series. ■ *Contact Parker at annparker@annparker.net.*

The Emotional Life of Your Brain: How Its Unique Patterns Affect the Way You Think, Feel, and Live—and How You Can Change Them **by Richard J. Davidson and Sharon Begley, published by Hudson Street Press**



University of Wisconsin Professor of Psychology Richard J. Davidson and science journalist Sharon Begley describe six distinct emotional dimensions, each with a defined and measurable neural signature. Each person's unique combination of the six dimensions together comprise what Davidson calls "emotional style"—the essence of our personality and the reflection of how we live and respond to our experiences. The six dimensions—resilience, outlook, social intuition, self-awareness, sensitivity to context, and attention—emerged from Davidson's three decades of research on affective neuroscience, the study of the brain basis of human emotion. Intrigued by the tremendous differences between even closely related individuals, he embarked on a quest to better understand the physical foundations of emotion at a time when such questions were not included in scientific discussions. The book includes a series of self-assessments to help readers determine where they fall in each of the six dimensions, as well as strategies for shifting their emotional styles. ■ *Sharon Begley can be reached at sbegle@aol.com. Publicist for the book is Courtney Nobile at courtney.nobile@us.penguingroup.com.*

The Science of Yoga: The Risks and Rewards **by William J. Broad, published by Simon & Schuster**



William Broad, a science journalist, senior writer at the *New York Times*, and a lifelong practitioner of yoga, presents a pioneering, engaging, and impartial evaluation of yoga; a discipline that began thousands of years ago and improbably evolved into one of today's most popular fitness activities. Uncommon states are integral to a hidden world of risk and reward that lies beneath clouds of myth, superstition, and hype. *The Science of Yoga* celebrates what's real and shows what's illusory, describes what's uplifting and beneficial, and what's flaky and dangerous—and why. Broad illuminates how yoga can lift moods and inspire creativity. He also exposes moves that can cripple and kill. As science often does, this groundbreaking book also reveals mysteries. It presents a fascinating body of evidence that raises questions about whether humans have latent capabilities for entering states of suspended animation and unremitting sexual bliss. Broad also unveils a burgeoning global industry that attracts not only curious scientists but true believers and charismatic hustlers. In the end, he shatters myths, lays out unexpected benefits, and offers a compelling vision of how the ancient practice can be improved. ■ *Reach* Broad at broad@nytimes.com.

NASW President
Nancy Shute
Freelance
NANCY@NANCYSHUTE.COM

President's Letter

Remember new media? It seems only

YESTERDAY THAT THIS FRIGHTENING APPARITION LOOMED ON THE HORIZON, THREATENING TO CRUSH ANY SCIENCE WRITER WHO CLUNG TO THE ANCIENT TECHNOLOGY OF INK AND PAPER.

But who's better equipped than science writers to learn new technologies, master them, and profit? To further those efforts, in the past few years NASW has invested a lot of time and money into resources into opportunities for members to learn new media skills, and share them. Since 2010, we've handed out almost $200,000 in grants for members seeking to learn new skills or launch an experiment in science writing.

Members already adept in the mysteries of digital journalism and publishing have generously shared their knowledge through our annual workshops, regional meetings, the World Conference of Science Journalists, and the NASW committees, website, and listservs.

And new media is no longer code for an apocalyptic future. Now new media is just, well, media. Those digital tools are just part of the science writer's arsenal, to be deployed as needed. As someone who came from legacy media, I look at how I work now, using my iPhone to record broadcast audio and shoot photos for NPR's website, and I'm amazed.

And that's not even talking about social media. Recently, I spent a few minutes in an impromptu chat about whether publications should have a Good Housekeeping seal of approval for factchecking with Ed Yong, creator of the "Not Exactly Rocket Science" blog, and journalist Christopher Mims. The conversation happened on Twitter. It never could have happened without Twitter.

The market for high-quality science coverage at newspapers has not recovered, and probably never will. But publishers are still investing in great science journalism, as the bumper crop of entries for NASW's Science in Society Awards attests. There are signs that people are willing to pay for high-quality science writing online, too, as evidenced by pay-as-you-read experiments like The Byliner and The Atavist.

Then there's Matter. In February, journalists Jim Giles and Bobbie Johnson posted on the crowdfunding site Kickstarter, asking for $50,000 in donations to help start a site that would each week publish "a single piece of top-tier long-form journalism about big issues in technology and science." They raked in $140,201. But at the same time that Matter was sparking contributions, it was also sparking sharp comment on whether it was a sustainable business model for long-form journalism, or, as one online commenter termed it, "Snake Oil Salesmen 2.0."

And consider also Narrative Science. Sounds like another market for long-form science journalism. But no. It's a bot that cranks out automated stories on news of the day, charging clients $10 per 500-word article. So far Narrative Science has focused on the business press, but there's no reason it couldn't be applied to science stories as well. And as Evgeny Morozov points out in *Slate*, there's no reason that Facebook, Amazon, and Google couldn't start serving up similar Cuisinarted content.

Coming up with sustainable business models for quality science writing isn't the only challenge we still face. There's also the recurring question about who gets to profit from our creativity. Science writers are already using Pinterest, the visual sharing site. But as science illustrator Glendon Mellow points out, Pinterist's business model states explicitly that they not only have the right to copy anything pinned on a Pinterest board, they own it. *Scientific American*'s Facebook page has been ablaze with debate on whether pinning constitutes copyright infringement, or harmless sharing of links for the betterment of humankind.

It hasn't been all bliss to be alive at the dawn of digital media, that's for sure. But it's our world now, and it will be what we make of it. I'm grateful to the many incredible members of NASW who have made the journey forward a collaboration of kindred spirits. And I'm looking forward to continuing the conversation on how we can use NASW's resources to help us all do more, better science writing in the digital age. ■

NASW Invests In Its Members

TOTALS AWARDED TO DATE

Career Grants	$91,945
Idea Grants	$140,000
Changing Times Travel Grants to ScienceWriters meeting	$12,023
Laura van Dam International Travel Fellowships	$26,875
Undergrad Travel Fellowships to AAAS meeting	$27,445
Graduate Travel Fellowships to ScienceWriters meeting	$26,198
Freelance Travel Fellowships to ScienceWriters meeting	$38,426

DAVIS COURTESY OF MARK D. COHEN

Dispatches from the Director

Timeline and Deadlines

A Glimpse at NASW's Day-to-Day Operations

In my role, I undertake the day-to-day operations and implement programs and projects as directed by the board. As a result, I always feel like I am living a few months ahead of myself. There is a rhythm to NASW, though, and here are some selected highlights on our annual horizon:

Tinsley Davis
Executive Director
DIRECTOR@NASW.ORG

January
Renewals are in full swing, and approximately 75 percent of membership have renewed by the Jan. 31 deadline. The Education committee is busy planning for the internship fair, selecting student travel fellows, and recruiting mentors for the AAAS meeting in February. End of the calendar year tax filings are due, such as the Federal 1096 form for vendors, contractors, and award winners.

February
With the entry deadline for the Science in Society Awards in February, the awards committee is gearing up. Entries are sorted and shipped to screeners. The finance committee is reviewing numbers from the first six months of the fiscal year that began on July 1 and making sure the budget is on track.

March
Contributors to the spring issue of *ScienceWriters* magazine are scrambling to meet the March 1 deadline, one of four throughout the year. The workshop committee receives 40+ proposals from which they select 12 to 16 to makeup the workshops offerings at the fall ScienceWriters meeting. In even years, when there is an election, the nominating committee begins its work to develop the slate of officer and board candidates.

April
This month the finance committee will begin the budgeting process for the upcoming fiscal year. It will develop a budget that needs to be approved by the board before the end of the current fiscal year on June 30.

May
With the workshop committee's work drawing to a close, session organizers and the authors of the successful proposals, now begin their work in earnest, recruiting speakers and crafting the session for the fall ScienceWriters meeting.

June
In even years, board and officer candidates are putting the finishing touches on their bios for submission to the *ScienceWriters* summer issue in preparation for August elections. In odd years, NASW members, speakers, session organizers, and Laura van Dam travel fellows are packing their bags for the World Conference of Science Journalists, held every two years in a different country.

July
Though it's the height of summer, registration and program information for the fall ScienceWriters meeting is being finalized in preparation for registration opening in August. With the end of the previous fiscal year, the annual audit process begins.

August
The final judging committee for the Science in Society Awards is deciding winners from among the top four in each category, winnowed down by hard working category committees.

September
In addition to looking at the first quarter numbers of the new fiscal year, the finance committee will review the audit before passing it on to the board for its approval.

October
After months of work from many volunteers, the ScienceWriters meeting finally arrives, drawing upwards of 500 attendees. The board, which meets three other times per year on conference call finally get to see each other in person at a board meeting.

November
NASW's federal and state information returns and business taxes must be filed by the 15th. With the awards still fresh in the previous winners' hands, next year's awards begin anew with publicity for entries.

December
Renewals open early this month, and approximately six percent of members will respond to the first call for dues.

In addition to those events that have a rhythm, there are many other events and tasks that are constant. At any given time through the year, the program committee is reviewing Idea Grants applications, other committees are working on various projects, the board is mulling over new programs, and volunteers are reviewing travel fellowship and career grant applicants. ■

NASW Budget Report

Revenue

	2010 Proposed	6 Months 2010 Jan-June Actual	Fiscal Year 2010-11 July-June Proposed	Fiscal Year 2010-11 July-June Audited Actual	Fiscal Year 2011-12 July-June Proposed
Dues	$ 160,000	$ 77,625	$ 160,000	$ 181,240	$ 175,000
Workshops	60,000	150	69,000	83,389	55,000
Mailing List	18,000	5,500	15,000	14,400	12,000
Ads/Online & Magazine	35,000	22,020	30,000	30,758	27,500
Authors Coalition (AC)	50,000	98,397	50,000	447,757	7,500 [1]
CASW Grant	1,500	0	1,500	1,500	1,500
Dividends Interest	10,000	911	5,000	1,994	2,000
Unrealized Gains (Loss)	1,000	(3,091)	1,000	10,216	5,000
Miscellaneous Income	0	0	0	80	0
SW Field Guide	1,800	886	1,200	1,936	1,200
TOTAL REVENUE	**$ 337,300**	**$ 202,398**	**$ 332,700**	**$ 773,270**	**$ 286,700**
AC Funds Released From Restriction					$ 324,800 [2]
TOTAL INCOME					**$ 611,500**

Expenses

Salaries	$ 75,000	$ 37,500	$ 77,500	$ 77,500	$ 80,000
Payroll Taxes and Benefits	15,000	6,190	23,000	16,967	17,400
Website Support and Maintenance	36,000	14,156	26,000	34,638	30,000
Website Editor and Content	0	0	13,140	8,260	21,800
Magazine Publication	55,000	34,667	50,000	46,981	60,000 [3]
Magazine Editor and Content	23,000	11,500	29,000	27,312	26,000
Awards	15,800	446	15,000	10,350	16,350 [4]
Directory	5,000	1,500	5,000	2,259	3,500
Local Groups/Meetings	1,000	1,125	1,500	4,178	0 [5]
SW Field Guide	0	0	0	0	0
Fellowships and Grants	100,000	29,100	102,500	113,238	182,500 [6]
Annual Workshops	80,000	8,026	100,000	125,932	70,000 [7]
Elections	1,500	400	1,500	2,154	0 [8]
Outreach and Education	27,500	3,201	55,000	29,046	7,000 [9]
Special Projects	0	49,335	123,500	62,835	12,000 [10]
Supplies and Expenses	3,000	331	3,000	2,668	3,450
Internet and Telephone Services	3,800	613	2,500	2,085	2,000
Postage	4,500	1,390	5,000	3,875	4,500
Printing	4,500	337	4,500	808	1,500
Dues and Subscriptions	350	439	350	1,142	1,000
Insurance	2,200	2,772	6,000	3,766	3,000
Bad Debt	500	0	500	(876)	500
Bank Charges (merchant service fees)	3,500	3,614	6,500	8,538	8,000 [11]
Accounting Fees	9,000	5,481	15,000	27,932	20,000 [12]
Legal Fees	2,500	9,702	20,000	23,951	10,000
Check and Payroll Services	1,800	938	2,100	1,281	1,500
Board Expenses	10,000	285	17,500	10,662	17,500
Staff Travel	0	1,708	10,500	2,260	3,500
Corporate Taxes	400	4,729	8,500	7,767	8,500
Amortization Expense	0	0	0	8,771	0
TOTAL EXPENSES	**$ 480,850**	**$ 229,485**	**$ 724,590**	**$ 666,280**	**$ 611,500**

Authors Coalition Details

[This is an estimate. Actual year end reflects all expenditures for this class and may include portions of other line items above]

Workshops	$ 8,667	$ 128,053	$ 70,000
Fellowships and Grants	30,860	124,277	182,500
Content and Design	40,842	56,639	21,800
Outreach and Education	1,875	76,670	20,500
Administration Allowance (10% of Annual Disbursement)	8,000	54,302	30,000
TOTAL AC Funds Released From Restriction	**$ 90,244**	**$ 439,891**	**$ 324,800**

1. Amount annually guaranteed by Authors Coalition
2. Funds already in hand; transferred into Operating Account
3. Increased costs reflects need to mail one issue/yr first class
4. Includes increased travel costs to Arizona
5. Now in Outreach and Education
6. Breakdown:
   - SciWri1011 Travel $ 35,000
   - Career Grants $ 40,000
   - AAAS Undergraduates $ 7,500
   - Big Ideas Proposals $100,000
7. Lower costs incurred in Arizona
8. Now incurred in Special Projects
9. Includes:
   - Education Comm. Proposal $ 2,000
   - Local Groups $ 2,500
   - AAAS Internship Fair and Mentoring $ 2,500
10. Includes:
    - Web ad programming $ 10,500
    - Online elections $ 1,500
11. Increase due to complete online renewals
12. Should stabilize due to one-time fiscal year audit

Cybrarian
Russell Clemings
CYBRARIAN@NASW.ORG

Cyberbeat

WE'VE MADE SOME CHANGES IN THE ADMINISTRATION OF NASW'S MAILMAN DISCUSSION LISTS (COMMONLY CALLED "LISTSERVS," BUT SEE **HTTP://BIT.LY/AOCPXW**) THAT WE BELIEVE WILL MAKE THEM EASIER FOR US TO MANAGE AND FOR SUBSCRIBERS TO USE.

As a result, you can now manage your subscriptions to NASW's public lists (NASW-Talk, NASW-Freelance, NASW-PIO, NASW-Books, NASW-Teach, NASW-FOIA, and NASW-Chat) without going to a separate website or using a different password.

Instead, just log into the ScienceWriters (**nasw.org**) website and go to the "mailing list subscriptions" tab on your user profile page.

Your user profile page should load automatically when you log in. Or, if you are logged in already, just click on your name at the upper right of any ScienceWriters (**nasw.org**) page.

If you are not an NASW member and have never registered on our website, we may have created an account for you already. Try entering your email address on the "forgot password" page (use the "login" button to get to that page). Doing that will either send you a temporary login via email, or it will tell you your address could not be found. In which case, you should register.

Those instructions apply to all of NASW's public lists. We also have a number of lists for discussions among NASW's various committees. Members of those committees can be added or removed only by an administrator, but you can still use the "mailing list subscriptions" tab to choose between regular and digest versions of the list, and to turn your mail delivery off when you need to.

There's just one catch in this new system: For boring technical reasons, your list subscriptions must go to the same address as the "primary email address" on your NASW account. You can change that address at any time by going to the "edit" tab on your user profile page.

Finally, as part of this transition, we have also moved the archives of all lists to the main ScienceWriters (**nasw.org**) site from their temporary home at **http://legacy.nasw.org**. Current NASW members can read archives of the public lists by following the "discussions" link on **nasw.org**.

Committee members can also see archives of the committee lists by going to a URL in the form of **https://www.nasw.org/listname**. We hope to revamp the "discussions" page soon so that committee members will see links to their list archives as well as the public list archives. Other improvements are planned for coming months, including an improved search function for the archives.

As usual, if you have any questions or comments, please send them to me at cybrarian@nasw.org.

NASW-TALK

Should a journalist "let my stupidity shine" when interviewing a scientist or academic? That's what University of North Carolina-Chapel Hill science writer Mark Derewicz said he does (see **http://bit.ly/w9lY64**). His essay prompted an NASW-Talk thread in mid-February.

"There's a big difference between being ignorant and being stupid. As a writer, I am often ignorant, and that's one of the reasons I interview sources. But I sure am not stupid, and would be appalled to be thought of as such," Massachusetts freelancer and gentleman farmer Richard Robinson wrote.

Other list subscribers then debated the distinction.

"I have felt that one of my greatest allies in being a science journalist is what I have long called 'astute' ignorance." That means I may not be knowledgeable about a specific subject or advance, but have an excellent general background," Ohio science/technology writer and editor Trudy E. Bell responded.

Veteran Ohio State PIO Earle Holland offered: "I would argue that a background in science is very helpful but not absolutely necessary. What's necessary is a strong interest in the science and a willingness to self-study enough to not be a loon during an interview."

Expert witnesses were called.

"I remember watching Bill Moyers interview a neuroscientist," posted Cynthia Mills, an Oregon veterinarian and science writer. "He asked a question about some aspect of her findings. She answered in words I understood, so I thought, okay, I got it. Then Moyers asked the exact same question again, I mean with the exact same inflections. The scientist seemed a bit taken aback, but rallied and answered again, in somewhat simpler language. Then Moyers did it again! Exactly the same. This time the scientist did not even blink but gave an answer she would have given 'to her 6-year-old niece, or her grandmother.' It was masterful."

Climate Central senior writer Michael Lemonick brought another master to bear on the question:

"John McPhee always pretends he knows far less than he actually does when interviewing for one of his *New Yorker* pieces. Rumor has it that after he finished an interview with two geologists and left the room, one of them turned to the other and said 'Well, he isn't very bright, is he?' If it's good enough for McPhee…"

NASW-FREELANCE

How important is it to verify a famous quotation when it issues from the mouth of your interview subject? Maryland medical writer Julie Corliss posed that question on NASW-Freelance on Jan. 2.

"The other day, a cancer researcher said to me, 'As Plato would say, There is a reality out there; what we see is an image of reality.' I'd like to quote her on this, but want to get the quote right."

Opinions ran the gamut, from run with it, to fix it if it's wrong.

"Your responsibility with a quote is to accurately reflect what your source said, not the accuracy or veracity of the original material, or the citation of it," Washington, D.C., freelancer Bob Roehr said.

But Michael D. Lemonick of Climate Central pointed out a flaw in that approach.

"What if a source quotes a much more recent but still dead

person, whose quote is well known, and quotes that person inaccurately—mangles JFK's "ask not" quote, for example? Would you just leave it as is without any comment?"

The discussion continued for almost a week. Eventually it shifted to a slightly different question: How can one possibly verify a quote spoken (or written) in a different language more than two millenniums ago?

"In this particular case, there can be no such thing as an exact, verifiable quote," MedPage Today senior editor John Gever observed. "We don't have original writings from Plato or his contemporaries. What we have are multiple layers of transcriptions and translations which, at best, provide a general sense of what Plato was getting at." ■

Heather Buschman, Ph.D.
Scientific Communications Manager
Sanford-Burnham
Medical Research Institute
HBUSCHMAN@SANFORDBURNHAM.ORG

The PIO Forum

Social Media for the Science PIO

AT MY RESEARCH INSTITUTION'S ANNUAL SYMPOSIUM LAST YEAR, I SPENT ALL DAY TWEETING UPDATES ON THE SPEAKERS AND LINKS TO MORE INFORMATION ON TOPIC AREAS. I ended each tweet with the hashtag #SBsymposium that I encouraged others to use it in order to collect all related tweets into one news feed. An editor with Nature Publishing Group (NPG) noticed my tweets and sent me a Twitter message asking if I'd like to write about the symposium for NPG's conference blog. I would be writing about it for my institution's blog anyway, and here was an opportunity to reach an even broader audience. An opportunity made possible by Twitter.

About a year and a half ago I had an eureka moment in which I realized how I could make more effective use of my institution's Facebook and Twitter accounts. It just made sense that social media could help connect with all the audiences we want to reach and drive more traffic to the Sanford-Burnham Institute website and blog—if we do it right.

Social media takes many forms with Facebook and Twitter being the eight-hundred-pound gorillas in the room. But there's also LinkedIn, Google+, YouTube, Crowdrise, Quora, Pinterest, and many others. It's worth exploring a few to see which are the best ways to reach your particular audience. For a not-for-profit medical research institute, potential donors and employees are more likely to be on Facebook, while journalists and funding agencies are easier to follow on Twitter. Blogs are also an important part of the science PIO's social media toolbox, but that deserves its own separate discussion.

For the sake of simplicity, this article will focus on Twitter, but most concepts apply to other social media channels.

Twitter Dos and Don'ts

DON'T: Scientists Discover Molecular Switch That Determines How the Pancreas Responds to Dietary Fructose by Releasing Insulin http://bit.ly/xilc58

DO: Taste receptors in the pancreas?!? Amazing but true.. new @PNASnews study shows they help sense dietary fructose http://bit.ly/xilc58

■ ■ ■

DON'T: Sanford-Burnham Medical Research Institute Scientists Study Heart Disease http://bit.ly/A7T8lU

DO: Today is National #WearRedDay! Check out the @NIH_NHLBI flash mob: http://1.usa.gov/wHsA3q [video] #heartmonth

■ ■ ■

DON'T: San Diego Magazine Names Sanford Consortium #1 "Reason to Love San Diego this Month" http://bit.ly/zSWydJ

DO: What's @SanDiegoMag's #1 reason to love San Diego this month? Sanford Consortium for Regenerative Medicine!! http://bit.ly/zSWydJ #stemcells

HOW TO FIND THE TIME

As a PIO trying to do more with less, your plate is already full. If you're like me, you're already working on at least three different press releases, launching a new website, getting the latest donor newsletter out the door, and planning an event. Not to mention press calls to answer, pitches to make, a presentation to get started on, staff meetings, and all that other work that keeps you from your actual work.

I've heard it said that social media is "free." Free like a "free puppy." In other words, there's no upfront financial cost, but it can cost you significant time and energy caring for it. Initially, I spent a lot of time with social media (probably too much time). It's natural to experience a time-consuming learning curve early on, as you comb the web, looking for groups and people that you should be following and for content that's appropriate to share with your followers and fans. It can also be addicting, as you see science writers and others you admire start following you and re-tweeting your content.

So, how to do you make time for social media? You have to make it part of your routine. Now, I average just 45 minutes each day on social media. On days when there's a lot going on in the Twitter-verse, I spend more time. Other days, if I'm too caught up in other activities, I don't log on at all. But I never want too much time to pass. A social media presence should always be fresh and frequent. A Twitter account that hasn't seen a new tweet in a month isn't going to attract too many new followers.

Crafting a social media message has now become a natural extension of what I write. As I'm working on a press release or blog post, I'm already thinking about how to describe it in fewer than 140 characters and who I should mention when I do tweet it out—these can include a collaborating institution, the journal that published the study, the agency that funded it, or a patient advocacy group that I think might be interested. Social media can also be fun, so checking our Facebook page and Twitter feed feeling more like a break than it feels like added work.

WHAT TO DO WITH IT

Social media is just that—social. It's about talking, asking questions, sharing content, listening, and looking for opportunities to provide information or join a conversation. It has to be more than just another way to push out press releases. It also means following certain etiquette, such as thanking people who follow, re-tweet, and mention your institution. You should also mention other people or groups involved wherever possible. In turn, they often re-tweet your message or link to their followers. Those followers then share with their followers, and so on. Before you know it, hundreds of people are sharing a link and visiting your site.

Places to Find Fodder for Social Media

Look beyond your own website; be sure to cite sources.

Blog Posts: Your own or someone else's—even another university or research institution

News Articles: Link to any article on a topic relevant to your institution's science (but avoid controversy)

Events: Twitter is especially useful for events—before, during, and after. Look for hashtags to follow and create your own. Examples: #WorldCancerDay #SciWri12 #SfN12

Questions: Example: "If you were interviewing Francis Collins, what would you ask him?"

Video: Link to YouTube videos

Social media can also be used as a tool for traditional media relations. Though some may appreciate it more than others, Twitter allows you to "eavesdrop" on bloggers and journalists. You learn what is of interest to them, what they are writing about, and where and how to direct a pitch. For example, I saw an editor of a trade magazine tweet out an article on brown fat. I tweeted back with a comment and a link to a blog post I'd written on the same topic. The editor thanked me. Another time, a national news reporter/blogger tweeted his amazement at the discovery of taste receptors in the bladder. I responded by sharing a link to one of our stories about research on taste receptors in the gut.

Of course, with the power of social media comes responsibility. You are the voice of your institution. Comment on and share links only to articles that speak to your organization's area of expertise and core values. Don't write anything that scientists or others working at your institution might disagree with. In short, avoid controversy. For example, my institution is founded in basic cancer research, so I stick to the science and avoid content involving dubious stem cell treatments, too-good-to-be-true weight-loss therapies, or other modern-day snake-oil pitches.

HOW TO SELL IT TO THE BOSS

It's rare that an organization's executive leadership will direct the communications department to get on board with social media. You, as the communications expert, need to take the lead. We started with a short white paper explaining social media and how it could benefit the institute. In retrospect, I wish we'd also set the stage early on with a social media policy for the entire institute, including encouragement and guidelines for employees, laboratories, and other groups to participate. It would have also been helpful to include clear instructions on how faculty members could contribute by providing us with information and photos from conferences, interesting meetings, and other blog- and social media-worthy events.

Nevertheless, the white paper got us started, though I don't think upper management took much notice until we started demonstrating ROI (return on investment). So how do you demonstrate the return? To help answer that question for our leadership and other stakeholders, our department produces a monthly Online Communications Report that includes qualitative highlights and quantitative statistics for our website, blog, monthly email update, online staff newsletter, two Twitter accounts, Facebook, LinkedIn, and any other channel (Foursquare, YouTube, etc.) that saw some action that month.

Graphing a growing number of followers and monthly visits to our blog is satisfying, but who actually engaged with us and what they said is more important. So, the monthly report highlights a few notable new followers—a science writer, a fellow PIO—and interesting comments, re-tweets, mentions, or conversations. We also describe any new approaches we tried (using a poll on Facebook, for example) and whether or not it proved helpful.

What about financial gain? Certainly there are groups trying to convert followers into donors, with varying degrees of success. But don't count on it, especially right away. In the meantime, there are many other (non-monetary) benefits to social media—increased website traffic and more opportunities for traditional media coverage, for example.

Enjoy being a part of the experiment. I'll see you out there. (Twitter: @hbuschman or @SanfordBurnham.) ■

Upcoming Meetings

July 1-6, 2012 • ***62nd Meeting of Nobel Laureates,*** Lindau, Germany. info@lindau-nobel.org

July 12-16, 2012 • ***5th Euroscience Open Forum (ESOF2012),*** Dublin, Ireland. www.esof2012.org

September 3-6, 2012 • ***Kavli Prize Science Forum,*** Oslo, Norway. www.kavlifoundation.org/kavli-prize-science-forum

September 4-7, 2012 • ***International Conference on Science Communication,*** Nancy, France. www.jhc2012.eu

In Memoriam

Ray A. Colvig
Announced UC Berkeley News to the Nation

Ray A. Colvig, chief spokesman for UC Berkeley for nearly three decades, died March 4 of sudden cardiac problems. He was 80.

As manager of public information, Colvig's job was representing the Berkeley campus and the seven chancellors whom he served over 27 years that took in the birth of the Free Speech Movement in the 1960s, the campus protests over the Vietnam War, the riots over People's Park, and the Patty Hearst kidnapping. He did his job with such integrity that reporters—both in the Bay Area and nationally—relied on him to provide facts impartially, regardless of the controversies. Colvig also provided details on nine Nobel Prize winners, the rise of the campus to academic and research excellence, and an endless stream of scientific advances by faculty members in every discipline.

According to Charlie Petit, who met Colvig while Petit was working at the *San Francisco Chronicle*, Colvig was "among the most reliable PIOs in the business," and a "living history for UC Berkeley."

"He was the best sort of person," Petit said. "He was congenial, he was careful, and he knew how to tell a joke. He was someone that everyone wanted to have as a favorite uncle."

Colvig was born in 1931, in a small house owned by a lumber company in the town of Weed, Calif., at the foot of Mt. Shasta. He graduated from a 16-student high school class before attending UC Berkeley to study English and journalism. After earning his bachelor's degree, he studied at Cornell University, where he earned a master's degree in English. Colvig joined the UC Berkeley public information office as a science writer in 1959 and was named manager of the department in 1964.

After retiring in 1991, Colvig collaborated on two books with Glenn T. Seaborg, the Nobel laureate and former UC Berkeley chancellor. One was *Chancellor at Berkeley*, about Seaborg's years in that post, and the other was *Roses from the Ashes: Breakup and Rebirth in Pacific Coast Intercollegiate Athletics*. He also wrote *Turning Points and Ironies: Issues and Events-Berkeley, 1959-67* about the campus turbulence of the 1960s and the stormy tenure of Berkeley's first chancellor, Clark Kerr.

Colvig maintained his interest in science writing and was a co-founder and active member of the Northern California Science Writers Association.

Die-hard Cal fans, Colvig and his late wife, Norma, had season tickets to all his school's football and basketball home games for many years.

"Fifteen minutes before he passed," son Timothy Colvig said, "he asked what the score of the Cal-Stanford game was."
(Source: San Francisco Chronicle *and* The Daily Californian *obituaries)*

■ ■ ■

Richard P. (Dick) Leavitt
Director of Science Information, March of Dimes

Richard P. (Dick) Leavitt, a former member of NASW and a science writer for the March of Dimes Foundation for nearly four decades, died at his home in Hartsdale, New York on Feb. 1. He was 67.

Leavitt joined the March of Dimes in 1972 and was named director of science information in 1987. He was responsible for providing scientific information to the public, the news media, national office staff, and chapters of the foundation. He was closely associated with March of Dimes research programs and sat in on the foundation's research advisory committee meetings. He also contributed to *Encyclopedia Britannica*'s Medical & Health Annual entry on genetic disorders. In his obituary in the *New York Times*, the March of Dimes said, "We greatly admired Dick for his wit, erudition, dedication to scientific accuracy and integrity, and compassion for families affected by prematurity and birth defects."

In addition, Leavitt was a longtime volunteer EMT-defibrillator and past board member of the Scarsdale Volunteer Ambulance Corps, and volunteered for many years in the emergency room at White Plains Hospital.

Leavitt was born July 8, 1944, in Boston. He graduated from Belmont Hill School in Belmont, Mass., and from Yale University (Davenport College) with a degree in Russian studies in 1966. He was an officer in the U.S. Navy from 1966 to 1969, serving as education officer at the Naval Air Facility in Naples, Italy. Returning to the United States in 1970, he wrote for hospital and surgical trade magazines for two years before moving to the March of Dimes.
(Source: The Leavitt Family)

■ ■ ■

[*ScienceWriters* has learned belatedly of the following deaths.]

William (Bill) Glitz, of Falls Church, Va., on Nov. 2, 1011. Glitz was a 40-year professional public relations consultant specializing in the medical field and had been an NASW member since 1996.

R. Ned Landon, of Niskayuna, N.Y., on Dec. 28, 2011. He was 90 and had been a member of NASW since 1959.

Hugh Vail Shaw, of Annapolis Royal, Nova Scotia, Canada, on Feb. 4, 2011. He had been an NASW member since 1970. ■

ScienceWriters Welcomes Letters to the Editor

A letter must include a daytime telephone number and email address. Letters submitted may be used in print or digital form by NASW, and may be edited.

Mail to:
Editor, *ScienceWriters*
P.O. Box 1725
Solana Beach, CA 92075

email to:
editor@nasw.org

COLVIG COURTESY OF JANE SCHERR; MEREDITH BY CHRIS HILDRETH; BLAKESLEE COURTESY OF URSULA COYOTE; AAAS FELLOWS COURTESY OF JEFF GRABMEIER

Dennis Meredith Honorary Sigma Xi Life Member

Science author and journalist Dennis Meredith will be inducted as an Honorary Life Member of Sigma Xi. Meredith's career as a science communicator has included service at some of the country's leading research universities, including MIT, Caltech, Cornell, Duke, and the University of Wisconsin. He has worked with science journalists at all the nation's major newspapers, magazines, and radio and TV networks and has written well over 1,000 news releases and magazine articles on science and engineering over his career.

He has served on the executive board of the National Association of Science Writers and is a contributor to *ScienceWriters*. He wrote the NASW handbook on media relations, *Communicating Science News*. He has also served as a judge for the NASW Science in Society Awards and the AAAS Journalism Awards. He won the latter award himself —for newspapers under 100,000 circulation—in 1974. He was a creator and developer of EurekAlert!, working with AAAS to establish this international research news service, which now links more than 4,500 journalists to news from 800 subscribing research institutions.

He has also worked with federal agencies and scientific journals, including NSF and the Public Library of Science, to help them develop policies for communicating research and collaborating with public information officers. Since 1983, noted science advocates, top science journalists, and friends of research who have made important contributions to science but are not eligible for Sigma Xi membership, have been elected honorary members. ■

Dennis Meredith

Sandra Blakeslee

Sandra Blakeslee Honored As AAAS Fellow

NASW member Sandra Blakeslee has been elected a Fellow of the American Association for the Advancement of Science (AAAS). She received formal recognition of this honor at a ceremony during the 2012 AAAS Annual Meeting, in Vancouver, Canada.

AAAS Fellows are recognized for meritorious efforts to advance science or its applications. Blakeslee was cited for "distinguished contributions communicating with alacrity and interpreting with clarity the intricacies of psychological science and neuroscience to and for the general public."

Blakeslee has been a science writer at the *New York Times* for 45 years. She began her career (after a stint with the Peace Corps in Borneo) in 1967 at the United Nations Bureau, where she was a news assistant, then a clerk on the night city desk (during the Columbia riots), and then a staff reporter in the science department.

She has covered a wide range of subjects but somewhere in the mid-80s fell in love with neuroscience, which has been her main specialty ever since. She is particularly fond of social cognitive neuroscience which is digging ever deeper into mysteries of the human condition.

Blakeslee is the co-author of eight books, four of them written with Judith Wallerstein (*Second Chances*, *The Good Marriage*, *The Unexpected Legacy of Divorce*, and *What About the Kids?*). Her other books are about the brain (*Phantoms in the Brain* with V.S. Ramachandran, *On Intelligence* with Jeff Hawkins, *The Body Has a Mind of Its Own* with Matthew

BLAKESLEE continued on page 29

2012 Travel Fellows at AAAS

NASW awarded travel grants to eight undergraduates interested in science writing to attend the AAAS meeting in Vancouver, B.C., Feb. 16 to 20. They are:

(Front row, L to R) Michelle Spektor, Raechel Kelley, Rachel Feltman, and Derrick Haynes. (Back row) Signe Brewster, Aviva Hope Rutkin, Natalie Villacorta, and William Ferguson.

- Michelle Spektor, an undergrad at Cornell University studying biology and society
- Raechel I. Kelley, who is studying science journalism as a Frances Perkins Scholar at Mount Holyoke College
- Rachel Feltman, a senior at Bard College at Simon's Rock, where she studies environmental science and writing
- Derrick Haynes, a senior majoring in print/online journalism at Howard University
- Aviva Hope Rutkin who studies neuroscience and Chinese at Union College
- Natalie Villacorta, a junior at Brown University studying biology and English
- William Ferguson is a University of Arizona junior majoring in journalism
- Signe Brewster, a senior studying life sciences communication at the University of Wisconsin-Madison

Each received up to $1,000 in travel expenses to attend the meeting where they reported on some of the scientific sessions that they found most interesting and newsworthy. Read their articles at **https://www.nasw.org/taxonomy/term/76.** ■

Pam Frost Gorder
Assistant Director
of Research Communications
Ohio State University
GORDER.1@OSU.EDU

Our Gang

Beryl Lieff Benderly has been named a winner of the 2011 IEEE-USA Award for Distinguished Literary Contributions Furthering Public Understanding of the [Engineering] Profession in recognition of "outstanding journalistic effort in educating the public about the influence of engineering in medicine." Her winning cover story on biomedical engineering appeared in the October 2010 issue of *Prism*. The award will be presented at the IEEE annual convention in May. Congratulate her at blbink@aol.com.

New freelancer **Rachel Berkowitz** has begun writing a column in *Physics Today*'s daily edition. It's called "Down to Earth," and it covers research and updates within the earth sciences community. Recent topics include the origin of rock falls on Yosemite's Half Dome—hint: It has something to do with the convex curvature of the dome itself—and geologic evidence of long-ago tsunamis. Write to her at rdberkowitz@gmail.com.

A veritable *Who's Who* of NASW has started a new blog. **Deborah Blum**, **David Dobbs**, **Jennifer Ouellette**, **Steve Silberman**, **Maia Szalavitz**, **John Timmer**, and **Carl Zimmer** are among 16 writers and editors of Download the Universe, a site that offers reviews of new science e-books. According to Zimmer, they created the site because "traditional book reviews limit themselves to works on paper. Some e-books may appear in computer magazines, but buried in reviews of laptops and printers. In between, we need a community… Download the Universe is a step towards that community. It is the work of a group of writers and scientists who are deeply intrigued by the future of science books." Send general inquiries to Zimmer at carl@carlzimmer.com, and contact the rest at dblum@wisc.edu, david.a.dobbs@gmail.com, jenluc@gmail.com, steve@stevesilberman.com, maiasz@gmail.com, and jtimmer@arstechnica.com.

At the March 2012, American Chemical Society meeting in San Diego, **John Borchardt** gave a talk entitled "Technical writing: A gateway to other nontraditional careers." So far this year, he's proven that technical writing is a gateway to publication: he's written on the shale gas drilling boom and the technology that makes it possible, funding for biotech startups and solar power cell manufacture, patents, and the proper disposal of old chemicals. Write to jkborchardt@aol.com to find out what to do with the decade's worth of paint cans you've hidden in the garage.

Emily Caldwell was a finalist in the 2012 SeniorHomes.com Best of the Web competition. Her blog, "Mom's Brain," covers her experience as a caregiver for her mother, who was diagnosed with Alzheimer's disease in 2005. Though she began the blog anonymously, eventually Caldwell "realized there is nothing to hide, because there should be no shame associated with Alzheimer's disease… Emotions under these circumstances can run high. But there's also lots of humor. And mostly, the unexpected is the norm." She received the fourth highest ranking in popular votes in the contest, which highlights the best senior living and care-giving websites, blogs, and resources for consumers and senior living professionals. Congratulate her at Caldwell.151@osu.edu and read the blog at **http://momsbrain.wordpress.com/**.

Veronique Greenwood, **Sujata Gupta**, and **Emily Sohn** are among 12 writers chosen to attend the Knight Science Journalism Fellowships' Food Boot Camp. For one week, the attendees take an intensive course on the complexities of food and science at MIT. Like other MIT boot camps, the Food Boot Camp teaches the basics of the issues, but also addresses the underlying science and the overlying social, economic and political factors that influence them. Topics include food safety, food-borne illness, the politics of nutrition, the business of "better for you" foods, and environmental sustainability in agriculture. Congratulate Greenwood, Gupta, and Sohn at veronique.greenwood@gmail.com, sujigupta@gmail.com, and emily@tidepoolsinc.com, respectively.

Robert Kanigel, professor and former director of MIT's Graduate Program in Science Writing, has retired from that position and returned to Baltimore to once again write full-time. He's just back from three weeks in India, where he gave a series of public lectures for the 125th-birthday celebration of the mathematician Ramanujan, who also happens to be the subject of his second book, *The Man Who Knew Infinity: A Life of the Genius Ramanujan*. In the presence of the prime minister of India, Kanigel was given a scroll acknowledging the impact of the book. Now back in the U.S., Kanigel can celebrate the issue of his latest book, the non-science-related *On an Irish Island*, and he's begun writing a biography of urban visionary Jane Jacobs. Write to him at kanigel@mit.edu.

After 20 years of running his own academic research laboratory, cancer pharmacologist **David Kroll** has taken a new path as director of science communications at the Nature Research Center, a new wing of the North Carolina Museum of Natural Sciences. He also joined the faculty of North Carolina State University, where he will teach a course on science in the media. And he will continue to write his Terra Sigillata natural products pharmacology and chemistry blog at the *Chemical & Engineering News* blog network, CENtral Science, as well as his Take As Directed general interest science blog at the PLoS Blogs network. Kroll adds that he has no regrets about "leaving my science lab career behind for lower pay and a longer commute." Congratulate him at david.kroll@ncdenr.gov.

Charlotte Libov's article profiling stem cell advocate Sabrina Cohen, entitled "Paralyzed as a teen, Sabrina Cohen fights to cure others," was selected as a finalist from among 1,000 entries in the America Inspired contest. That selection by a panel of judges was followed by a three-week period of online voting, after which Cohen was named the winner in the "Overcoming Adversity" category and awarded a $10,000 prize. Libov won $1,000 for writing the article. The contest, sponsored by Examiner.com, was designed to spotlight community heroes. Tell Libov that she's your hero at char@libov.com.

Janine Sullivan Love has changed positions at publisher UBM Electronics, a division of United Business Media. Love is now senior editor of *Test & Measurement World* and editor of *Test*

GORDER COURTESY OF JO MCCULTY; CLANCY COURTESY OF MARC LEIBERMAN

& *Measurement DesignLine* and *RF & Microwave DesignLine*. She continues to be an adjunct professor of English at Sussex County Community College, senior editor at communications service Form and Content Media Limited, and owner/founder of technical writing/communications service Writing Solutions. Write to her at jlove@writesol.com to find out how she fits all this information on a single business card.

A tale of love, murder, and medical chicanery has made **Ann Parker** a finalist in two literary contests that wrap up later this spring: the Agatha Award for Best Historical Novel and the Bruce Alexander Memorial Award. Parker's book, *Mercury's Rise*, is the latest in her Silver Rush series of historical mysteries published by Poisoned Pen Press. Set in 1880s Colorado, it's the story of heroine Inez Stannert's quest to reunite with her family—and to untangle the suspicious death of a businessman from his cohorts' web of deception as they attempt to profit from the scourge of tuberculosis. Write to annparker@annparker.net to beg for details about what happens next!

Daniel Pendick has left his position as senior science writer at NASA to become the executive editor of *Harvard Men's Health Watch*, published by Belvoir Media Group and Harvard Medical School. Pendick describes the publication as "a monthly consumer health newsletter for boys exactly like me: 49, slightly paunchy, but well-meaning." He adds that it's been "a little confusing switching from proto-stars to prostates, but I'm getting there." Drop him a line at dpendick@nasw.org.

The American Medical Writers Association has named **Melanie Fridl Ross** its 2011-12 immediate past president. She has been a member of the organization's executive committee since 2003. She continues to direct Health Science Center News and Communications at the University of Florida in Gainesville, where she also teaches news reporting. And she's senior producer of "Health in a Heartbeat," which airs on public radio affiliates in 18 states and Washington, D.C. Congratulate her at ufcardiac@aol.com.

Andrea Widener has joined *Chemical & Engineering News* as an associate editor, where she will cover science education policy. She previously served as a science writer at the Howard Hughes Medical Institute's *HHMI Bulletin*. Write to her at andrealwidener@yahoo.com.

The European Geosciences Union (EGU) has named **Alexandra Witze** one of two winners of its first-ever Geosciences Communications Fellowship. Witze, a contributing editor at *Science News*, will use her €2,500 award to support a book she is writing with her husband, freelancer Jeff Kanipe. The book concerns the 1783 eruption of the Icelandic volcano Laki, which Witze calls "one of history's great untold natural disasters." The eight-month-long eruption devastated Iceland and much of northern Europe with thick clouds of hydrofluoric acid and sulfur dioxide. The new EGU fellowship is an annual competition, intended to enable writers to accompany geoscientists on location and to develop in-depth understanding of their questions, approaches, findings, and motivation. Find out where Witze's fellowship will take her at awitze@gmail.com.

Catherine Zandonella has left freelancing to become communications and outreach strategist at Princeton University. She'll write science news and features, and produce Princeton's research magazine, *Discovery*. Write to her at czandone@princeton.edu. ■

Suzanne Clancy
Senior Manager of Public Relations
Life Technologies
SCLANCYPHD@YAHOO.COM

Regional Groups

WASHINGTON, D.C.

Members gathered at the National Geographic Society in December to bid farewell to 2011 at the annual DCSWA holiday party. Santa Claus showed up to spread holiday cheer and hand out special gifts to the "nicest" party guests. To kick off 2012, in January, Ed Sauer, a Washington tax advisor, sat down with DCSWA members to share helpful tips on how journalists and freelance writers should file their taxes. Then in February, sharp-eyed DCSWAns spotted bald eagles on a tour of Mason Neck National Wildlife Refuge, about 20 miles south of Washington, in Virginia. Later in the month, members met at the Science Club in Dupont Circle for the inaugural DCSWA Tweetup (#duckswap), where DCSWA tweeps shared drinks and exchanged their favorite science books.

DCSWA continued to sponsor the D.C. Science Cafe this winter, hosted each month by the popular Busboys and Poets. In December, science fans considered how architecture, institutional culture, community, and leadership influence creativity, in a discussion led by Art Molella, director of the Smithsonian's Lemelson Center for the Study of Invention and Innovation; Monica Smith, exhibition program manager at the Lemelson Center; and Sean Eddy, a genome analyst at the Howard Hughes Medical Institute's Janelia Farm. Later, in February, DCSWA members embraced the weirdness of quantum mechanics in a discussion led by physicist of Steve Rolston of the University of Maryland and the Joint Quantum Institute.

NEW YORK

Science Writers of New York (SWINY) had a busy several months. In December, Mark Smith, Skirball Professor of Bible and a Professor of Hebrew and Judaic Studies at New York University, gave a presentation on his research on Ancient Israel, which draws on new archaeological discoveries and a growing library of ancient inscriptions and icons from surrounding civilizations. These discoveries have changed our understanding of some Biblical passages, and suggest how the ancient Israelite culture emerged from the Canaanite world around it. Smith addressed questions including: What if the ancient Israelites were polytheistic and worshipped many gods; whether Israel's God, Yahweh, was the god of Israel's mortal enemies, the Edomites; and whether the First Commandment meant that there were other gods, but Yahweh came first?

In January, SWINY presented "Treating the Brain for Depression, Anxiety, and Chronic Pain—Transcranial Magnetic Stimulation, Deep Brain Stimulation, and Beyond," which discussed the use of medical devices to treat depression and other mental health disorders. Speakers were Dan Iosifescu,

M.D., associate professor of psychiatry and of neuroscience, who heads the Mood and Anxiety Disorders Program at the Mount Sinai School of Medicine; Joshua Berman, M.D., Ph.D., assistant professor of clinical psychiatry at Columbia University and director, Program in Experimental Brain Stimulation in the Division of Experimental Therapeutics, at Columbia University College of Physicians & Surgeons; and Charles Avery (Chip) Fisher, president of Fisher Wallace Laboratories, which manufactures the handheld Fisher Wallace Cranial Stimulator.

Also in January, author, synesthete, and synesthesia expert Maureen Seaberg spoke. Synesthesia is the simultaneous and consistent activation of two sensory or sensory and cognitive pathways. Most common is seeing letters, numbers, and day/months names in color. Seaberg's book *Tasting the Universe* narrates her intensive journey to understand this neurologically-based trait that she was born with, and provides interview-based examples of this trait in others, including the actress Tilda Swinton and violinist Itzhak Perlman, for whom specific notes on the violin have specific colors. Seaberg was joined by William Bushell, Ph.D., neuropsychology investigator affiliated with MIT, who studies an association between synesthesia and deep meditation.

And, to celebrate Leap Year, SWINY held its annual holiday party at Friend of the Farmer in the historic Gramercy Park district, on Feb. 29.

NEW ENGLAND

Boston-area science writers who have built online audiences through a variety of strategies and outlets shared their experiences at a January panel discussion sponsored by the New England Science Writers.

Making the leap from science writing and editing to the more entrepreneurial world of blogs and web presence requires new ways of doing things, business models, and creative staffing strategies. "You not only have to write the stories—you also have to sell them, over and over," said Carey Goldberg, co-host of the CommonHealth blog (**http://commonhealth.wbur.org**) on Boston NPR outlet WBUR. CommonHealth blog became a general health news site in 2010 as part of a grant establishing a dozen blogs at local NPR stations. It covers the intersection of medicine, money and politics, including health care reform, medical innovation, and personal health. The blogging experiment convinced NPR leadership of the value in original reporting that originates on the web, Goldberg said.

Bob Buderi, former editor-in-chief of *Technology Review*, founded the tech business website Xconomy (**http://www.xconomy.com**) with a focused presence in six major cities. Buderi said he's succeeded in attracting "underwriters and partners" (rather than advertisers) by offering them access to an "elite audience" of well-educated, high-profile individuals interested in innovation and who want to be associated with the content on the site.

Gabrielle Strobel, executive editor of the Alzheimer Research Forum (**http://www.alzforum.org**) said that long-term philanthropic support (15 years) has made possible the community of researchers, patients, policy makers, and others that the free site has created. Among other things, it serves as a dynamic exchange of scientific questions and results. More than half of the audience are active Alzheimer's researchers, most of whom use AlzForum as their home page.

The fourth panelist, Ethan Zuckerman, is the founder of Global Voices (**http://globalvoicesonline.org**), which uses a small, paid staff of part-time editors and scores of volunteer authors from around the world, bringing news and opinion from voices not ordinarily heard in the mainstream media. For example, Global Voices started covering the Arab Spring uprising on Dec. 20, 2010, three weeks before the *New York Times* picked up the story, Zuckerman said. Though not oriented toward science writing, Global Voices is an unusual model for aggregating content—and doing it with a minimal budget.

NESW COURTESY OF DIANNE FINCH; CSW COURTESY OF WILLIAM HARMS

Regional Groups inform and delight

Carol Cruzan Morton introducing a panel whose online news operations are shaping the future of science journalism…

…Original in-depth content, targeted audience and (paid) savvy editorial management have helped build solid online news operations, according to (from left) Alison Bass, Ethan Zuckerman, Gabrielle Strobel, Carey Goldberg and Bob Buderi at January's member meeting sponsored by the New England Science Writers.

Steve Koppes (above) and Jann Ingmire (below) join fellow Chicago Science Writers colleagues…

CHICAGO

Stress, and what to do about it, was the topic when the Chicago Science Writers group gathered for wine and cheese in a 10th-floor conference room overlooking Michigan Avenue and busy rush hour traffic below. University of Chicago psychologist Sian Beilock, a blogger, an accomplished communicator of science to the public, and the author of *Choke: What The Secrets of The Brain Reveal About Getting It Right When You Have To*, discussed her research on why some people choke under pressure and why others do not. Whether it's test taking, public speaking, or athletic performance, many factors influence performance anxiety. For example, just having to identify your racial group or gender before taking a test can conjure up "stereotype threat"—negative feelings that can prevent women and minorities from doing their best. In other cases, thinking too much can lead to "paralysis by analysis," which in an athlete can disrupt what was once a fluid, flawless performance. Beilock's work has shown the importance of working memory in helping people perform their best in academics and in business. Working memory, lodged in the prefrontal cortex, serves as a mental scratch pad for temporary storage of information relevant to the task at hand, whether solving a math problem or responding to tough, on-the-spot questions from a client. Talented people often have the most working memory, but when worries creep up, the working memory they normally use to succeed becomes overburdened and they lose the brain power necessary to excel. That's why you should prepare by practicing before a presentation.

NORTHWEST

The Northwest Science Writers Association (NSWA) rang in 2012 with a January party in the moon shadow of the Space Needle, at Seattle's Institute for Systems Biology. Institute scientists gave tours of the state-of-the-art facilities. NSWA President Sally James announced newly elected board members Rebecca Kelley, Molly McElroy, and Keith Seinfeld, who join continuing board members David Ansley, Sandi Doughton, Ellen Kurek, John Roach, and David Williams.

From partying to posting, NWSA focused on online science communication in February, with a ScienceOnline2012 recap on the University of Washington campus. People who attended the sixth annual confab on science and the web, held in North Carolina in January, included Sandra Porter, Liz Neeley, Jennifer Davison, Usha Lee McFarling, and Brian Glanz. They conveyed the buzz from the in-person gathering of journalists, bloggers, scientists, science artists, open-science advocates, librarians, and data specialists. ScienceOnline2012 is an "unconference," meaning that beforehand, using a wiki, everyone planned the interactive sessions, which were discussions, not lectures. Among the highlights: communicating personalized genomics, dealing with being attacked online, and crowdfunding for science. Listen to an audio archive of the left-coast recap on our landing page (**http://nwscience.org**).

The chapter completed fundamental upgrades to its website and membership management. Now, the online process to join NWSA is easier. Thanks to treasurer, David Ansley, and consultant, Matt Vivion, for their hard work on those crucial infrastructure upgrades.

NORTHERN CALIFORNIA

At NCSWA's annual holiday dinner, architect, photographer, and UC Berkeley professor Charles (Cris) Benton shared photos taken from kite-lofted cameras above the Bay Area. The images wowed NCSWA members and guests who were in San Francisco for the American Geophysical Union annual meeting. Benton showed off shots of the 15,000-acre site of former salt ponds in the bay, now being restored to a natural state. Small aircraft can't fly as low as his kites, so Benton's often stunning aerial photos are about the only way to get this view. The group learned about

REGIONAL GROUPS continued on page 29

NSWA COURTESY OF ANNIE LAURIE MALARKEY; NCSWA COURTESY OF CRIS BENTON

...atop the Chicago City Hall "Green Roof"—a 20,300 sq. ft. garden with thousands of plants, trees, scrubs, and vines.

(Above, left to right) Northwest Science Writers Association members Sally James, Usha McFarling, Mary Guiden and Sandi Doughton in a photo booth at the January meeting.

San Francisco Bay Area's new rail line (above) through a camera lens, kite-lofted 200 feet in the air. The same technique documented changes to a salt pond (left) six months apart. Photos are the innovative work of NCSWA speaker Cris Benton.

NASW CONTACTS

National Association of Science Writers, Inc.
P.O. Box 7905
Berkeley, CA 94707
Phone 510-647-9500
www.nasw.org

STAFF

Executive Director
Tinsley Davis, director@nasw.org

NASW Cybrarian
Russell Clemings, cybrarian@nasw.org

Workshops Coordinator
Tinsley Davis, workshops@nasw.org

***ScienceWriters* Editor**
Lynne Friedmann, editor@nasw.org

OFFICERS

President
Nancy Shute, nancy@nancyshute.com
Freelance

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BOARD MEMBERS AT LARGE

Terry Devitt, trdevitt@wisc.edu
University of Wisconsin-Madison

Dan Ferber, ferber@nasw.org
Freelance

Bob Finn, finn@nasw.org
Int'l Medical News Group

Deborah Franklin, deborah_franklin@nasw.org
Freelance

Jeff Grabmeier, grabmeier.1@osu.edu
Ohio State University

Michael Lemonick, mikelemonick@gmail.com
Climate Central

Robin Lloyd, rlloyd@sciam.com
Scientific American

Rosie Mestel, rosiemestel@gmail.com
Los Angeles Times

Tabitha M. Powledge, tam@nasw.org
Freelance

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Mitch Waldrop, m.waldrop@naturedc.com
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NEW MEMBERS

CALIFORNIA: Caitlin Sedwick, freelance, Carlsbad; Kristina Roskos*, Keck Graduate Institute of Applied Life Sciences, Claremont; Ryder Diaz*, UC Davis; Emily Martinez*, UC Davis; Janet Rae-Dupree, SLAC Nat'l Accelerator Lab, Stanford; Linda Marsa, freelance, Los Angeles; Katy Butler, freelance, Mill Valley; Regina Cheung*, Stanford Univ.; Ann Wendland, Caltech, Pasadena; Brian Malow, freelance, San Francisco; Steve Silberman, freelance, San Francisco; Thomas Sumner*, UC Santa Cruz; Sandra Aamodt, freelance, Winters. **COLORADO**: Terri Cook, freelance, Boulder; Catherine Meyer*, Univ. of No. Colorado; Ariana Brocious, KVNF Community Radio, Paonia. **CONNECTICUT**: Joseph Calamia, freelance, New Haven; Peniel Dimberu*, Yale Univ., New Haven. **DISTRICT OF COLUMBIA**: Sarah Graddy, freelance; Charles Homans, *The New Republic*; Jane Lee, Science; Kenneth Moore, freelance; Sara Reardon, *New Scientist*; Ivan Semeniuk, *Nature*; Mary Catherine Adams, American Geophysical Union. **FLORIDA**: Mickie Anderson, Univ. of Florida, Inst. of Food and Ag. Science, Gainesville; Erica Anderson*, Univ. of Florida, Gainesville; Cristina Rabaza*, *Journal of Young Investigators*/ Univ. of Florida, Gainesville; Derrick Haynes*, Howard Univ., Lauderhill. **GEORGIA**: Nancy Peck*, SCAD (Savannah College of Art and Design), Savannah. **IOWA**: Matthew Nelson*, Drake Univ., Des Moines. **IDAHO**: Cindy Salo, freelance, Boise; Laura Kross*, Univ. of Idaho, Moscow. **ILLINOIS**: Katie Yurkewicz, Fermilab, Batavia; Madeline McCurry-Schmidt, Amer. Soc. of Animal Science, Champaign; Darcy Ross*, Univ. of Illinois Urbana-Champaign; Jennifer Abbasi, freelance, Skokie; Ashley WennersHerron, Fermilab, Batavia. **LOUISIANA**: Emily Powell*, Louisiana State Univ., Baton Rouge. **MARYLAND**: Laura Dattaro, *Baltimore City Paper,* Baltimore; Christopher DiFrancesco, Nat'l Cancer Inst., Bethesda; Sean Treacy*, Johns Hopkins Univ., Baltimore; Sarah Lichtner*, Johns Hopkins Univ., Baltimore. **MASSACHUSETTS**: Charli Kerns*, Boston Univ.; Caitlin Stier, *New Scientist*, Allston; Margaret Clark*, Harvard Univ.; Mary Chaffee*, Univ. of Mass., Dartmouth; Lillian Hwang*, Boston Univ.; Noelle Swan, freelance, Brighton; Hepeng Jia, MIT; David Scales*, Harvard Medical School; Taylor Beck*, MIT Science Writing Graduate Program. **MICHIGAN**: Adam Becker*, Univ. of Michigan, Ann Arbor; Rewatee Gokhale*, Michigan State Univ., East Lansing. **MISSOURI**: Paige Pritchard*, Center for Agroforestry, Univ. of Missouri, Columbia. **NEW JERSEY**: Laurie Tarkan, freelance, Maplewood; Fred Guterl, *Scientific American*, Montclair; Erilyn Riley, Hemedicus, Inc., Ridgewood; Karen Golebowski*, Univ. of the Sciences in Philadelphia, River Edge. **NEW MEXICO**: George Johnson, freelance, Santa Fe. **NEW YORK**: Sharon Hartzell*, College of William & Mary, Binghamton; Chikaodili Okaneme*, Columbia Univ.; Ajai Raj*, CUNY Graduate School of Journalism, NYC; Zully Santiago*, John Jay College of Criminal Justice, NYC; Kennedy Thomas, American Physical Society, Brooklyn; Sarah Whelchel*, Hunter College, NYC; Robert Aboukhalil*, Cold Spring Harbor Laboratory, Cold Spring Harbor; Sherrie Dulworth*, Columbia Univ.; Elbert Chu*, CUNY School of Journalism, NYC; Yael Maxwell, Cardiovascular Research Foundation, NYC; Paul McRandle, NRDC, NYC; Shannon Yu*, Gerstner

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**student member*

AAAS MEETING

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Acknowledging the outdated engineering flaws that led to the tragedy at Japan's Fukushima plant after the March 2011 tsunami, Schenkel explained that a more regulated global system would prevent future incidents.

"The international regulations vary," said Schenkel, noting that the International Atomic Energy Agency (IAEA) sets guidelines that are voluntary, not obligatory. Modern developments in nuclear energy, such as improved internal cooling methods, will help to protect surrounding communities, he stated. Converting to deep geological repositories also would allow for better disposal of radioactive waste, Schenkel added.

"The new generations of reactors incorporate 40 years of experience," Schenkel said, "and they are a major step forward in safety." He suggested that IAEA be entrusted with the globalized coordination of nuclear energy to improve existing nuclear facilities and ensure the proper management of the new generation of reactors.

O'Reilly challenged, as myth, that all tobacco products are equally harmful—while further describing the need for less toxic nicotine products such as smokeless and modified tobacco. Those products are not commonly linked with smoking-related diseases, he noted. "If people are going to consume nicotine," O'Reilly said, "then give it to them in the safest possible way."

O'Reilly blamed policy makers for focusing on unsuccessful "quit or die" strategies for smokers. He explained that nearly a billion people will die from cigarettes if there is not an intervention that urges smokers to switch to these allegedly safer nicotine substitutes.

"We need to see tobacco consumers not as sick and addicted patients," O'Reilly said, "[but] as consumers who make real consumer choices and understand what it is that would make them migrate to safer products."

In response to questions about why the industry continues to market cigarettes to poorer countries when there are safer products available, O'Reilly responded that companies still have "duties to shareholders…[and] an obligation to maximize profits."

Van den Eede discussed the political issues surrounding production of genetically modified organisms. He said they provide "a contribution to food security" regardless of societal stigmas.

Van den Eede called for more science to be incorporated in the decision-making process, while insisting that "it is absolutely impossible to allow a product on the market if you know that it has potential problems with the environment or human or animal health." Some GMOs might prompt certain allergic reactions, putting unaware consumers at risk, he stated.

"The consumer does not see any benefit from [GMO] technology," Van den Eede stated in response to an audience question. "Any benefit at all will be seen on the farmer level or seed production level."

Cunningham concluded by arguing that consumer outcomes must be clearly outlined in these and other controversial topics: "Neither the benefits nor the cost are very clear, but the costs are clearer than the benefits." ■

SCHOLARLY PURSUITS

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policy. In the United States this happens in a very complicated environment where policy makers must make a decision to rely on various scientific opinions based not only on their own personal beliefs but also the perceived beliefs that their constituents are likely to have. Accordingly, scientific authority in this context is tied to a knowledgeable public that is predisposed to accept technocratic authority.

This paper investigates three variables for a link to the level of policy influence that people feel scientists should have. These variables include the level to which one feels that a scientist: (1) is knowledgeable of the subject at hand, (2) has the national interest in mind as opposed to personal interests, and (3) is in agreement with the broader scientific community on the topic. Not surprisingly, all of these variables serve as predictors as to whether an individual supports scientist involvement in the policy process. However, the strongest predictive factor is whether or not an individual believed that the scientist had the national interest in mind. This is somewhat concerning considering recent polls showing dipping levels of trust in scientists' ability to put public interests ahead of their own.

If we apply the model Kahneman describes to this situation, we gain some additional insight. Kahneman notes that non-experts will substitute easy questions over difficult questions. Making a judgment about the level of influence that scientists should have in the policy process is complicated and requires some level of expertise to answer. Answers to this question are influenced by personal background, and respondents likely used some type of simpler surrogate question to come to a conclusion. The data in this paper suggest that one of the most important surrogates that people use for answering the question about the level of influence scientists should have in policy making is whether they feel that scientists have the national interest in mind.

An additional insight that Kahneman shares is that people are very good at remembering agents and what they do. We create mental lists of agents and assign certain attributes to the people in these roles. Scientists have a very specific role in the minds of most people which may not be consistent with participating in the policy process. With all of this in mind, there are a few potential implications for science communicators. First, we need to be particularly mindful of how we describe the role of scientists and how it may conflict with historically formed context. Second, this reinforces the importance of building public trust of scientists and the need to engage people in meaningful ways about scientists' motivations. These additional pieces of context may make a significant amount of difference in the collective mind of your audience, and color the outcomes of many strategies for engagement of scientists with policymakers and the public. ■

BLAKESLEE

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Blakeslee, and *Sleights of Mind* with Stephen Macknik and Susana Martinez-Conde). Sandra is a third generation science writer. Her grandfather, Howard, was science editor of *The Associated Press* and her father, Alton, was also *AP* science editor. Her son, Matthew, is the fourth-generation Blakeslee to write about science. ■

REGIONAL GROUPS

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wildlife returning to the area and the ins and outs of aerial photography as an art form and a remote-sensing tool. Benton brought along his cradle, kites, and cameras for a show and tell. (More of Benton's photography can be seen at **http://bit.ly/pRJQZo**) The traditional holiday science trivia contest, hosted by the almost-ready-for-prime time stand-up artist Rob Irion, impressed and embarrassed the appropriate proportion of NCSWAers. ■

SW2012 BACK COVER

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