So You Want To Be A Science Writer? Or Communicate Like One

MICHAELEEN DOUCLEFF, PHD
REPORTER & EDITOR, NPR’S SCIENCE DESK
Today’s Talk

- Why science writing?
- Who is it right for?
- How do I get started?
- How do I become a better science communicator?
- If I don’t want to be a science writer, why should I care?
Meet Dr. Mango Doucleff

- New assistant prof at UC Berkeley (canine sciences)
- Extremely focused on getting tenure
- Highly motivated researcher, doesn’t have any interest in pop science.
- Wants results and high-profile pubs
Why Science Writing

- Money ain’t bad

Medical writer

Associate professor
Why Science Writing? Cool Places

After Ending Polio, India Turns To Stop Another Childhood Killer

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MICHAELLE DOUGLEFF

Listen to the Story
Weekend Edition Sunday
Why Science Writing? Adventure

Covered the Ebola outbreak
In Liberia
Why Science Writing? Fun Assignments
Why Science Writing?

- **Work-life balance**
  - So many places to live
  - Easy on the two-body problem
  - Pretty good hours
Why NOT Science Writing?

- ‘Lots of criticism, rejection
- Less prestigious (“You’re throwing your career away!”)
- No tenure
- Very fast pace ... daily, weekly deadlines
- No lab work, little experimentation
- It’s hard!
Why Learn The Skills Of Science Writer?

- Success in science correlates w/ communication skills
- Good talkers at the top of their fields
- Write more convincing grants
- Want to pub in *Nature, Science*?
Is Science Writing Right For You?

If someone in lab gets great results, do you:

1. Get jealous, walk out of lab to grab a beer
2. Say congrats, go back to your own research
3. Run over and start asking as many questions as possible
Is Science Writing Right For You?

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  Start critiquing the results, Poking holes in logic

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  Immediately want to tell others, See how it connects to the big picture
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  - Get excited! Run over and start asking as many questions as possible
  - Start critiquing the results, Poking holes in logic
  - Immediately want to tell others, See how it connects to the big picture
  - Perfect for scientific editing
  - Perfect for science writing
Only Become A Science Writer ...

• If, and only if, you love to write.*

*Not required for editing
Flash back to 2007 ...

- How do you start to become a science writer?
- “Well, you just start writing ... “
How Do You Get From Here To There?
Just start writing ...

- You’ll get faster

- It will get easier:
  - To write
  - To sell stories
  - To get a full gig

- It’s the only the way to make $$

- You’ll figure out quickly if you like it
Where can you start?

- School and local publications
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- Start writing a blog (twitter, tumblr)
  Soooo... many blog networks to pub in
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- Science writing internship –
  AAAS Mass Media Fellows
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- Soooo... many blog networks to pub in
- Science writing internship

- Pitch to the places YOU READ
Back to 2007 ... NIH Postdoc

- Working in lab 60 hours a week ... but bored
- Picked up book “How To Write For Magazines”
- Wrote a pitch ... sent it to:
  - Runner’s World
  - Running Times
  - Trail Runner

... waited about two weeks
Back to 2007 ... NIH Postdoc

- Sold it to two places!
- Loved writing it so much, I started pitching all the time

Inclination for Speed
Run uphill like the pros

I'm A Runner: Wolfgang Ketterle, Ph.D.
The Nobel Prize-winning physicist talks about his 2:50 marathon and how running helps him stay at the top of science.

You were quite an athlete as a young boy, playing soccer and basketball. When and why did you start running?
When I was a little kid in Germany, I went to a turnverein, or a club run by volunteers where kids do all kinds of activities—run around, play ball, and do gymnastics. Running was never on my mind. But when we had to run a lap or two, I was usually the fastest. So I started getting interested in that.

When I was 14, some older boys in the track-and-field club said, "Want to go to the forest for a long jog?" I said, "Okay." That was the first time that I ran a 10-K, and I have done it ever since. It was strenuous, but I enjoyed it.

Why do you like long-distance running?
I like the challenge of endurance running. You're one-to-one with your body, consciously pushing against your limits to overcome fatigue, to push yourself further. Running is a challenge for my body.
What’s A Pitch

- A short email to an editor selling your story
  - Just figure out who edits what and reverse engineer address

- What you put in it:
  - Who you are
  - What the story will be about – what’s the point
  - What resources you will use to write it
  - Logistics (how long it will take, you’ll write it “on spec”)
  - Clips? Website?
Good Pitches

- Short: ~300 words

- Pointed: From just one or two sentences, the editor should know what the “head and deck” of the story are

- Clear and packed with information

- To the right editor
Blood Test Shows Promise as Alternative to Cancer Biopsy
By GINA KOLATA 44 Minutes Ago
The hope is to give oncologists a tool to let them figure out quickly whether a treatment is working and, if it is, to keep monitoring for resistance.

Bundle Of Joyful Microbes: Mom’s DNA Alters Baby’s Gut Bacteria
by MICHAELEEN DOUCLEFF
April 10, 2015 • Babies have a microbe in their gut that prevents infections and helps the immune system. But not all infants get the bacteria at the same time, or in the same amount. Scientists have figured out why.

Bacteria bonanza found in remote Amazon village
Genes for antibiotic resistance among those found in most-diverse human microbiome.

What Parents Can Do to Help Preemies
Hospitals are enlisting moms and dads to work full-time with their premature babies in the NICU
Dear Mr. Hensley,

I’m a graduate student at the Virginia Tech, studying neuroscience. I stumbled upon an idea that I thought would be great for Shots: *Point of the story, jazzed up a bit.*

A line to grab them. Deck, expanded to two sentences.

I offer you a 500-word story, entitled *Headline.* To write the story, I will interview:

1. Researcher 1, at University 1, who was involved in the study
2. Researcher 2, at University 2, who wasn’t involved in the study

I can get you the article two days after you give me the go ahead. The study is embargoed for *some time.* I’m happy to write it on spec. For examples of my writing, see my website:

[http://yourawesome.website.com](http://yourawesome.website.com)

Thank you in advance for your time, and I hope to hear from you soon,
Michaeleen
How do you write a good pitch

- Get in your helicopter!
  - Think broadly
  - See the whole picture
How do you write a good pitch

- Get out of the weeds!
  - Don’t fuss with details
  - Worry about the forest later
How do you write a good pitch

- Get in your helicopter!
- Make it connect to life, outside science:
  - Art, music, food, movies, TV, sports, health
How do you write a good pitch

- Get in your helicopter!

- Make it connect to life, outside science:
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- Cocktail party test:
  - How would talk about the findings at a cocktail party (nonscientist)
  - Call mom, or your non-scientist friend, explain and record
How do you write a good pitch

- Get in your helicopter!
- Make it connect to life
- Get rid of the jargon
  - Every word should be understandable by your mom or grandma
  - If you need other words, you’re in the weeds!!
How do you write a good pitch

• Get in your helicopter!
• Make it connect to life
• Get rid of the jargon
• Forget about chronological order → Switch to “interest order”
Same tips to help academics

- Get more grad students, post docs excited about research
- “Broad interest” required for top journals more media attention
- More media attention (NPR?)
- Might inspire new directions
Example: My Graduate Research

- Thesis title: Structures of sigma-54 transcription factor bound to DNA

- “I solved the NMR structures of bacteria transcription factor bound to it’s promoter element to see what residues are important for binding.”

- BORING! Jargonny. Weedy. Grandma could care less
Example: My Graduate Research

- Thesis title: Structures of sigma-54 transcription factor bound to DNA

- Connect to life: Sigma-54 required for Lyme disease

- Get out of the weeds: No one cares about structures

- Remove the jargon: promoter, residue, NMR
Example: My Graduate Research

- Thesis title: Structures of sigma-54 transcription factor bound to DNA

- “I studied a protein required for Lyme disease. I tried to figure out mutations that would stop ticks from getting infected with the Lyme bacteria. So maybe one day we could eradicate the disease.”

- Still pretty boring but much better.
Back to 2009 ... living a dual life

By day ...

In lab,
- Running columns
- Writing papers
- Talking NMR
- Good little postdoc

By night ...

Science writing,
- Pitching stories
- Writing, writing
- Researching food, running, dogs

I was exhausted!
Take an honest look at what I wanted

- **What I didn’t want:**
  - ‘Lots of lab work. Kind of hated it
  - Settling down in the mid-West
  - To teach the “penny” problem for seven years
Take an honest look at what you want

- What I didn’t want:
  - ‘Lots of lab work. Kind of hated it
  - Settling down in the mid-West
  - To teach the “penny” problem for seven years

- What I did want:
  - Cool science everyday
  - At the cutting edge
  - Fast paced, deadlines
  - Power and usefulness
What are the best options?

- Jump right into freelance science writing ... SCARY
- Get an internship (AAAS, NPR, Wired, NYTimes)
- Go to science writing school (NO MORE SCHOOL!)
- ... how about science editing
Scientific Editing

- These are tough jobs to get
- Helps you figure out: Do I love reading, writing 8 hours a day
- Teaches you a broad range of science
- Read papers fast, summarize findings
- Can return to academia
“Front of the book” best for writers

- Commission, edit and write commentaries, previews, essays, news
- Much less saying “no”
- More creative
After 2 years ... full-time writing best for me

- How did I make the leap from Cell to NPR?

- Well, I almost got fired ...
Birth of an idea

- Riding in the car, with Adele turned up loud

Nevermind I’ll find someone like you

- Made me cry ... thought why?
- Googled it ... no one knew, but I wasn’t alone
- I’m going to figure it out, pitch NY Times
Many obstacles

- “Worst idea ever” – husband
- “You can’t write for other outlets” – boss at Cell
- “No one cares about that song anymore” – hipster friend
But I kept going ...

- Emailed NY Times → “Sure we’ll take it on spec”
- Took two days off from work, wrote the damn thing
- NY Times holds for three weeks, days before Grammy’s → “Might not have space”
- Angry → sent to WaPo, LA Times, WSJ →
- 12 hours later: “Yes we’d like”
- Three days later ....
Big Break

- Went viral
- Covered by NPR, Slate, etc.
- When I got the interview at NPR, first question: “How did you make this article?”