



Photo courtesy of Dan Vergano

## Between the newsroom and the classroom

As lunchtime entertainment a few years ago, I gave a talk to a group of physics journal editors. The topic was covering physics for a national newspaper, using the studies they published as grist for the mill. As physics meetings go, it was a lot of laughs for them, in the vein of “if I didn’t laugh, I’d cry.”

I’m not even going to pretend they were laughing with me.

Most of the yuks came as I described for them the gulf between the newsroom and the classroom, starting with science literacy. Even though I regularly report physics news for a national newspaper, I was (and remain) deliriously unqualified to do so by even the most humble journal editor’s standards; with a Bachelor’s degree in aerospace engineering, I am grounded in modern physics only to the extent that Mussolini could be considered “modern.”

But by newspaper standards, I’m grossly over-educated, capable of calculating percentages, for example, something that verges on eccentricity in a reporter. Ask any waitress about a group of reporters trying to calculate a tip, deliberations whose rapidity rivals the negotiations that (sort of) ended the Korean War.

Amid the chuckles, looks of pained resentment, open hostility, etc., I did tell the journal editors one bright bit of news: Even if my readers are intimidated by science, and a decidedly low-rent oracle conveys its doings to them, they are still very interested. There is a surprising appetite in particular for physics stories.

All this came back to me recently, writing a report on a “cloak of invisibility,” (honest, that’s what the study called it) described in *Science* magazine. Basically, it was a nifty prototype that took advantage of the negative index of refraction that some meta-materials possess, allowing microwaves to (mostly) pass by the cloak without reflection, shadows, or other scattering. Voilà, microwave “invisibility” in one narrow frequency. There, I said it. You mostly got that, right?

No way my readers, or editors, would get it. For the most part, they don’t read books with an index, much less realize that materials possess one (much less one of refraction). Very few know there is an electromagnetic spectrum. They do know a story about Paris Hilton’s latest video mishap lies elsewhere in the newspaper, and they can just turn the page to find it. Science reporting is basically baseball reporting for the blind, with the play-by-play cut off by a commercial between every pitch.

But the funny thing is that the story ended up on the newspaper’s front page anyway. The editors loved it. “Great stuff, didn’t understand a bit of it,” some told me proudly. The big debate in the newsroom was whether we should go with a Harry Potter reference or a Romulan cloaking device one in the lead (“lede” to newsies) sentence of the story. Harry won, walking away.

And that’s one key to understanding why ignorance may seem to be prized in the newsroom. What we really do—and this isn’t even faintly “Modern” but “Classical” in the sense of Odysseus poking out the eye of the Cyclops—is tell stories. “Some geniuses smashed some atoms and out popped a red-headed phoenix,” is the template for a physics story. Not a bad template actually. But it is bound to leave out a few things—the name of each crew member, the plot of the Iliad, the details of Cyclops’ ruined business deals. You get the picture.

Investigations of Nature’s fundamental characteristics, bizarre properties of materials, and even squabbles about string theory that most physicists would likely prefer to stop hearing about, make for the stuff of engaging narratives, which is what our readers seem to want, at least as measured by online reading and newsstand sales.

Deploring scientific illiteracy is one of these cheap pastimes which, for effectiveness, rivals wishing for it to stop raining. People love science stories, however. So, what I ended up telling the journal editors is that getting the details right is paramount, but making sure that scientists give reporters a sense of the story behind the study may be just as essential.

*Dan Vergano is a science journalist and columnist for USA Today.*