

The (science) writing life



Seema Singh

‘The only way to be creative over time – to not be undone by our expertise – is to experiment with ignorance, to stare at things we don’t fully understand’, says Jonah Lehrer, author and popular science journalist.

Indeed, every time I have embarked on a writing assignment, I have stared at things that I do not fully understand – from copy-number variation to how can a gene, say, one that modulates the production of the hormone vasopressin, be dubbed the ‘husband material’, to more controversial subjects like what does the Indus script actually code for. But that is the draw of science writing, pretty much in the same vein as real science – all about having faith in uncertainty, in being driven by ignorance. But I am not sure if many of us understand or believe in this process; that ignorance can drive good science writing.

A few years ago, Pushpito Ghosh, Director, Central Salt and Marine Chemicals Research Institute, Bhavnagar, asked me a question – ‘If I have to hire someone like you, what do I look for: a person who has a degree in science and can write well; or someone who writes well and has understanding of science, but has no formal degree in science. And where do I advertise to get the best response?’

Let me add the disclaimer: I had written about his laboratory’s work in an Indian newspaper and in IEEE magazine *Spectrum*.

Ghosh’s questions were good, but I did not have the answers. I have seen writers with science background write crushingly boring stuff that nobody would care to read. On the other hand, I know writers with no advance science degrees write with a passion, flair, and care for detail that would put a specialist to shame. The art surely lies in combining the humanist’s sensibility with the scien-

tist’s rigour. More recently, someone again asked me a similar question. This time I dipped into a trusted resource. I went to Boyce Rensberger, who directed the Knight Science Journalism fellowship at Massachusetts Institute of Technology for 10 years, prior to which he was a science writer and editor at *The Washington Post* for 14 years. He says he does not believe it is necessary to have a science degree to be a good science writer, but it does help. It helps not because of the facts one learns in getting a science degree, but because it teaches how scientists think, the way one asks questions and goes about trying to answer them. It teaches the process of science, he says. However, this goes only so far. The ways of molecular biology, for example, are very different from the ways of petroleum geology. Pharmaceutical research is not much like palaeontology.

Carl Sagan, who probably did more for the popular understanding of science than anybody else, said ‘science is a way of thinking much more than it is a body of knowledge’. It is hard to disagree with this particularly because when it comes to communicating science to a non-specialist audience, the ‘body of knowledge’, or too much formal specialization in one branch of science, can have a flipside. Keeping aside the jargon that comes so naturally to a specialist, it gets difficult to maintain childlike curiosity that is necessary for writing an engaging piece. Clay Johnson in his book *The Information Diet* calls it the ‘cult of expertise’, which obscures the very capacity for cultivating a ‘thirst for ignorance’.

Still, I would concede, it is an open-ended question. And like most other creative professions, it has only guidelines, but no rule book cast in stone. One such guideline comes from late Stephen J. Gould, a palaeontologist and evolutionary biologist, who was perhaps more widely known for his popular science writing than his theories.

On a spring afternoon in 2001, when we, a group of science journalists, met him for lunch in Harvard Square at Cambridge, Gould was at his eloquent best. His rare skill was instantly noticeable: the ability to bridge the specialist and layperson gap. Gould spoke about many things: his abdominal mesothelioma (a rare form of cancer usually associated

with exposure to asbestos); teaching of creationism in some American schools (against which he crusaded); his theory of ‘punctuated equilibria’ (which propounded that evolution takes place in rapid spurts of species differentiation, not in continuous transformations), and a host of other issues. What I distinctly remember is that one of us had asked him how he managed to write such fascinating essays on a variety of subjects. Gould’s answer was deceptively simple: He read a lot, retained all of it, and was able to make ‘connections’. In his works, he could take an abstruse point in natural history and connect it with a building or a baseball game. As ordinary mortals, we can only look up to such writings for inspiration.

Making connections is central to science. It is, after all, an interconnected enterprise. But no less important than connecting the dots, is the act of collecting the dots itself. It requires training, rigour and expertise to know what dots to collect. As science communicators if we falter here, then we go down the slippery slope.

So, for writing this piece I went back to Ghosh and asked if he had found the science communication person he was looking for and what his own perspective was on this. He has not quite found that person yet, but he believes ‘someone who looks from outside has a different perspective’ and that helps communication.

Science is just about reviving in India. People mention that the first time in three decades such a coordinated effort is being mounted to infuse funds and sparkle in Indian science. But there still are not too many stories that can be told with a single-sentence punch line. In which case, the art of chronicling the process becomes even more important. Now, whether the body of knowledge will help here, or the skill of storytelling, is left to my mind, to individual communicators, specialists or non-specialists.

For me, personally, it is about homework and humility, intricate osmosis of critical inquiry and sensitivity, the spirit of curiosity, sense of wonder, and, of course, fact checking.

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