



Science journalism by a journalist for journalists

Book ANGLER, M. W. (2017). SCIENCE JOURNALISM: AN INTRODUCTION. OXFORD, U.K.: ROUTLEDGE

Reviewed by **Andy Ridgway**

Abstract This book is a beginners' guide to science journalism, explaining the 21st century journalistic process, from generating story ideas to creating multimedia content when the story's written, taking in research and writing structures along the way. While many of the chapters are introductory, the book also covers topics also likely to be of interest to more experienced writers, such as storytelling techniques and investigative journalism. Readers are introduced to important debates in the field, including the role that science journalism plays; whether it is a form of 'infotainment', or whether its primary role is to hold scientists and the science industry to account. Taken as a whole, what the book does particularly well is to introduce prospective science writers to the judgements they need to make as reflective practitioners.

Keywords Popularization of science and technology; Science and media; Science writing

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What's the book about?

What makes a good science journalist? "You have to know what the story is and you have to be able to say it in a sentence. People have to actually understand that sentence and still want to know more." These words, from the Guardian's former science editor Tim Radford and found in the pages of this book, cut to the heart of what science journalism is about — telling stories about science that are clear and engaging. But behind such a straight-forward sounding notion lies a whole world of skills, competing objectives that need to be weighed up, unwritten rules and know-how that make up good science journalism. And that's what this book is about.

Almost exclusively practical in focus, Angler's book describes all the key processes of science journalism; from generating ideas for articles (and the crucial difference between coming up with a broad 'topic' and a real story), how to do your research, how to choose and structure the words you write and how to create a multimedia package; there's even guidance for the 21st century writer on how to shoot video material.

It's a book about journalism, written by a journalist who has used journalistic techniques to formulate each solidly-researched chapter. Angler draws on interviews with writers and academics, reading from academic papers, blogs, other books as well as personal experience to pull together what feels like a comprehensive insight into science journalism. Though an experienced writer himself, Angler often chooses to defer the role of expert to his interviewees and the authors of the text he quotes, so, as he puts it, "... you will get to know the tools of the trade via the first-hand accounts of these experts." [p. 1]. What this makes for is a curated selection of quotes and extracts, interspersed with Angler's own thoughts.

Who is the book for?

This is a book of two halves. The first half covers the key terrain of science writing — research, interviews, story structures and the like. While the latter chapters walk into slightly more advanced areas, such as the art of crafting a narrative and investigative science journalism. It means, as the book's title suggests, that the book is most squarely aimed at newcomers to science journalism and would help both researchers looking to develop popular writing as a skill as well as those looking to work solely as writers. More advanced writers would need to pick and choose what they read, largely from the latter chapters in the book.

While Angler does draw on academic sources, such as studies of how emotion is used to engage readers in non-fiction writing, these are purely used to help guide the aspiring science writer rather than to engage those with an academic interest in science journalism — unless they happen to teach science writing.

What is it like?

This may not be a book for academics, but it does address a few hotly-debated topics in science journalism. One of which is science journalism's *raison d'être* — whether its role is to entertain, provide 'infotainment' or whether its primary role is to hold scientists and the science industry to account. Angler nails his flag to the mast on p. 3. "If done properly, science journalism questions the methods scientists employ as well as their results and how the media and the public interpret them; it also investigates and unfolds possible conflicts of interest researchers may have." He doesn't end there, on the same page adding: "Without a critical mindset, journalists often produce mediocre and shallow contributions that champion science rather than critically scrutinise it."

All this could give the aspiring science writer the impression that an article that's not questioning scientific techniques, results and conclusions is somehow less worthy. That unless you do these things, your writing is destined to be a "shallow contribution".

Later in the same chapter, Angler quotes a Guardian blog by Jalees Rehman at the University of Illinois in Chicago [Rehman, 2013]. This is a rallying cry for critical, investigative journalism and in particular journalists not simply relying on the peer review process of academic journals for the "fact checker role". In this blog, Rehman goes on to provide tips on distinguishing infotainment science journalism and critical journalism. "Infotainment science journalism stylistically generates a substantial amount of contagious enthusiasm in regards to the research being

reported.” Whereas critical science journalism employs soberer words and fewer words that convey excitement, such as “awesome”, “paradigm shift” and “revolutionary”.

But this shrugs off some equally noble aims of science writing — aims such as providing a means of escapism for readers, providing a source of optimism in challenging times, and even simply generating an interest in science. Perhaps even, dare I say it, excitement — something especially important at a time when so little science news is being read. Just 36% of Americans get science news “at least a few times a week” and 17% are “active science news consumers” [Funk, Gottfried and Mitchell, 2017]. Any science journalism can be done well — and badly — including journalism that doesn’t set out to hold science to account. It’d be a shame if new writers felt their efforts were somehow tarnished if their stories don’t pick science papers apart.

Another debate explored in Angler’s book can be boiled down simply to: storytelling in science writing is good (as it can boost reader engagement), or that it’s bad (as getting caught up in telling a story will make it hard to explain the complexities of the science well). Now you would be forgiven for thinking that this latter point of view is the preserve of scientists. Not, so — as Angler points out. In a blog, that Angler quotes, science writer Tabitha Powledge says: “Writing for story distorts and cripples explanatory prose. The fact that narrative science/medical journalism is fashionable — and at some pubs (sic) obligatory — doesn’t make it right. Or informative.” [Powledge, 2016]. Here though, Angler provides less opinion and more of an overview of the different sides of the argument. In fact, he gives a useful insight into different storytelling techniques, such as three-act structures and literary devices such as flashbacks and flash forwards. The chapter on storytelling in science journalism is a highlight of the book that should provide inspiration for even the most seasoned writers.

Then there’s the debate that’s almost as old as the internet itself of whether readers are willing to read long-form articles online, or whether vanishingly-short attention spans online mean that you’re wasting your time as a writer after the first few paragraphs. Here again, readers are left to make up their own minds. Angler cites research from Microsoft Canada’s consumer insights team, which states that the average attention span decreased from 12 seconds in 2000 to 8 seconds in 2013 [Gausby, 2015]. Although notably, the report this statistic comes from appears to be aimed at advertisers. But Angler does offer evidence of long-form science writing’s endurance online. “. . . thriving long-form platforms like Matter, the Atavist, Byliners and Nattative.ly seem to disprove the theory that online readers are easily distracted and cannot focus on an article over an extended period of time.” [p. 284].

In that same chapter, called ‘Science Journalism in the Digital Age’, we start thinking about digital audiences. Ed Yong, a writer at The Atlantic, makes an interesting point about the limitations of the data that can be gleaned about audiences of online articles. “I think you can work out where your audience comes from, what operating systems they run and which browsers they are using, but actually knowing who they are is much harder.” [p. 289]. Yong says he made efforts to get to know his readers on his blog by running a yearly thread in which he asked them to tell him more about themselves. But ultimately, says Yong, thinking about audience is only useful to a point. “If you have good stories and

you can tell them well, you will be able to find an audience. . . You can think about reaching a broad audience or a narrow audience, in terms of whether you want to communicate to a general lay reader or to scientists. In that sense it is critical. But beyond that, it pretty much doesn't matter." [p. 289]. I can't say I agree — most publications, online and in print, have differences in their audience be it in terms of ideology, broader interests and demography that and even the more subtle aspects of these can be useful when you're trying to forge long-lasting connections with your readers — connections that keep them coming back for more. So the book would have benefitted from more of a focus on audience — how you get to know them, how you write for different types and how you engage them in conversation.

But all this should not give the impression that this isn't a good book. It is. What really shines through in the pages is Angler's generosity of spirit. He has clearly gone to great lengths to present an honest picture of science writing — presenting the challenges and frustrations (including, for example, one of his own pitches that wasn't commissioned) so readers will walk into the profession with their eyes open and a little more worldly wise. At the same time, he offers words of wisdom on how to how to overcome potential pitfalls, like having your idea stolen when you pitch to a publication.

The debates, discussions and trade-offs raised in the pages of this book are all key considerations for a good 'reflective' science journalist and, for the most part, Angler lets the reader make up their own mind from the varied viewpoints presented. As a lecturer, I often tell my students at the start of a lecture: "If you leave here with more questions in your mind than you have right now, then I'll have done my job." Being a good science writer involves making judgements, and to do that, you have to have an awareness of what to make judgements about — and this book will undoubtedly help with that.

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