Science Writing for the Masses: a Primer

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Mary Mortimore Dossin wrote in a 1997 issue of College Teaching: "What I believe most students need is practice in the process of gathering information, analyzing and synthesizing that information, making their own sense out of it and then communicating their understanding to others." Science writing attempts to utilize all these skills. Interviews with employers of graduates from the UW Oceanography program suggest that our students can be better prepared for the 'real world' if they are better skilled at disseminating technical information to non-technical audiences.

The job of a science writer is to thoroughly air the issue. For OCN442, you conduct research, interpret it within the light of previous research, and then write the science article. You can interview subjects about their experiences on the topic, you should conduct library research on your subject and then organize the assembled ingredients into a feature story that incorporates multiple points of view on the subject. Graphics should be used that add multiple points of entry to the story. The final product will be a story that could be published in a magazine such as *Discover* or *Scientific American*.

What is a feature (science writing)?

A feature is a story that is more in depth than a hard news story, which consists of just a direct, one sentence lead paragraph and all the particulars in descending order of importance. Unlike a hard news story, the feature has more time and space to go into more depth. Written well, a good feature will move, entertain and teach the reader all at the same time.

The most popular type of feature is the human-interest story. Whereas a news story doesn't usually feature people affected by the news, feature stories have real people and real lives at the heart of them. Features are not features without the people whose lives are affected by the subject matter. They appeal to the reader on a visceral level, which makes the reader more likely to keep reading and absorb the information.

Features are comprehensive. Once the reader has read the feature story from beginning to end, she should feel very educated or at least grounded in the subject matter. The feature format lends itself particularly well to science journalism for several reasons, most important being that scientific concepts can be complex and therefore difficult for the layperson to understand. Features allow science journalists room to offer human examples, statistics, definitions, background and more to make the subject matter accessible to the reader.

While features have more entertainment value than news stories, science features must be just as accurate and fact filled as straight news stories. They also need to be well

organized so the reader does not get lost, with the information well paced and spaced to keep the reader's attention.

What is the structure of a feature story?

There are many ways to structure a feature story. For our purposes, however, we will stick to the following format for our feature:

- Anecdotal open
- Nut graph themes or issues
    - a,
    - b,
    - c
- Terms defined including background and statistics to demonstrate scope
- Development of
    - a,
    - b,
    - c
- Anecdotal close

The Anecdotal Open and Close

First, what is an anecdotal open? Often you will begin your science feature with a little snippet of or scene from real life that illustrates the problem or frames the setting. Here is an example:

> I lost my lunch, standing on the rolling ship and looking out over the seemingly endless ocean. One can certainly sense its vastness – and that's only the view from the surface. What exists between the surface and 35,800 feet down at the ocean's deepest point? What fate will befall my undigested chili? We don't really know – at least we don't know nearly enough. Organic matter in the ocean, such as my lunch, ultimately converts into fossil fuel. Along the way it influences plant growth (primary production) in the oceans, the abundance of fish stocks, the ability of the oceans to absorb the pollutants we endlessly ask it to, and a myriad of other functions. That's quite a bit to ask of my lunch.

The writer has used her situation to illustrate the news story she is writing about. The anecdotal open is simply that: a story or anecdote to draw the reader right into the piece by allowing him a voyeuristic peak into someone's life and troubles.

The Nut Graph

The anecdotal open is usually closely followed by the nut graph, graph being short for paragraph. Nut is a slang term journalists like to use because it symbolizes the paragraph's function as the purpose of the feature story in a nutshell. This paragraph

must tell the reader what the story is about and why it matters. In addition, the nut should preview all the issues, problems, themes you are about to develop in the feature story. Those issues will be aired in greater depth later in the story, but for now, the reader must be able to get the gist of the story just by reading the nut graph. If it is written well, the reader will continue on.

Continuing to use the example, here is a nut graph:

> Organic matter in the oceans leaves a bathtub scum ring along the beaches and bulkheads of the world, yet without this enigmatic mixture of degrading whale meat and fetid plant remains the oceans would soon be sterile and devoid of life. The only problem is understanding how and why organic matter makes such a difference. Scientists disagree about the types of compounds within the ocean, their abundance and their importance. They can't even agree on the methods that should be used to investigate this oceanic compost bin. However unbecoming it might seem to study the dead and dilute minutia of the oceans, some of the best and brightest scientists America has to offer are tackling the problem head-on. Some argue that without the efforts of these young guns, we'll soon be swimming in our own sewage.

The Statistics

Next come the statistics and the scope of the problem. This might take one or two paragraphs. In a feature story, statistics come right after the anecdotal open and the nut graph. Once you have introduced the reader to the subject, and you have stated definitively that a problem exists, you have to prove that it affects more than that one esoteric environment or person. This is a good place to begin putting background scientific information.

Background information and how it is incorporated into the feature

It is almost impossible to write a science feature without appropriate background. Science writers are usually in no way experts on anything they write; they rely on experts for expert advice. But that does not mean you don't know anything about the subject.

Primary sources are the best places to look for background. Primary sources are first hand sources, as opposed to second hand where someone else has the first hand source and writes about it. They are critical to science feature writing. Interviews with people affected by the subject are primary, and they are what give features life. News happens to people so an interview with someone who is directly involved with the subject is crucial. Create interesting questions and look for interesting answers that lead to more questions. If you interview multiple people, you will invariably get different answers, some that may surprise you and introduce a side to the issue that they never thought of. These questions become the themes within their feature referred to earlier in the structure of the feature as a, b, and c. After you complete an interview, you can select themes that you can introduce in the nut graph and develop in subsequent paragraphs.

Incorporating Images

The image is essential for the scientific writer. A well-constructed image invites the viewer to continue reading while providing a temporal and visual refuge from the text. Often, the images included in scientific writing are very technical as well as including depictions of information that are not relevant to less educated audience's backgrounds. Because of this, scientists often only see information in ways that they have seen it over and over again rather gaining a new perspective. For science writing, a challenge is to open the mind and attempt to create visuals for the feature that are informative and simple, inviting and fun. Many people will decide to read an article based on the graphics.

A good graphic will, with no other information, present to the reader the general content of the text. That is, with a single glace at an image, the reader ought to have a general idea of the direction and theme of the text that accompanies the image. Art helps to breakdown the social stigmas of science. Often, when examining the relationships between science and our daily lives, initial connections are hard to form without graphic support.

Pulling it all Together

The story wraps up nicely with a closing quote or anecdote that either shows some emotion or advances the story. After the feature is concluded, references are propvided. For our class, you are to conform to L&O style.

Bibliography

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Osborn, Patricia. School Newspaper Adviser's Survival Guide. West Nyack, New York: The Center for Applied Research in Education, 1998. This book contains loads of tips for getting students comfortable with the newspaper writing style.