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Sensationalism in the Media: When Scientists and Journalists May Be Complicit Collaborators

Sensationalism in medical reporting occurs when extravagant claims or interpretations about research findings are made. Sensationalism in medical reporting has been discussed extensively,¹⁻⁹ and a few years ago one author predicted that “the tensions are likely to increase.”¹ The conventional explanation for the problem is “miscommunication” resulting from the different styles of science and journalism, and the principal intervention proposed is “education.”^{2, 3, 10, 11} While different styles of communication may contribute to inaccurate science journalism, we believe that subtle incentives sometimes cause scientists, journalists, and others involved in the reporting of science to contribute to sensationalism. Regardless of its specific causes, sensationalism may prevent the public from being knowledgeable participants in policy discussions about scientific issues. In this Policy Matters, we review the problem, causes, and possible solutions.

Why Sensationalism Is a Problem

Distorted journalistic reports can generate both false hopes and unwarranted fears.^{3, 12} For instance, when a finding is reported in a sensational way, the results may create a national media feeding frenzy. An example is the reaction to a report of a single-blinded study involving only four patients with Alzheimer disease.² News about such topics as diet, cholesterol, the toxic shock syndrome, and breast implantation affects individual behavior and sometimes causes panic.¹ Subsequent research does not support some claims or interpretations, as in the cases of pancreatic cancer and coffee drinking^{4, 13, 14} or breast implants and collagen vascular disease.¹⁵

Because democracies rely on an informed citizenry to debate and decide among policy choices, sensationalism may threaten effective involvement by desensitizing the public to information about medical science through repetitive cycles of excitement and disappointment.^{4, 12} A similar kind of cynicism has been described in the reporting of political news: In some cases, it is easier for journalists to report superficial controversies than to conduct and report deeper analyses of complicated and substantive problems.¹⁶ Similarly, in science writing, “the trend toward tabloidization, trivialization, sensationalism and dumbing-down . . . [may drive] away readers and viewers.”¹¹ In both politics and biomedicine, the complexity of a problem may be sacrificed to the expediency of a simple and gripping story.

Why Sensationalism Happens

One perhaps puzzling aspect of sensationalism in medical reporting is that the reports published in scientific journals may be so cautious in tone as to be considered dull, while the same research reported in the lay press may be sensationalized. While the professions of journalism and science each have well-defined standards to encourage accuracy, fairness, and balance in writing, the process sometimes yields a

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product that, when scientists and journalists interact, conforms to the ideals of neither good science nor good reporting.

The Conventional Explanation: Miscommunication

Sensationalism can occur in the face of apparently benign intentions on both sides. The conventional explanation suggests that the two professions have similar goals but differ in style and language, resulting in “miscommunication.” The miscommunication argument claims that “Both scientists and journalists are committed to communicating truth, and the tensions over science reporting have less to do with accuracy than with style.”¹ Moreover, “Media constraints of time, brevity, and simplicity preclude the careful documentation, nuanced positions, and precautionary qualifications that scientists feel are necessary to present their work.”¹ Journalists may create a human-interest angle in a personal story that “may distort research that has meaning only in a broader statistical context.”¹ In contrast, scientists may write as if research findings are necessarily tentative and therefore not even newsworthy until certified by peers.¹⁷ This conceptualization of the problem suggests that participants share motives to avoid sensationalism and that better communication might provide a solution.

How Media and Scientists May Benefit from Controversy

Reporters or their media might benefit from reporting controversy^{3, 18} because controversial stories may be more engaging and easier to write.¹⁶ To scientists, however, controversy may be “a source of irritation . . . because scientific standards of objectivity require not balance or equal time but empirical verification of opposing hypotheses.”¹ At the same time, however, scientists may be attracted to controversy. After all, overturning accepted dogma is one goal of science.

We propose that sensational reporting does not arise simply from miscommunication in the face of good intentions. Rather, in some instances, both scientists and journalists may perceive benefits from sensationalism. Scientists may directly gain from publicity, for example, when being cited in the lay press increases citations in the scientific literature and “amplifie[s] the transmission of medical information from the scientific literature to the research community.”¹⁸ Hospitals (which employ scientists) may similarly benefit from publicity, as evidenced by billboards citing rankings in such magazines as *U.S. News and World Report*. Scientists at some institutions believe that the ability to attain promotion or

tenure is related not only to publishing in competitive journals but also to landing a story on the front page of *The New York Times*. Conversely, the top journals, whose pages are scoured for news stories, may be collectively referred to as “the tabloids.” This usage indicates the practical value of media attention to a successful scientific career and further suggests that the standards of the two professions may become unhealthily blended. The “breakthrough syndrome” overemphasizes good news—for example, a promising but very small study of Alzheimer disease² or an animal experiment without clear clinical importance. Scary epidemiology can be sensationalized, as occurred when media reports about pancreatic cancer and coffee¹⁴ were substantially less cautious than the discussion section and conclusion of the journal articles. In these examples, benefit may accrue both to the journalist, with the rewards of a highly visible story, or to the scientist (or the scientist’s institution) for discovery of a clinically important finding. As in much reporting, subsequent qualification of sensational claims receives less dissemination.

One key feature of news reporting of science is the unclear source of responsibility for a news report that turns out to be unfair and unbalanced. News releases illustrate a kind of diffusion of responsibility that might lead well-meaning people and institutions to produce a sensationalized product. A news release may be produced by a university news office, a voluntary health organization, a scientific journal, or a corporation or public relations firm. When there are few disincentives, these principled organizations and people may behave in a way that promotes sensationalism. While the tone of a scientific article is expected to be fair and balanced, the news release seems, in general, to be held to a different and lower standard: “Scientists rarely make exaggerated claims when reporting their results in the scientific literature because it is poor etiquette and likely to provoke the scorn of their peers . . . [but] news releases are a different matter.”⁵ Responsibility for distorted reporting in the pages of a medical journal clearly falls on editors and authors^{8, 19}; however, responsibility for a press release is less clear: A press release exists beyond the checks and balances that are part of the peer review culture of a journal.

After a sensationalized press release, journalists and scientists can point fingers of responsibility at each other, even though both may gain from the controversy or media attention that a sensationalized story receives. For example, a medical researcher may provide an oversimplified claim to a news reporter because the researcher believes that the work needs to be stripped of complexity for public consumption. The journalist reports the oversimplification without qualifying it and

may inflate or distort health-related implications. If the oversimplification and inflation evoke protest, the reporter can fairly claim to have accurately reported what the scientist said. The scientist can assert that the research was exaggerated and simplified when, for example, an accurate quote is cited out of context to make a point that was not intended. Each party may profit by the activity: The reporter has a compelling story, and the scientist has visibility. In this way, it is possible to have one's cake and eat it, too, and scientists and journalists can be tempted to collaborate tacitly in sensationalized reporting of medical studies. One reason for tacit collaboration is the lack of evident penalty and clear process to assign responsibility for balance in the journalistic product.

Steps To Decrease Sensationalism

Accurate communication is the responsibility of both the media and the medical researcher.³ Several approaches have been suggested to help enjoin compliance with this responsibility.

Approaches To Reduce Miscommunication

Approaches to reduce sensationalism have generally been aimed at the problem of miscommunication.^{3, 20} One suggestion is to create a special group of medical journalists and certify them, much as meteorologists are certified.² In our view, this solution addresses only part of the problem because the public is much more distanced from the content of science than the weather. While meteorologists interpret complicated events, the public promptly forms an independent judgment. However, the public has no direct way to assess the verity of a scientific report.

Another proposal is to create a cadre not of expert journalists but rather of expert scientists to interpret the news, much as Carl Sagan interpreted and popularized many aspects of science.^{21, 22} We believe that the creation of an elite panel, consisting of either journalists or scientists who interpret science news, is neither practical in a domain as big as modern science nor necessary if proper attention is given to the reporting environment and perhaps to some rewards and punishments for good and bad reporting.

Approaches To Reduce Incentives for Sensationalism

While most scientific writing is done well, the current level of exaggeration, even if infrequent, may discredit good reporting. We propose that sensationalism occurs, in part, when the participants stand to benefit from publicity without a corresponding penalty for misleading

reports. This problem will not be solved simply by attention to improved communication. Rather, what is needed in that transaction is some pain and reward. In particular, some pain should accrue to the principals in a misleading story (just as rewards should accrue for an especially difficult or especially balanced story). At present, no one is responsible for the results of transactions between reporters and scientists in the way that an editor is responsible for the peer review process and content of a scientific journal.

We propose an institutional solution that might involve creating a kind of professional review or watchdog organization that regularly writes positive or negative assessments of medical news reports. Organizations such as the Council for the Advancement of Science Writing or the National Association of Science Writers assess science news reports, and biomedical reporting is occasionally reviewed in publications such as *Science*,^{4, 23} *The New York Times*,^{5, 6, 24} or *Brill's Content*.⁹ However, such assessments tend to focus on the highest-profile controversies and occur sporadically. Most assessments do not concern medical reporting, and the assessments do not regularly acknowledge effective, balanced reporting.

While many details would need to be worked out, we envision an operation characterized by several features. First, it would need to be housed in an appropriate respected and neutral institution, such as a medical society (for example, the American Medical Association or American College of Physicians—American Society of Internal Medicine) or a medical journal. Reports would be picked by a staff of journalists or editors looking for particularly well-done or badly done news reports, on wire services or in local reports. Medical professionals could nominate pieces for consideration. The content of reviews would be similar to that of reviews that are occasionally done now, but they would be shorter and would focus on the more “routine” stories that make up most medical reporting. Such reviews might be fashioned along the lines of the *Columbia Journalism Review's* section “Darts & Laurels.” The main idea is to show that there is a watchdog function. We expect that such a function would be respected by journalists and scientists, who generally pay attention to written criticism (and praise) from a knowledgeable and fair group of critics perceived to be above the fray. A near-term step would be a planning effort, perhaps sponsored by interested journals and professional societies, that could build on preliminary efforts in this area.²⁵

The intent of a watchdog effort would be not to closely monitor all biomedical reporting but rather to highlight outstanding or egregious reporting. The regular appearance of these citations would indicate that

someone, who has the respect and support of both the medical and journalistic professions, is watching.

Conclusion

While most reporting of medical news seems accurate, fair, and balanced, the cases of sensationalized reporting receive, by their very nature, a disproportionate amount of attention. They can also cause a disproportionate amount of disillusionment and distancing of the public. The central problem is that scientists and journalists, while each remaining responsible to their own professional standards, may become complicit in a system in which miscommunication helps each reach certain ends. The system is characterized by the lack of clear responsibility or oversight to prevent miscommunication. We believe that a small amount of attention and oversight might go a long way to help provide some balance and may keep the public informed and involved in important scientific debate.

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