

Who Broke the Embargo? (It's the Wrong Question!)

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Who broke the embargo? The Web site of the National Association of Science Writers erupts in a frenzy of inquiry and recrimination.¹ It happens several times a year. Someone has published news about a scientific discovery that was meant to be kept under wraps for a few more days, that is, it was "embargoed" by the journal that would be publishing the research paper. Reporters justifiably want to know which of them violated a pledge not to publish anything until the embargo was lifted, and they want to know what punishment will be inflicted on the offender.

Only occasionally do science writers tackle the question, Should there be embargoes at all? I argue that most of the time embargoes are a bad idea.

The journals *Science* and *Nature* impose the embargoes that most affect physicists and geophysicists and the reporters who write about their work. The embargoes are two-pronged affairs, aimed both at scientists and science writers, with separate conditions and sanctions for each.

Reporters receive press releases and access to full journal papers up to a week in advance (*Science* recently shortened its embargo lead time) in return for a promise not to publish anything before the prescribed day and hour. Embargo breaks of even one hour cause consternation. At least the rules for journalists are relatively straightforward.

For scientists, embargoes are more daunting. They begin when a researcher submits a paper, even though acceptance and publication may be months away. *Science*, for example, forbids authors to participate in news conferences about their discoveries more than one hour before expiration of the embargo or to grant interviews to any reporters who have

not agreed to respect the embargo, and even then, only in the week before the lifting of the embargo.² *Nature's* rules, although not identical, are similar.³

This gag rule imposed on scientists is particularly onerous at professional meetings. Scientists are allowed to present their findings, but may not participate in press conferences. At most meetings, reporters may attend scientific sessions and write about them regardless of embargoes, but scientists under embargo may not discuss their findings with those reporters or provide them any backup materials.

Are embargoes justified by some noble purpose as *Science* and *Nature* argue, or are they simply imposed by powerful journals for their competitive advantage? I believe that com-

observed that reporters on other beats do not have the luxury of working on a story for five days, even when the topics may be as complex as a science story and have greater direct impact on the public.

In my view, the main benefit of the embargo accrues to the journals, not the reporters. Science writers can practice pack journalism as determinedly as reporters hot on the trail of a White House scandal, except that the latter do it in real time. The *Nature* and *Science* embargoes simply assure that, every Thursday and Friday, news media the world over announce the same research news. Editors, who are usually not science specialists, know that competing media will publish the stories just released from embargo and

believe they would look foolish by not carrying them also. They budget space or airtime. And, in a triumph of circular reasoning, they assume that the embargoed offerings must be that week's most important science news; by prominently publishing them, they make it so.

This is one area in which embargoes affect the American Geophysical Union and all the other publishers of respected journals that do not impose embargoes. AGU publishes some 50 000 pages of peer-reviewed scientific research each year. We issue press releases about a small fraction of the most interesting discoveries. We also issue brief highlights of important new journal papers. Reporters can quickly obtain the full papers and publish the information immediately, if they wish, even in advance of the appearance of those articles in *Geophysical Research Letters*, the *Journal of Geophysical Research*, or any of our other journals.

Reporters do pick them up, and we have the clippings to prove that news from AGU publications is carried in hundreds of newspapers, magazines, and other media worldwide. But because it is provided to reporters ad hoc, as the information becomes available to us, not on a predictable schedule with an embargo date, stories based on AGU journals have to fight



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SCIENCE JOURNALISTS question Gary Ernst of Stanford University and colleagues following their press briefing on sustainability of natural resources at the 2002 AGU Spring Meeting in Washington, DC.

petitive advantage is, overwhelmingly, the real answer. Embargoes are touted as providing reporters with a "level playing field," that is, time to digest a paper, conduct interviews, and prepare their article, knowing that no one else can scoop them by rushing into print with a less carefully written story.⁴ Arguably, the field is equally level when there is no embargo. Some reporters do appreciate the guaranteed breathing space, while others have told me they find it insulting. One award-winning writer

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for space, not only with other science news, but with other news in general. We do envy the automatic access *Science* and *Nature* secure via their embargo process. If there were no embargoes, editors would have to use news judgment to determine daily which science stories to carry.

One may ask, why does AGU not simply play the game and issue embargoed releases on a weekly basis? Well, this would, indeed, be a game. The information is already available, and we believe that there is no legitimate reason to keep it artificially under wraps simply to achieve the competitive advantage of a "guaranteed" weekly spot in the media. With online-first publishing in place since the beginning of 2002, AGU journal papers are posted as soon as they become available, and this date is not predictable by more than a day or two. The paper edition is now simply a compilation of papers posted online since the last paper issue. There is no rationale for creating an artificial embargo in such a process. Even in past years, we issued press releases as soon as the papers were written and approved, without embargo.

Scientific information does not belong to a journal; it was developed by scientists, usually with grants of public money, and has been reviewed by other independent scientists (an important function facilitated by journal editors). The goal, AGU believes, should be not to manipulate but, rather, to release this information as quickly as feasible.

And what about the embargoes on scientists? I can attest that they have a chilling effect on the free exchange of information, as they are meant to. At an AGU Spring or Fall Meeting, we typically hold 15–20 press conferences at which panels of scientists summarize research they are presenting. Typically also, some planned press conferences are canceled because key participants say they have submitted a paper on the subject to *Nature* or *Science*.

The chilling effect goes beyond that. Some scientists have declined to participate in a press conference because they think they might, at some later date, write a paper on the topic and submit it to *Nature* or *Science*. The embargo actually applies only to papers already submitted to those journals, but so pervasive is the fear of punishment (rejection of the paper and, perhaps, of future papers) that scientists censor themselves just to be on the safe side.

Remember, reporters can attend these scientists' sessions and write

about them, but they risk not getting as complete information as at a press conference, where there is more time and the opportunity to get clarifications and background information during the question-and-answer period. I contend there is no legitimate reason for bottling up information that is being presented to dozens, even hundreds, of people just because a journal is going to publish that research later (and it is sometimes just a few days later!).

Embargoes on press conferences at meetings will end when a few leading scientists stand up and denounce their absurdity. Researchers will eventually realize that journals need them as much as they need the journals and that their academic freedom is impinged when journals tell them what they may say, and when, and to whom, about their own publicly funded research. The scientists are actually in a strong position because they have other prestigious journals to turn to that do not presume to deny them the right to discuss their own work in advance of publication.

Is there ever a case for an embargo? I accept the possibility that, in some specific instance, there might be a good reason for imposing one, but that is far removed from the automatic imposition of embargoes on all papers at all times. I am told that journals that report medical advances worry about insider trading if a report about, for example, new treatments for a disease is prematurely or selectively leaked. I defer to medical writers on this, although I cannot believe that most pharmaceutical stock analysts get their information on new medicines from their local newspapers.

With regard to evidence of climate change, the existence of water on Mars or Europa, or the location of tectonic plate boundaries, I submit that Wall Street fortunes will not be made or lost because of the absence of an embargo. Let the rule be this: Information should be made available as soon and as widely as feasible. Embargoes are an option for rare special circumstances which do not include the competitive advantage of the embargoing journal.

References

1. <http://www.nasw.org/lists/nasw-talk/hyper>
2. http://www.sciencemag.org/feature/contribinfo/faq/embargo_faq.shtml
3. <http://www.nature.com/nature/author/embargo.html>
4. See, for example, News Focus and Editorial in *Science*, **282**, pp. 860, 877 (1998). ■