

# NIEMAN REPORTS

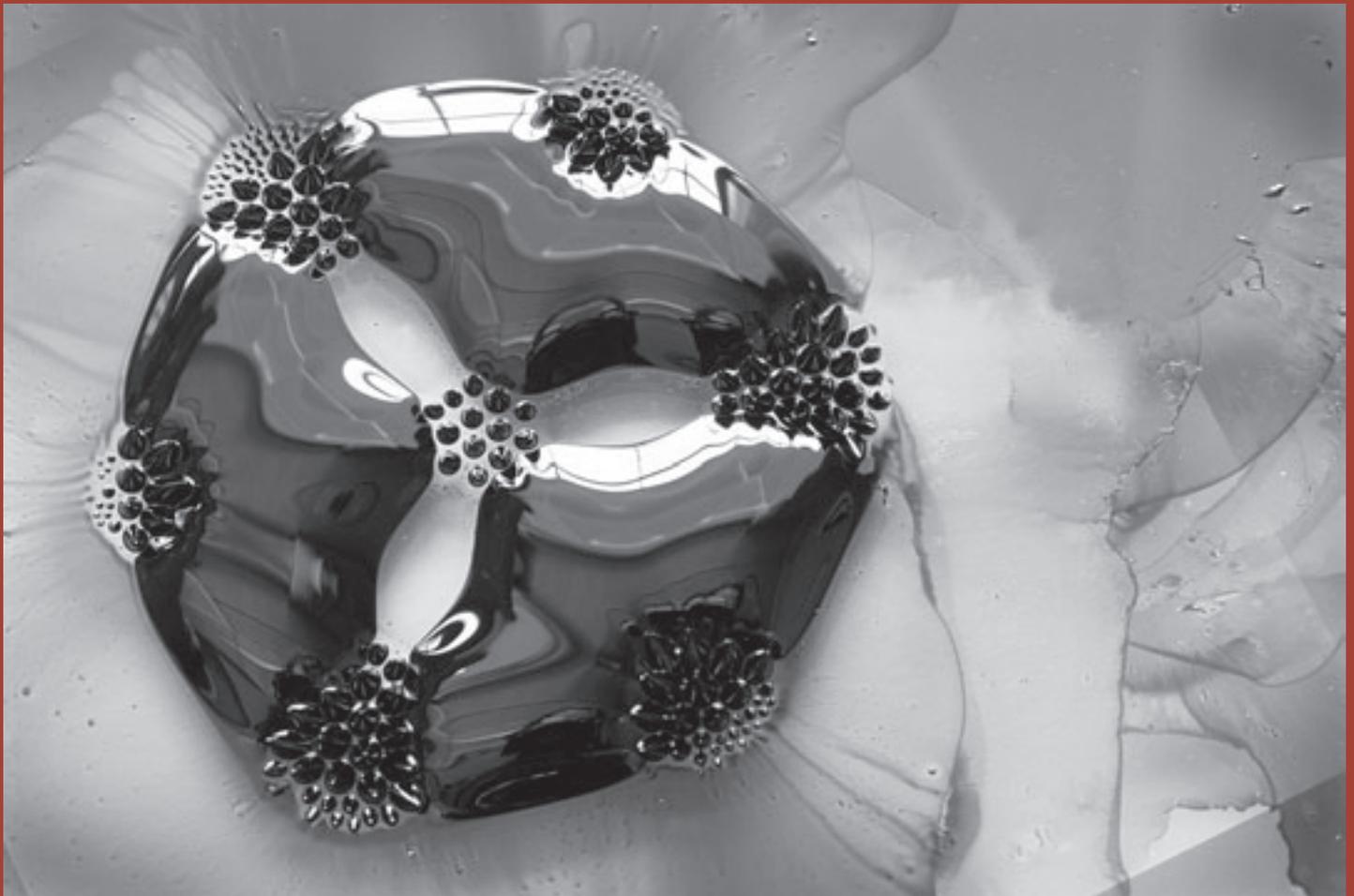
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## Science Journalism



International Journalism

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The Impact of Middle East Pictures and Words

“... to promote and elevate the standards of journalism”

—Agnes Wahl Nieman, the benefactor of the Nieman Foundation.

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Fall 2002 THE NIEMAN FOUNDATION FOR JOURNALISM AT HARVARD UNIVERSITY

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Cover photo: A three-centimeter drop of oil in which iron particles are suspended. The pattern is a result of seven circular magnets positioned under a glass slide, onto which the ferrofluid is placed. *Ferrofluid* © Felice Frankel, from "Envisioning Science: The Design and Craft of the Science Image" (The MIT Press, 2002).

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# Restoring and Renovating Walter Lippmann House

The Nieman Foundation is enlarging its home to meet the needs of its residents.

By Bob Giles

For the past two years, the staff of the Nieman Foundation has been developing ideas to address a situation encountered by recent Nieman classes: It's a tight squeeze to fit the staff and the many activities of the fellows into Walter Lippmann House.

On a typical Monday evening, more than 50 attend the fellows' "soundings," crowding into the seminar room and spilling into the Bill Kovach Library next door. Speakers who come by for discussions experience a close encounter with the fellows and affiliates who press around them in the seminar room. PowerPoint or slide presentations are generated from an old metal stand, with images projected on a small pull-down screen a few feet away. It is not an environment especially conducive to effective learning.

The Kovach Library holds more than 2,500 volumes, plus small collections of bound newspapers. Only a portion of the collection can be displayed for use by the fellows and the occasional scholar who drops by. We anticipate the library collection will grow to perhaps 6,000 to 8,000 books. These, along with bound volumes of newspapers and valuable papers, should be properly displayed and preserved.

The fellows' computer needs are met in a limited way. The computer room on the first floor has been renovated and equipped with six new computers. The room serves as a gathering place, with fellows typically waiting for an open computer. Workshops on computer-assisted reporting and video editing, however, must be held in another part of the house, often sharing workspace with the staff.

The Nieman staff, meanwhile, now includes 11 full-time and six part-time employees. The third floor, which many remember as the quarters for the Lippmann House caretaker, now is home to the Nieman Program on Narrative Journalism. During these past months, we have been developing plans to build an addition on Lippmann House that will accommodate the staff and the increasing demands of the fellows' program while honoring the wonderful historical nature of the house.

Our plan includes a new seminar room on the main level and a library and computer workshop on the lower level in a structure to be built on the north side of Lippmann House. This undertaking requires a balancing act that satisfies the interests of many constituencies. Lippmann House is located in a historic district, and our plan had to pass muster with the Cambridge Historical Commission. Charles Sullivan, its executive director, became a strong advocate for the project, making two key recommendations:

First, that the addition be in the nature of a garden room. He described it as a more honest and effective architectural solution than attempting to replicate an 1836 building.

Second, that the foundation restore the older part of the house so it more accurately reflects the original construction by replacing the shingle siding with clapboard and rebuilding the front portico.

Our Francis Avenue neighbors were brought into the planning process. Some raised initial objections. During several meetings we were able to satisfy their concerns by scaling back slightly the front part of the addition.

Finally, we had to obtain approval from the Cambridge Board of Zoning Appeals to permit construction of an elevator at the rear of Lippmann House. This was a critical early objective that had to be met before the project could move forward. The zoning board approved our request in early August, enabling us to publicly announce plans for the addition, to schedule the start of construction in early fall, and to initiate an effort to raise money for the project.

The estimated cost is \$2.5 million. We expect to get an interest-free loan for construction while following through on opportunities to raise money tied to naming all or some of the components for people whose contributions to the Nieman Foundation might best be remembered in this way.

Your ideas, suggestions and, yes, contributions are welcome. ■

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Artist's rendering of the new design of Lippmann House.

# Science Journalism

Those who report on science have never been better prepared to do so, according to Los Angeles Times science and technology writer **Robert Lee Hotz**, whose insights open our section on science journalism. But as Hotz also observes, the challenges these reporters confront have never been larger: Newsroom cutbacks mean the reporters “are stretched to cover increasingly complex science stories . . .” And their task is made harder by the dearth of impartial sources, forcing them “to look as hard at the scientists as we look at the science itself.”

Science writer and journalism professor **Jon Franklin** uses his narrative style to describe evolving connections and disconnections between journalism and science during the past half-century. Today, he writes, our journalistic culture “all but ignores what is perhaps the most powerful force of change in our world, and that makes life excruciatingly difficult for the handful of serious science writers with designated beats.” **Boyce Rensberger**, who directs the Knight Science Journalism Fellowship program at Massachusetts Institute of Technology (MIT), reminds science reporters to “try to keep the sense of uncertainty in their copy.” Caveats are important, he asserts, for without them, conclusions are often misleading. To inform the public accurately about science, journalists should focus “less on hyping apparent ‘gee-whiz’ moments.”

Investigative science reporter and journalism professor **Deborah Blum** explains why journalists undertake relatively few big-scale investigative science projects (“The nature of our job provides little time to burrow in,” she writes), then she uses her investigative reporting experiences to create a useful road map for those who do. **Jim Dawson**, senior news editor at *Physics Today*, recalls the time when he worked as a reporter at the (Minneapolis) *Star Tribune* on its short-lived, science-in-depth weekly page. With editors demanding an infusion of stories about health and lighter science fare, “the science page quickly lost its focus . . . The page actually managed to make science boring.”

In his analysis of how and why reporting about a development in human cloning went awry, **Jon D. Miller**, who directs the Center for Biomedical Communication at Northwestern University, sheds much-needed light on the forces that led some science journalists to misrepresent what had been discovered. And he imparts valuable lessons drawn from the media’s handling of this “first cloned human embryo” story.

**Olivier Blond**, who reports on science for a French weekly magazine, and **Stefanie Friedhoff**, a freelance journalist who reported on science for a German newspaper, provide European perspectives on science journalism and the issues reporters there tend to cover. Blond focuses on the various approaches to reporting on cloning, and Friedhoff reminds us how much cultural assumptions shape the questions asked, responses given, and stories told.

No mainstream newspaper devotes the attention and space to reporting on science than The New York Times does in its weekly science section. **Cornelia Dean**, the Times’ science editor, writes that her staff struggles to meet the many demands of their job. “. . . [S]cience is becoming increasingly specialized,” she writes, “so it is harder for journalists, even journalists with advanced training, to know what is

important and what is not important.” **Claudia Dreifus**, a contributing writer to *Science Times*, describes how she uses the interviewing techniques she honed as a political reporter on the science beat.

**Felice Frankel**, a science photographer at MIT and author of “Envisioning Science: The Design and Craft of the Science Image,” brings her astonishing images to our pages to demonstrate how pictures created by the use of new technology “will assume an increasingly prominent role in communicating scientific information . . . [and] produce a different kind of journalistic thinking . . .”

As producer of more than 40 documentaries about science, **Jon Palfreman** describes a current television environment in which “bankable topics” (volcanoes and mummies) tend to triumph over “unsexy but important science.” In the in-depth science coverage Palfreman is able to do on “Frontline,” he has “learned that the task of communicating messages that people don’t want to hear . . . is among the most interesting challenges for a science journalist.” **Christopher Joyce**, who reports on science for National Public Radio, explains how complexity in scientists’ words doesn’t work well on radio, but capturing sounds of their work does. In radio stories about science, “Complicated and abstract ideas are fine; just eliminate complicated and abstract language,” Joyce writes. “Remember,” he reminds us, “radio is actually a visual medium.”

In teaching journalism students how to report on science, **Douglas Starr**, who codirects the Knight Center for Science and Medical Journalism at Boston University, stresses the need to “view science in a more interwoven way than it was reported in the old days.” His students learn to ground science news in a broader context, as Starr writes, “fleshing out the scientific, economic and social aspects of issues to illuminate their relevance and meaning.” As science journalist **Patricia Thomas** set out to write “The Big Shot: Passion, Politics, and the Struggle for an AIDS Vaccine,” she never anticipated “that in this story, science would be inextricably linked with big business and with politics on a grand scale.” In this article, Thomas explains how she integrated these strands of her reporting.

**Anne Fitzgerald**, who reports on agribusiness for *The Des Moines Register*, provides a personal look at how agriculture has changed and, in turn, the job of reporting on it. “. . . as science’s role in the food chain has grown,” she writes, “so has the need to report on it and get it right.” She offers tips on reporting—and also on homegrown vegetables. **Marcelo Leite**, science editor and columnist at the Brazilian newspaper *Folha de São Paulo*, describes how South American journalists rely on Web resources and science journals to report on international science news but often overlook scientific research in their own countries. Leite believes these journalists “cannot wait any longer to progress from ‘good’ science reporting to the kind of independent evaluation and criticism of science that the public needs and deserves.” Australian professors **Rosslyn Reed** and **Gael Walker** tell what they learned in research that explored the tensions and conflicts that exist between scientists and journalists. They sought solutions that could lead to more constructive relationships and discovered that well-informed public relations people could play key roles. ■

# The Difficulty of Finding Impartial Sources in Science

Reporters are better prepared, the public is eager for news, yet the science beat is getting tougher to do.

By Robert Lee Hotz

Journalists who cover science spend their working lives trying to bridge what British essayist C.P. Snow once called the gulf of mutual incomprehension between scientists and the general public. It is exotic and contested terrain, in which journalists and scientists angle for advantage, simultaneously adversaries and allies.

More than ever, scientists aggressively court media attention, even as—paradoxically—unprecedented commercial secrecy comes to shroud so much of what scientists do today and financial conflicts of interest among researchers have become so common.

At a time when science has become the wellspring of America's wealth and global power, however, many newspapers have reduced coverage of research developments and biomedical controversies. In cities like Atlanta, Minneapolis, Boston and Dallas, newspapers that once supported significant science staffs gradually have cut back or refocused their efforts into other topics. At all but a handful of the largest papers—The New York Times, The Wall Street Journal, the Los Angeles Times, The Washington Post—enterprise reporting in the sciences is less common. Investigative reporting of scientific endeavors is unusual in any medium. There are points of light in pools of shadow.

Economically, it may be the worst of newsroom times. Yet never have reporters covering science been so well educated or prepared to get to the bottom of complex research topics. The National Association of Science Writers (NASW), of which I serve on the board of directors, consisted of 12 working reporters when it was founded in 1934. Today, NASW has 2,400 members. Almost two-thirds are journalists,

and many have advanced degrees in the sciences or have completed graduate training in science writing through university programs such as those at Boston University, Stanford, University of California at Santa Cruz, University of Wisconsin, Columbia University, New York University, and the Massachusetts Institute of Technology.

Yet almost half of those science journalists in NASW are freelancers, not staff writers, making them dependent on corporate and university assignments. They are not in a position to easily bite the hand that feeds them. In part, this situation reflects the economic realities of any 21st century newsroom, especially those of most broadcast outlets and many mid-sized or small newspapers where no one can afford to specialize.

Fewer staff reporters are stretched to cover increasingly complex science stories, and more of them are being asked to feed the public's seemingly insatiable appetite for the news of discovery and wonder on topics from cosmology to cloning. To survive, reporters become dependent on the daily cascade of embargoed research papers, e-mailed press releases, university tip sheets, and conference abstracts. They pay close attention to the editorial judgment of peer-reviewed journals like *Science*, *The New England Journal of Medicine*, and *Nature* that do so much to shape the weekly news of scientific developments.

In a landmark 1987 study of science and the press, New York University sociologist Dorothy Nelkin concluded that reporters had gotten too close to their scientist sources. "Many journalists are, in effect, retailing science and technology rather than investigating them, identifying with their sources

rather than challenging them," she wrote in "Selling Science: How the Press Covers Science and Technology."

But she did think matters were improving. Nelkin believed that pattern of co-dependence had started to change in the 1990's, with more critical, skeptical science reporting and greater tension between reporters and scientists as a result. Recently, *The Wall Street Journal* and the *Los Angeles Times* expanded their science coverage by adding reporters and reorganizing staffs to give science news greater prominence.

In part, science writers are no more or less vulnerable to the occupational hazard of any beat reporter—that of adopting the point of view of the people they cover. In this case, it means that reporters can come to identify with the enterprise of science itself. Ashley Dunn, former technology editor at the *Los Angeles Times*, has suggested that science can be so alluring that reporters can risk forgetting that their true loyalty is to the public, not to the scientists they cover. "Science is so complex that to bring it alive you have to love it," Dunn said. "You have to infuse it with your passion. Loving what you cover is a tricky path in journalism. Some reporters can be seduced by the wonder."

As a result, perhaps, science coverage today can still be more explanatory and adulatory than challenging or analytical. Our stories urge readers to peer with awe into the nurseries of stars to see the universe at birth and to turn inward to brood over the alternate futures in the DNA of our genes. We hold up the broken skull of our earliest ancestor so that they can muse on what once we all were and what we might become.

Make no mistake. By itself, this is

important and difficult reporting. Many science writers would argue it is their most important work. It is the script of human progress, the rough draft of the future. Even so, scientists themselves sometimes find reporters, in their rush to meet a deadline, insufficiently skeptical of new research.

A recent assessment of science and medical news stories, published in the *Journal of the American Medical Association*, assessed news coverage of research at scientific meetings. The investigators found that one-quarter of the research covered by the press never ended up getting published in a peer-reviewed journal, the most common measure of the actual importance of an experimental finding. In a separate study of news coverage published recently in the *British Medical Journal*, the researchers found that the strongest medical evidence was seldom considered newsworthy.

In too many newsrooms, there might be time to report the quick hits of scientific discovery, but not to probe the more complex debates over theory or regulatory policy or the role of business in research. Such reporting would likely bring readers into the contest of ideas, which in the end might have more effect on the way we think about the world we inhabit and our place in it.

More than ever, the effects of science in public life have become pervasive, even as the political influence of scientists themselves has waned. Consider the esoteric research making today's headlines: the search for the biological roots of behavior, the conundrums of string theory, the chemistry of climate change, the discovery of planets far beyond our own solar system, the creation of animals with human genes, and homemade infectious viruses. These laboratory innovations are setting the stage for challenges and dilemmas we cannot easily foresee. Yet most legislators who must grapple with human cloning, genome sequencing, and embryonic stem cells can barely

cope with the simplest concepts of pure science. Like the citizens whose taxes underwrite research grants and who bear the social costs of science, they learn much of what they know about new research and its implications through the media.

The scientists who might be expected to provide the clearest guidance in such debates are increasingly hobbled by commercial secrecy, financial conflicts, or professional self-interest. Pure research just isn't so pure anymore. Researchers are no longer searching solely for the truth. Many of them are also seeking their fortunes. A hidden cost of stock options, consulting contracts, patent rights, and com-

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mercial research contracts is that the scientists most familiar with new research developments are no longer so free to dissent publicly. And several studies of biomedical controversies have shown that an expert's public scientific position can be predicted by his or her financial relationships.

But it is getting harder than ever to find a knowledgeable source who does not have a financial stake in a biomedical controversy. When scientists must struggle to balance research integrity and commercial advantage, it is often the public that suffers. In June, *The New England Journal of Medicine* eased its strict conflict of interest rules for authors of certain articles because it cannot find enough experts without financial ties to drug companies. The journal's rule had been that nobody who wrote a review article or editorial could have any financial interest in a company that made a product discussed

by the article, or in any of its competitors. Now the journal only will forbid such articles by authors who receive payments of \$10,000 or more a year as a result of such a stake, or who have stock options or patent interests in those companies.

Even the specialists in the ethics and morality of science—routinely called on by reporters to objectively weigh the pros and cons of new research—are finding themselves tangled up in financial disclosure conflicts. As more bioethics experts become corporate consultants, they too are finding their independence compromised.

To whom, then, can readers, listeners and viewers turn? The buck stops here. Science journalists should perhaps pay more attention to the interplay of character and cupidity that affect the sources on whom we depend: to look as hard at the scientists as we look at the science itself. But there is reason to take heart. Whatever our differences, scientists and journalists who cover them share a common purpose: to discover and report the unbiased facts about the world in which we live. ■

*Robert Lee Hotz covers science and technology for the Los Angeles Times. He shared a 1995 Pulitzer Prize for coverage of the Northridge Earthquake and was a 1987 Pulitzer finalist for coverage of genetic engineering issues. He is the author of "Designs on Life," which examines the scientific and ethical issues surrounding human embryo research.*

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# The Extraordinary Adventure That Is Science Writing

‘Once you’ve done it you can’t imagine doing anything else.’

By Jon Franklin

October 4, 1957, was bright and clear in Lebanon, Missouri, and I will remember it forever. I was downtown when I noticed that the post office flag was at half-staff. Inside, a clot of stunned people listened to the yammering of a radio announcer. The Russians had launched a satellite. Sputnik, they called it.

As a geeky teenager and sci-fi addict, I knew instantly what had happened and what it meant. I let out a whoop of joy and went running home to tell my dad.

All along the elm-lined streets people were out of their houses. Some looked terrified, others cried. My landlady stood, head back, hands spread to the sky, beseeching her God not to destroy the world because the Russians had trespassed on Heaven. I detoured around her, pounded up the stairs and blurted the news to dad. No religious nut, he. But he didn’t share my elation.

“That means,” he said, “the Russians have won.” He went straight to the corner bar and got drunk.

My friends and I couldn’t comprehend the reaction. But, then, who understood adults? Our science teacher would be different. We looked forward to his class.

The science teacher really wasn’t a science teacher, of course. As was the way in those days, he was coach. But we figured he’d at least read the books he assigned us. So we greeted him with anticipation. What was this thing? How did it work? What did it mean?

He turned on us. We were being stupid. Sputnik was just another big red lie. Such a moonlet would violate one of the most fundamental laws of physics, to wit: What goes up must come down.

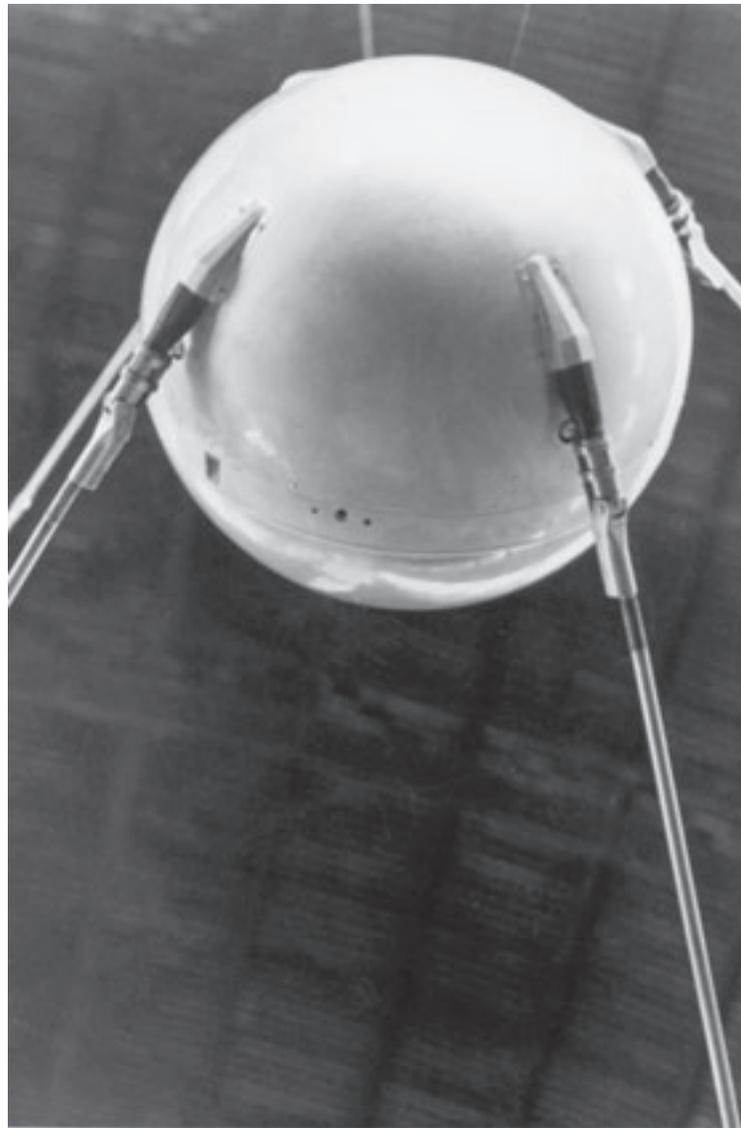
So the new age drew a bright line between those who celebrated and embraced science and technology and

those who feared and denied it. Five years later C.P. Snow, the British novelist and physicist, would be the first to put it into words. A great schism was growing, he said. Scientists and like thinkers were splitting off from the humanistic majority, and each was going its separate psychic way, developing its own assumptions and languages.

And while the scientific culture was a relatively small one, it had immense power—and that power was growing exponentially.

This schism defined much of life for the rest of the century, and while we’ve all been touched by the struggle, nobody has had a wilder ride than science writers have. Our beat required us to penetrate into the heart of science and then return with our stories to newsrooms that represented the very opposite in assumptions, politics and emotions. Our sources often despised the media for its many excesses and oversimplifications, and our editors often dismissed us and our news as too complex and too specialized. The sum of that experience showed that the average journalist is much more ignorant of science and hostile toward it than the reader.

There are studies to that effect, like the one that showed a majority of managing editors thought dinosaurs lived at the same time as early humans and that the moon had a dark side upon which the sun



This image shows a Sputnik 1 satellite, which was the world’s first earth-orbiting artificial satellite. Sputnik translates from Russian as “fellow traveler.” *NASA Photo.*

never showed. Editors ignorant of science tend to handle paragraphs they don't understand by taking them out. Not long ago a wire story about astrophysics appeared in a prestigious newspaper with its entire middle, from the nut graf to the wrap-up, cut out. What was left gave no clue as to what the physicists had done. Later, the managing editor told me that "If our readers want to know about science they can read the journals."

But, in the end, it's the personal things that are telling. When I worked for *The Evening Sun* in Baltimore, I was a gardener. Like others, I brought in produce to share with my fellow reporters. But while the vegetables from other gardens were snatched up, mine were untouched. Hurt, I asked a friend why. He hemmed and hawed and finally said, "Franklin, you're a scientist and so they don't know *what* you may have done to those tomatoes."

And there it was. I wasn't a scientist, but I associated with known scientists, which gave rise to the lingering suspicion that I might poison my colleagues.

I am told journalism began with enlightenment printers who named their publications "journals" in the spirit of science. This was Locke's principle: The world was evidence to be considered, sifted through, theorized about. But that strain died out of journalism early on, as it underwent a cultural merger with politics and politicians. Today journalism is truly the fourth estate of government. Thousands of reporters write millions of words every day about political and administrative processes. Reporters and politicians need each other. They have developed a shared understanding about what's fair game and what's not, as well as a nuanced language that distinguishes, for example, between "off the record" and "deep background."

So far so good. But today science and technology comprise a force that is at least equally important—and possibly more so. What was the basis of the rising standard of living that made the middle class so much more generous with people of different races and socioeconomic levels? What of radio,

which changed politics utterly, and television, which changed it again? What of the birth control pill, the computer, modern cancer therapy, beta-blockers for heart and ulcer patients?

But there is little journalistic recognition of this new social force. If newspapers suddenly undertook to cover the various human endeavors in order

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**'Science stories,' one editor once told me, 'make my executive editor get all jittery. He doesn't understand them, or know anybody who does. So he doesn't see why we should run them.'**

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of their importance and potential impact, science would fill the news columns. There wouldn't be enough qualified science writers to fill the job openings—openings that would come at the expense of other beats. Which ones? Answer that question and you will identify the pockets of newsroom hostility to science writers.

As a result, each scientific and technological advance has surprised us—and has been met by political histrionics from the consternation over the ethics of the kidney machine to the horror over the concept of brain death, the first heart transplant, the first genetic engineering experiments, the suggestion that fetal research might save many lives. Consider, more recently, the White House's almost humorous struggle to put together a statement on cloning human embryos. How desperately the politicians looked around for the court wizard, but they hadn't appointed one. And so they got the numbers all wrong.

In each case, the public was taken by surprise. We gave them stories, for sure, but they were few in number and fatally flawed because they didn't have the prominence they deserved and

weren't given the space necessary to make their importance clear. In many cases they were written and edited so sensationally that they could not be understood in their proper context. "Science stories," one editor once told me, "make my executive editor get all jittery. He doesn't understand them, or know anybody who does. So he doesn't see why we should run them."

That's probably true. Though the executive editor lived in the same place as thousands of top-flight scientists, he didn't go to the same cocktail parties they did. Newspaper people don't generally hobnob with scientists, and most scientists have kinder feelings for termites than for journalists.

The current emphasis on cutting newsroom budgets has deepened the dilemma. Science writing, both the reporting and the writing, are quite simply more difficult to do than other kinds of stories. It isn't so much that science is more difficult—you want complex, look at the rules governing baseball. But most Americans have a context for baseball, and they have practically none for science. That means you have to give a whole lot of backstory. That takes time and space, and most of all it takes experience. And it's those three things—time, space and experience—which are expensive. Science stories, inch for inch, are the most expensive copy in the newspaper. *Good* science stories are hideously spendy.

The result is a journalistic culture that all but ignores what is perhaps the most powerful force of change in our world, and that makes life excruciatingly difficult for the handful of serious science writers with designated beats. And, as I sadly tell my eager would-be science-writing students, it makes beats almost impossible to get.

If it's so bad, why do we do it? Because it's fun. It's exciting. Once you've done it you can't imagine doing anything else.

The isolation of scientists actually adds in some way to the thrill of penetrating into the worlds, say, of biophysics, genetic engineering, climatology, particle physics or geochemistry. Imagine being down at Cape Canaveral when a manned rocket takes off. Tele-

vision fails utterly to capture the thrill, the intensity of the hydrogen fire, the beauty of the billowing steam, the pounding waves of low frequency sound that penetrate into your body and make your very bones vibrate. I was so moved that I cried.

I have seen heart cells in a culture coalesce and begin to beat. I was perhaps the first nonscientist to get the full explanation of the discovery of the opiate receptor. I remember standing outside the Johns Hopkins briefing room, dumbfounded by the unavoidable conclusion that true behavior-modifying drugs lay just around the next bend of history. I will never forget the months I spent watching a young genetic engineer make his first mouse. And there was the night—it must have been yesterday—that I stared into the eternal black night of a crystal lens in an observatory high atop an Arizona peak. I have seen surgeons remove a diseased heart from a living human being and replace it with a new one. I saw Mount St. Helens erupt from a vantage point no more than a thousand yards from the rim of the crater. Most of all I have been able to watch and even participate in that most exciting of all human actions, the thought processes of intelligent human beings bent on discovery.

Lest you think I have some special access, I should note that the opposite is true. Science is remarkably open, and because scientists worry about the public view of their profession, they

are remarkably helpful. As a result, I have had the best of teachers. I've been behind the scenes, in laboratories, at the cocktail parties. When people ask me if I have a scientific background—which I don't—I always remember the time I was trying to figure out why Daniel Nathans, a Johns Hopkins virologist, had gotten the Nobel Prize for something called "restriction enzymes." We had written up the story and all,



This image shows water vapor in the earth's atmosphere, visible in infrared wavelengths. *NASA Photo.*

but—I still didn't understand. So one afternoon I happened to be by his office and noticed that the outer door was open.

I went in, and there was no one there. But there was another door, and I knocked. A chair scraped, and Nathans opened the door. Behind him were half a dozen of the university's more notable scientists.

Conscious that I was interrupting a meeting, I stammered out to Nathans

what I wanted. I asked if maybe he had some handout or something.

He looked at me for a second, grinned, and told me to come in. He politely shooed out the other scientists, closed the door, and spent the next three hours explaining to me that restriction enzymes were going to be the scissors that genetic engineers—a specialty still in the future—would use to snip out specific segments of tiny, invisible DNA molecules.

When I walked out of that tutorial, I not only had a general idea of what restriction enzymes were but also a whiff of some kind of genetic revolution in the immediate future. That, in turn, made it much easier to adapt to the new world that was just around the corner.

That's the joy of it. The lament is that I wish I had had the time and space to share what I'd learned with my readers. ■

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# Reporting Science Means Looking for Cautionary Signals

‘Experienced science writers try to keep the sense of uncertainty in their copy.’

By Boyce Rensberger

**A**s scientists will acknowledge, most scientific findings are wrong or, at least, so uncertain as not to be certifiably true. But most people would never get this impression from the way the news media usually cover the latest research developments. Cancer has been cured so many times in headlines that it’s an irritating joke among medical researchers. Advocacy group pronouncements that appear to be based on science receive widespread coverage before confirmatory studies expose the flaws. And yesterday’s dietary advice is reversed at least as often as lower court decisions.

Why do the news media so often leap on science stories that fall apart on deeper examination? I believe it is because many reporters and editors have a curiously naive conception of what science is. They think that if a statement has the label of science—perhaps even having been published in a peer-reviewed journal—it must be true or pretty close to true. After all, isn’t science about finding truth? Many journalists appear not to understand that there is a crucial difference between the science in textbooks and what actual working scientists do for a living.

Textbook science is, for the most part, well-established fact—truth, if you like. But, of course, scientists don’t get grants to discover what is already known. Instead, they study the unknown. Working scientists work on the frontier, the cutting edge. They confront mysteries, which lie in uncharted realms beyond the textbooks.

Thus, as any good scientist will tell you, findings in any hot field of research are always hedged in uncertainty. It is rarely clear at the beginning of a new line of inquiry just how

to go about finding answers. Early experiments on a new problem commonly fail. It takes repeated observations or experiments, usually attacking the mystery from different angles with results all pointing to the same answer, before honest researchers begin to believe that they actually understand something new. As the late science writer Isaac Asimov once said, “The most exciting phrase to hear in science, the one that heralds new discoveries, is not ‘Eureka!’ (I found it!), but ‘That’s funny....’”

When scientists report their findings to one another in technical journals or at meetings, they normally take care to describe not just what they think they have found but are careful to include uncertainties that should temper any interpretation of their data. They know that most of the time their findings, especially in a new field of inquiry, are likely to be wrong or, at least, to be only crude approximations of the truth. They’d look foolish to their colleagues to buy into preliminary findings.

## What Every Journalist Should Know About Science and Science Journalism

- Science demands evidence, and some forms of evidence are worth more than others are. A scientist’s authority should command attention but, in the absence of evidence, not belief.
- There is no one scientific method, but all good science includes elaborate procedures to discover and avoid biases that might mislead.
- Uncertainty is a sign of honest science and reveals a need for further research before reaching a conclusion. Cutting-edge science is highly uncertain and often flat-out wrong.
- The pace of science, despite the hype, is usually slow, not fast. Breakthroughs are never the result of one experiment.
- Balanced coverage of science does not mean giving equal weight to both sides of an argument. It means apportioning weight according to the balance of evidence.
- Virtually all new technologies pose risks along with benefits. Thus “safe” and “effective,” whether applied to drugs or new devices or processes, are always relative terms. It is irrational to ask whether something is safe or not. Nothing is 100 percent safe. Policy decisions involving science must balance risks and benefits.
- Journalists and scientists espouse similar goals. Both seek truth and want to make it known. Both devote considerable energy to guard against being misled. Both observe a discipline of verifying information. Both insist that society allow them freedom to pursue investigations wherever they lead. Neither requires licensure or approval of an outside authority to practice its craft.
- News organizations usually invest too much importance in a scientific development and not nearly enough in the broader trends. —B.R. ■

Novice science journalists, however, often skip right over these crucial, cautionary parts of a typical journal article and zero in on the conclusions, however tentative. They tend to ignore that

the premises often are assumptions and “best guesses.” In science, most reports end with an argument for why further research is needed. Experienced science writers try to keep the sense of

uncertainty in their copy. But, too often, editors instinctively strike out the caveats that, in their minds, weaken the story. Headline writers further prune perspective and judgment.

There are thousands of scientific journals, most published monthly, some weekly, and each is filled with reports detailing incremental steps in research. It's part of the culture of science to put out preliminary findings, along with detailed descriptions of how the research was done—precisely in order to get comments pointing out possible errors or suggesting better interpretations. But these days, more than ever, science reporters follow those journals and make stories out of what they think they find in them. Some more aggressive reporters lurk on online chat groups to catch even more preliminary tips.

None of this is to say that the news media should not cover science. Journalists should, of course. The impacts of science, including technology, and its effects on individuals and on society, are becoming more powerful and less predictable. It is more important than ever that the public be informed of what's happening in science. What the news media need to do is get smarter in how they cover it. Their focus should be more on increasing the public's understanding and less on hyping apparent “gee-whiz” moments.

Science's effects are everywhere—treating and sometimes curing disease, improving communication, making food cheaper and safer, enabling better transportation, detecting and convicting criminals, spying on terrorists, creating new materials, forecasting weather, improving our understanding of human behavior—to name only a few areas. Beyond practical effects are discoveries that simply enlighten and edify, that contribute as much to the meaning of life as do the arts—discoveries about the universe, the origin and evolution of life, the nature of matter and energy, how life works.

To be sure, the effects are not all salutary. Science and technology also have brought us vast and persistent environmental damage, unspeakable weaponry, innumerable toxic sub-

## Books Every Science Writer Should Read

*This list of recommended books has been assembled by Boyce Rensberger, director of the Knight Science Journalism Fellowships program at the Massachusetts Institute of Technology. It represents only a start on background reading and is not meant as an exhaustive compilation.*

### Classics

- The Origin of Species, Charles Darwin
- Relativity, Albert Einstein
- The Nature of the Chemical Bond, Linus Pauling
- Microbe Hunters, Paul de Kruif
- Silent Spring, Rachel Carson
- Chance and Necessity, Jacques Monod
- The Mountain Gorilla, George B. Schaller
- The Lives of a Cell, Lewis Thomas
- What is Life?, Erwin Schrödinger

### Books That Teach

- A Brief History of Time, Stephen Hawking
- On Human Nature, Edward O. Wilson
- The Feynman Lectures on Physics, Richard P. Feynman
- The Selfish Gene, Richard Dawkins
- Annals of the Former World, John McPhee (Includes four of McPhee's books: Basin and Range, In Suspect Terrain, Rising from the Plains, and Assembling California.)
- Chaos, James Gleick
- Genome, Matt Ridley
- Five Kingdoms, Lynn Margulis and Karlene V. Schwartz
- The Whole Shebang, Timothy Ferris
- The Insect Societies, Edward O. Wilson
- The First Three Minutes, Steven Weinberg
- In the Shadow of Man, Jane Goodall

### Outstanding Modern Books

- Gun, Germs, and Steel, Jared M. Diamond
- Gödel, Escher, Bach, Douglas R. Hofstadter
- The Hot Zone, Richard Preston
- The Blind Watchmaker, Richard Dawkins
- The Beak of the Finch, Jonathan Weiner
- The Language Instinct, Steven Pinker
- The Society of Mind, Marvin Minsky

### Biography, History, Memoir

- The Double Helix, James D. Watson
- Surely You're Joking, Mr. Feynman!, Richard P. Feynman
- The Making of the Atomic Bomb, Richard Rhodes
- A Sand County Almanac, Aldo Leopold
- Ever Since Darwin, Stephen Jay Gould
- Naturalist, Edward O. Wilson
- The Eighth Day of Creation, Horace Freeland Judson

### Science and Society, Analysis or Philosophy of Science

- Science, the Endless Frontier, Vannevar Bush
- The Structure of Scientific Revolutions, Thomas S. Kuhn
- The Art of the Soluble, Peter B. Medawar
- The Logic of Scientific Discovery, Karl Popper
- The Two Cultures, C.P. Snow
- Science and Human Values, Jacob Bronowski ■

stances, and some of the most profound ethical challenges society has ever had to confront. In decades past, wrong science—often enthusiastically promoted by the mass media—has bolstered the evils of racism, sexism and other pseudoscientific ideologies.

But in nearly all the impacts of science on society—for better or for worse—it was rarely scientists alone who were to blame. Citizens and societies, including corporations and governments, make decisions about what discoveries or inventions to encourage or reject. And, of course, those decisions are made on the basis of information, much of it supplied by the news media and the framing employed in the stories.

Why don't more editors and producers appreciate this crucial role that their newspapers and broadcasts play? Why do they settle for naive and careless stories about science when they don't seem to tolerate the same quality of work from a sports writer or political reporter? I think it's because of another widespread misunderstanding—not of science but of the public. Many editors with whom I've spoken over the years claim that the average reader or viewer is not interested in science. If only a few readers care about science, they believe, it's better to devote staff slots and newsroom budgets to the things readers *do* care about.

As it happens, American adults are, indeed, interested in science. According to repeated surveys by the National Science Foundation (NSF), fully 70 percent say they are interested in science—significantly more than say they are interested in sports or politics. If the question is expanded to ask about interest in new technologies, about 90 percent express interest. Yet just 17 percent consider themselves well informed about developments in science and technology. In other words, newsreaders, viewers and listeners of news say they are interested, but they realize they aren't being well informed. In short, the public wants to know more.

Interestingly, despite all the stories about how science-ignorant American students are in comparison with those in many other developed countries, the reverse is true for adults. According to a 1999 NSF study, U.S. adults score higher on tests of science knowledge than do adults in most other countries. Denmark scored at the top, followed a point or two behind by the Netherlands and the United States and, slightly lower, Great Britain. Seven other developed countries trailed, with Japan and Portugal at the bottom. Moreover, the percentage of Americans who can give the right answers to a set of science questions has been growing slowly for 20 years. So not only do most adults

want to know more about what is happening in science, they're better prepared to follow science news than are people in most other developed countries. And they're better prepared than they were in the past.

Newsroom managers are right not to be driven by marketing polls that push them toward inconsequential fluff in news coverage, but here is a case in which the surveys suggest readers, viewers and listeners want more and better reporting about science and technology and about the events and phenomena that exert powerful and lasting influence on everyone's lives. If these news consumers find that coverage of science is naive or ignorant, they'll lose trust in those upon whom they ought to be able to depend to broaden and sharpen their knowledge. ■

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## Investigating Science

Lots of time is required to cultivate sources and verify their claims.

By Deborah Blum

**I**n the early 1990's, an investigative reporter named John Crewdson began a series of articles on AIDS research, navigating a maze of claims and counterclaims over who first isolated the virus. Crewdson, of the Chicago Tribune, was a tireless researcher, an elegant writer, and—as he insisted—not a science writer. Science writers he classed with stenographers. They just

wrote down what scientists told them and dutifully repeated it, he explained at a journalism conference.

I remember seething over this with Laurie Garrett, a science writer from Long Island's Newsday. Garrett later won a Pulitzer Prize for her incisive and passionate reporting on infectious disease in Africa and Asia. Her perspective on good reporting is notably in-

trepid—"If scientists are wearing masks and gloves, put them on, too." She was insulted by Crewdson's characterization, not only for herself, but also for her profession, and even for me.

For many years people have described me as an investigative science reporter. While working at The Sacramento Bee, I'd spent much of the late 1980's tracking deception in nuclear

weapons programs. I'd been part of a reporting team that detailed the failures of our local nuclear power plant, since shut down. When Crewdson made his comment, I was starting an investigation into primate research. I didn't spend much time worrying about his words. I'd already made so many public record requests that the flood of documents spilled onto the neighboring desk. And I was too busy trying to persuade reluctant researchers to tell me about their monkey experiments.

Nor did I think Crewdson knew what he was talking about. But similar criticisms of science writers have continued over the years, among them that we don't do enough tough-edged reporting. "Investigative reporting in the sciences is virtually nonexistent," a friend of mine complained recently. Another charge is that science reporters are too accepting of what researchers tell them. Even Garrett, when she wrote about the way journalists cover infectious disease, complained that "Our profession has failed to consistently demand proof, not only that the new innovations of biology and medicine work, but also that the old dogmas and remedies stand the test of time."

These are valid criticisms, but I think—and I hope—they are becoming less valid as science writing matures. We are increasingly more willing to challenge dogma, to question heralded results. And our determination to do this arises, in part, because such challenges matter. Often we speak of the watchdog press as keeping an eye on government, yet science and medicine are also extraordinarily powerful forces, altering people's lives for better and worse. They need—no, they demand—similar scrutiny.

As with government, scientific research must be considered a wholly human endeavor—full of promise and ideas and dedication but also politics and greed and wrong-headedness. Maryland physicist Robert Park likes to point out that "A Ph.D. is not an inoculation against stupidity." Nor do I think that tough questioning should be limited to high-profile investigations. A good reporter investigates every time he or she writes a story. No credible

science writer accepts a researcher's assessment of his work (brilliant! brilliant!) at face value. Since none of us is an expert in every branch of science—capable of independent analysis of high-energy physics one day and molecular biology the next—investigation, then verification, becomes part of the basic foundation of many stories.

It is here that science writing stands apart from many other beats. The daily checking of facts is much more complicated because deciphering of research itself is so complex. A journalist must understand the science, at least enough to give it context, and must be able to evaluate the research. Is the research a part of mainstream science or is the science in question just smoking at the fringe? Are these preliminary results or confirmations? A judgment must be made as to whether findings are credible or not. What's the researcher's reputation? What kinds of scientists agree with the author's assessment? Are they friends or business partners? Can they be objective?

Sometimes I think the reason science writers do so little big-scale investigative reporting is that they exhaust themselves just trying to get the stories right on a day-to-day basis. Additionally, many science writers must constantly traverse a wide research terrain, reporting about molecular biology one week, high-energy physics the next, and then moving on to environmental toxicology. The nature of our job provides little time to burrow in.

### **Investigating Nuclear Weapons Laboratories**

What is required to begin an investigative science story is time. I began my journalism career as a police reporter. I used to think of cops as peculiarly insular, but I've come to realize that almost every professional community displays some of that same us-against-them mentality. It was with that awareness that I began my investigation of the nuclear weapons laboratories.

These are U.S. Department of Energy facilities located in California and New Mexico. In the late 1980's, money was pouring into those programs. I

wondered precisely what it was buying. I'd done a few weapons lab stories, and I knew that the weapons designers were wary to the extreme. So I proposed to my editors that I do a series on weapons designed in California—interesting even superficially—with the underlying motive of trying to crack into the bomb-maker circle.

I made myself an internal bet that if I was just patient, someone in that inner circle would begin to trust me. For six months, I visited weapons labs, talked to nuclear physicists, admired hulking lasers, and read up on weapons design. I went to the Nevada Test Site, where they were testing nuclear weapons underground, put on a construction helmet, and stood in the shadowy corridor where the bomb would be detonated.

One evening a scientist from one of the weapons labs took me to dinner and said he liked what I had written. And, by the way, he thought lab administrators were lying about some of those newer weapons. He had the documents to prove it—and copies for me. The resulting stories I wrote eventually helped to provoke a congressional investigation of those weapons and halt some unwarranted projects. This scientist was absolutely right. The weapons in question didn't work.

Not that I took his word for it. Nor did I entirely trust the documents. Just as people lie, so do documents. I spent hours verifying what was in those pages. As a science journalist, I needed another kind of source as well, what I think of as an objective technical expert. I'm not a nuclear physicist or a biologist or a scientist in any of the fields I cover. So if I'm going to criticize science, I need my conclusions checked and double-checked.

The other kind of sources I cultivated at the weapons labs were physicists that I trusted enough to ask if I was getting it right. Was I describing a stockpile test accurately? Had I cited the detonation sequence correctly? It's the small details that can trip you up, and if I'm going to accuse a government laboratory of deception, I don't want to puncture my story with errors, even little ones.

Implicit in all of this, of course, is that to do it right—or even to get the story—takes time. And this means a real commitment must be made by the paper as well as by the journalist. The Bee, during my time there, was extraordinarily supportive. I had some key editors who fully recognized the potential of covering science. There were others who didn't, and they couldn't be troubled to learn. When I covered the first shuttle launch after the Challenger explosion, one editor asked me if it was going to be a manned mission. Years later, I still haven't figured out a diplomatic answer.

## Reporting Science at Newspapers

A continuing challenge for science writers—especially at small- to medium-sized papers—is that they too rarely have a science-savvy editor. Editors often don't understand the science enterprise and thus don't push for the investigative promise there. I was fortunate to find supportive editors, but not every journalist does. It also helps to have built up some credibility. One of the personal benefits of that nuclear weapons series was that my editors were willing to gamble on me. That experience helped when I told them I wanted to spend a lot of time looking at monkeys. The investigation into primate research eventually won a Pulitzer.

This reporting project began with what I call “pattern recognition”—a strategy I now try to teach my journalism students. The challenge is how a reporter recognizes an important pattern before it is revealed in a formal report. I tend to listen for it: It can be found in the sound of the same idea repeated in different contexts. By the time I began reporting on the primate research story, I'd been a science writer long enough to have many scientists ask me to hold back details of their experiments on animals. They didn't want animal advocates noticing them. It began to seem like a secrecy pattern. How could anyone understand animal research if people who knew about it—including the reporters who covered it—kept hiding it from the public?

I decided to use monkeys to tell the story for a number of reasons. They are smart, social, genetically close, often endangered and, by using their circumstance, I could raise each of the ethical issues that interested me. And I had discovered that California was the only state that quarantined all primates upon entry to the state. That meant there were records on every monkey. I filed a public record act request to get these records. As I examined the detailed records of thousands of animals, I knew that I could start pulling apart those layers of secrecy.

Actually, it was easier to get the documents than to persuade researchers to talk with me. It took me almost a month of arguing, negotiating and cajoling to line up the first interviews. No surprise there—it fit perfectly with the secrecy pattern.

It's worth exploring another kind of pattern, and that concerns how often science writers do this kind of investigative story. The short answer is—not often enough. For all the reasons I've mentioned and because we still, culturally, are deferential toward science, the pronouncements of research too frequently go unchallenged. This is especially a problem at smaller newspapers, where there might be one overstretched science writer, if there is one at all. But examples of this can be found at almost any publication.

Still, my sense is that this circumstance is changing for the better. At the regional level, there are signs of solid investigative reporting—melding tough questioning with healthy skepticism—as exemplified by The Seattle Times' fine series on clinical trials in cancer research. At the national level, some remarkably good investigative reporting occurs, such as The Washington Post's detailed exploration of the challenges and failures of gene therapy and The New York Times' relentlessly thorough coverage of women's health issues. Is it as much as I would like to see, as much as I think is needed? Absolutely not, but the direction is definitely the right one.

The common ground in many of the current investigative science stories is medicine. This makes sense since re-

porters justifiably concentrate on research that most directly affects people's lives. Still, I could wish for more explorations into physics and earth sciences and even, once again, weapons design. I've talked about some of the challenges to investigative science reporting, but they are not excuses. We do could better. I hope the next generation of science writers surpasses mine by far.

When I teach science writing, I ask my students to investigate a risk and make their own decision about the science involved. I ask them to question research results as they would in reporting any other story. I usually assign one thoroughly skeptical book, such as Robert Park's “Voodoo Science” or even John Crewdson's “Science Fictions,” which brings me back to stenography.

In the spirit of investigation, while writing this article I contacted Crewdson and asked him if he still thought of science writers that way. He said the answer was more complicated: “There certainly are some good science and medicine reporters around, and I think the general quality is better than 10 or 15 years ago. But there's still an awful lot of ‘Dr. A says this, but Dr. B says that.’” He wanted it understood, though, that he no longer thinks of science writers as reporters who merely repeat what they're told.

Crewdson is right when he observes the continuing practice of citing dueling quotes and calling it a day. But I want another point understood as well: we were never stenographers. ■

*Deborah Blum is a science writer and a professor of journalism at the University of Wisconsin-Madison. She is the author of “The Monkey Wars” (Oxford, 1994), “Sex on the Brain” (Viking, 1997), and co-editor of “A Field Guide for Science Writers” (Oxford, 1997). Her latest book, “Love at Goon Park” (Perseus), will be published in October. She serves as president-elect of the National Association of Science Writers (<http://nasw.org>).*

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# The Devolution of a Science Page

Suffering from editorial interference and lack of focus, ‘The page actually managed to make science boring.’

By Jim Dawson

**B**ack in the early summer of 1999, just two years after I and a handful of reporters at the (Minneapolis) Star Tribune persuaded the senior editors to publish a weekly science page, the copyeditor I worked with leaned over the low partition separating our desks and said, “The vultures are in the trees.” The two of us, with significant help from other reporters, were having enormous fun each week putting together a page that was focused on hard science and medical research but that didn’t take itself too seriously. But we knew, given the nature of newspapers, that editors who knew virtually nothing about science or science journalism would eventually start imposing their views.

In the early days of designing the page, the copyeditor and I argued whether it would last as a home for pure science for one year or two. The page survived for nearly four years, although I recommended killing my own mutated creation in its third year.

The page ran with full color inside the “A” section of the newspaper on Wednesdays. That is highly valued real estate in a newspaper, and in the beginning it was justified by editors who saw the science page as a perfect “segment one enhancement”—a way to appeal to the better-educated readers. The paper had added all sorts of fluffy entertainment and shopping features (segment two enhancements) to the weekend paper, and our science page was seen as a good counterweight.

We did solid, in-depth science stories about physics, earth sciences, genetics, astronomy, cosmology, paleontology and climate. Especially climate. This was Minnesota, after all, where people actually debate whether el-

ementary school children should stand at bus stops when the temperature drops to 20 degrees below zero Fahrenheit. But we also sent scientists and mathematicians to review the latest bad science movies, hired the magician The Amazing Randi to write about pseudoscience, and convinced a highly regarded humorist to write about why he didn’t like scientists.

The page was a hit. The extensive Twin Cities scientific community that includes the University of Minnesota, a host of smaller colleges, 3M, Medtronic and other high tech firms, loved the visibility the page gave to science. The more general audience of readers who are interested in science—some 25 to 35 percent of subscribers, according to the newspaper’s surveys—responded enthusiastically. Even editors who typically glazed over when I had proposed stories on neutrinos or interfacial engineering had nice things to say.

One of the hard rules I set for the page was that consumer-oriented “health news” was not allowed. The newspaper’s Variety section carried consumer health news regularly, so there was no need to dilute the science page with stories on the latest wonder drug or advice about how to cope with bunions. As an aging baby boomer I find myself increasingly drawn to stories of disease and physical decay, but they don’t belong on a science page. I was adamant in this view, to the point where I wouldn’t allow some health stories that involved good science. I feared the camel’s nose under the tent.

Pure medical research—a new procedure being developed to replace heart valves, or new understanding of how viruses invade cells—was allowed on the page. This distinction between



Cartoon by © John S. Pritchett.

science and health news was arbitrary, based on my instinct as a long-time science writer.

My reasons for keeping consumer health news off the page were straightforward. Science is increasingly important in our society, yet poorly understood and feared by most people. Newspapers, according to the surveys I have seen, are the primary source of scientific information for the vast majority of readers. Yet newspapers, with a few well-known exceptions, typically do a bad job covering science. Editors often are as poorly educated in science and as afraid of the subject as society in general. There is also a type of anti-intellectualism at play in many newsrooms, especially among mid-level editors. If a story is complicated, the thinking goes, the readers won’t un-

derstand it, so better not to run it.

Local television news organizations are even worse. Science stories are often given to the weather reporter, apparently on the theory that because weather is complicated, the reporter will understand particle physics. Most weather reporters I know don't have even a cursory understanding of the science underlying global warming.

As time went on, some in the Star Tribune newsroom complained that our science page stories weren't written with the average "reader customer" in mind. Others worried that we didn't have stories on the page simple enough to attract readers who weren't interested in science. The art department complained when we insisted on smaller graphics so there would be room for words. Even the humor on the page was criticized as being too subtle. After two years, the complaints began taking the form of orders on design and story mix.

The newspaper's several health writers were told to write for the page on a strictly scheduled basis, whether they had decent science stories or not. Those writers, of course, did what they were good at—they wrote health stories. As the only science writer at the paper, I was pressured to produce more stories for the front page, ostensibly because science was so important that it needed to be out front. The science page quickly lost its focus and became a mishmash of light science fare and health stories all designed not to be too challenging. The page actually managed to make science boring.

I left the newspaper in 2000 to take a job as a senior news editor at *Physics Today* magazine. The science page had been an aimless mix of health and science for several months before I left. To be sure, there were occasional good stories on the page, but only occasional. The health reporters viewed the pages as an assigned burden, I was meeting my mandate to write for other parts of the newspaper, and the environmental and biotechnology writers were working on large-scale projects that didn't fit the page. Several months after I was gone, so was the page.

Killed, no doubt, after an editor asked why a health page was running in the middle of the "A" section when there was perfectly good health coverage back in *Variety*.

What happened at the Star Tribune was too bad for those of us who believe writing about science is a high journalistic calling. Unfortunately, it was predictable. Newspapers have historically tolerated science writing, not encouraged it. Health writing is fine, because

one on the beat. The science writer at the newspaper now is The New York Times or The Associated Press wire.

What has really been lost, of course, is coverage of local science. There are a lot of first-rate scientists in Minnesota, doing everything from looking for proton decay and neutrinos in detectors located deep in the Soudan Mine, to computerizing Jane Goodall's early field notes to better understand the behavior of chimps. The local sci-

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**As an aging baby boomer I find myself increasingly drawn to stories of disease and physical decay, but they don't belong on a science page. I was adamant in this view, to the point where I wouldn't allow some health stories that involved good science. I feared the camel's nose under the tent.**

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everybody gets sick. But cosmology or paleontology? Only if you can relate the stories to the reader's lifestyles.

The irony here is that the number of good science writers has grown dramatically thanks to programs such as the Knight Fellowship at MIT and the science writing program at the University of California, Santa Cruz. And it is clear that science stories are increasingly becoming part of the daily news cycle, with stories about genetics, biotechnology, nanotechnology and climate change becoming commonplace. One would think that newspaper editors would see the growing role of science in society and be insisting on high-visibility science beats.

Yet even The Boston Globe and The Dallas Morning News, newspapers that had two of the best science sections in the country, combined them with their health sections in recent years. At least those papers still have good science writers. The Star Tribune, over the protests of local scientists and readers, didn't hire a new science writer after I left. Now, for the first time since Victor Cohn began covering science for the Tribune back in the 1950's, there is no

ence stories are everywhere, and the Star Tribune isn't covering them. Neither is the rival Pioneer Press across the river in St. Paul. That newspaper has won a couple of Pulitzer Prizes in recent years, but has never had a science writer.

There are still four health writers at the Star Tribune, however. A year after I left the paper, I asked the new health and science team leader—a decent editor transferred in from the public safety team—how science coverage was going. "Great," he said. "We did a terrific job covering the nurses' strike." No doubt they did. ■

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# Breaking News or Broken News

A brief history of the ‘first cloned human embryo’ story.

By Jon D. Miller

**A**t nine o’clock on Sunday morning, November 25, 2001, the online e-biomed: The Journal of Regenerative Medicine, posted an article by Jose Cibelli, from Advanced Cell Technologies, and five colleagues entitled “Somatic Cell Nuclear Transfer in Humans: Pronuclear and Early Embryonic Development.” The article described a series of experiments that had produced three somatic cell-derived embryos that developed up to the six-cell stage. The article concluded that “The ability to create autologous embryos represents the first step toward generating immune compatible stem cells that could be used to overcome the problem of immune rejection in regenerative medicine.”

At the same moment, U.S. News & World Report released a copy of “The First Clone,” a story by Joannie Fischer that would appear in its December 3, 2001 issue. The article reports “... this week, scientists at Advanced Cell Technology, a small biotech start-up company in Worcester, Mass., are announcing that they have ... successfully engineered the world’s first cloned human embryo.... Over the past 18 months, U.S. News has reported from inside the ACT laboratory, with exclusive access to the cloning scientists and their laboratory work.”

Simultaneously, Scientific American released a copy of an article by Cibelli, Robert Lanza, and Michael West, all from ACT, entitled “The first human embryo cloned.” The article reports:

*“We hoped to coax the early embryos to divide into hollow spheres of 100 or so cells called blastocysts. We intended to isolate human stem cells from the blastocysts to serve as a starter stock for growing replacement nerve, muscle and other tissues that might one day be used to treat patients with a variety of diseases. Unfortunately,*

*only one of the embryos progressed to the six-cell stage, at which point it stopped dividing. In a similar experiment, we succeeded in prompting human eggs—on their own, with no sperm to fertilize them—to develop parthenogenetically into blastocysts. We believe that these achievements ... represent the dawn of a new age in medicine by demonstrating that the goal of therapeutic cloning is within reach.”*

Cibelli, Lanza and West are careful with their language in the text of the article. They do not say that they succeeded in producing stem cells or in sustaining the dividing eggs to the 100-cell level, but the title of the article proclaims “The first human embryo cloned.”

At 9:45 that morning, CNN interrupted its morning programming with a breaking news announcement:

*Martin Savidge: “We have breaking news this morning from the world of science. A U.S. laboratory says that it has successfully cloned the first human embryo. The Advanced Cell Technology scientists have been reportedly working on the project over the past several months. They describe their results in the Journal of Regenerative Medicine. The transfer of DNA into human eggs and the growth of those eggs into six-cell embryos. The findings could mean breakthroughs in treatments for deadly disease. It also means a great deal of controversy.”*

At 10 o’clock., Tim Russert opened “Meet the Press,” saying:

*“But first: a very significant development in the world of biotechnology. U.S. News & World Report is reporting this morning scientists have successfully engineered the world’s first cloned human embryo. Joining us are Michael*

*West, president and CEO of Advanced Cell Technology; Joannie Fischer of U.S. News & World Report, and NBC science correspondent Robert Bazell.*

*“And here’s the cover of today’s Scientific American reporting the first human clone, an article by Dr. West and his colleagues. And as I mentioned, today’s U.S. News & World Report, an article by Joannie Fischer. And here is what she says, scientists have finally duplicated a human embryo ... ‘this week, scientists at Advanced Cell Technologies ... are announcing that they have done just that—successfully engineered the world’s first cloned human embryo.’”*

Russert concluded the opening 15-minute segment by saying, “An historic moment here on ‘Meet the Press.’ And we’ll be covering your battle with the U.S. Congress over the coming weeks. A new world is upon us.”

Shortly after the original posting of the journal article, Jeff Donn, an Associated Press feature writer working out of Boston, filed the first AP story on the ACT claim to have cloned the first human embryo. The AP story summarized the claims made by ACT, but noted some dissent among scientists. Donn’s story noted that Glenn McGee, a University of Pennsylvania bioethicist, had resigned from the ACT ethics advisory board earlier and called the new announcement “nothing but hype.” Donn reported that McGee characterized the new claim as “doing science by press release.” From the number of individuals interviewed and quoted in the AP wire story, it appears that Donn had an advance copy of the release and material and had done his homework. (Donn declined to be interviewed for this article on orders from his AP editor.)

The lead paragraphs of the AP wire story were copied almost verbatim by the Xinhua News Agency in China and

Agence France-Presse, thus the world was quickly informed that the first human embryo had been cloned in the United States. In general, the foreign press repeated the claims about the success of ACT in making the clone, but dropped any reservations or doubts about the accuracy of the claim.

The AP wire story was updated throughout the day by Donn, adding new comments by President Bush, the Pope, and various U.S. political or religious leaders. Later in the day, the AP wire story added a paragraph:

*"A second company quickly claimed Sunday that it had also cloned human embryos, but in unpublished research. The company, Clonaid, said that it hopes to eventually create fully developed human clones. 'I'm very pleased that I'm not alone,' Director Brigitte Boisselier said in a phone interview. 'We're doing embryos every day.' The company keeps its laboratory location secret, citing security concerns. Boisselier said that the embryos were created by injecting eggs with a variety of other cells, but she refused to give details."*

AP repeated this release several times, including on their Online Edition. It was picked up by the foreign press, and a Japanese story reported that "two U.S. companies" claimed they have cloned human embryos. By the end of Sunday, AP dropped the Clonaid paragraphs from their running story.

Clonaid is a company created and operated by the Raelian Movement, a group founded by French journalist Claude Vorilhon, who claimed that he was abducted in 1973 by aliens from outer space who told him that all human life was cloned by the aliens in their own image and gave him the name Rael. On the Raelian Web site, Brigitte Boisselier is identified as a bishop in the movement.

Unaware of any doubts about the veracity of the ACT claims, the political and religious leadership of the world lost no time in responding to the announcement of this new scientific development. President Bush declared the work to be "morally wrong," and

numerous anti-abortion senators and group leaders demanded new legislation to ban the procedure. The Vatican was slightly more cautious, saying that if a real human embryo had been cloned, it would be a subject of concern to the Vatican, noting that the original news reports contained insufficient evidence to determine exactly what had been done.

## Monday

By morning, many science journalists had looked at the ACT claim and began to raise questions about the accuracy of the reported cloning. Gina Kolata's story in The New York Times began:

*"A small, privately financed biotechnology company said yesterday that it had created the first human embryos ever produced by cloning. But the embryos died before they had even eight cells, and most died long before that. Cloning experts outside the company said the experiment was a failure."*

Rick Weiss, writing in The Washington Post, reported that:

*"The cloned embryos ... grew for only a few hours—long enough to form microscopic balls containing just four to six cells each. The creations ... are still so unformed that some ethicists and scientists remain divided over whether they should be called embryos ...."*

Seth Borenstein from the Knight Ridder News Service summarized the problem with the ACT claim:

*"Some scientists were not impressed. The embryos died before they had eight cells, and most died before that. An embryo would have to grow for about a week and contain about 100 cells before it would have stem cells. 'It's a complete failure,' said George Seidel, a cloning expert from Colorado State University in Fort Collins. For a first attempt, he added 'they've progressed about as well as you'd expect, or slightly worse.'"*

Rachel Gotbaum, reporting on National Public Radio, interviewed Dr. John Eppig, a senior staff scientist at Jackson Laboratory, who concluded that the work reported by ACT was minimal and that most scientists would not have reported this kind of preliminary work. By Monday night, ABC's Peter Jennings introduced the story, saying "But today, the question is—did the company really make a breakthrough?"

There was broad agreement among science writers and among the scientists they interviewed that the small cluster of cells created by ACT could not have become a human if it had been implanted in a woman.

Oblivious to the reservations of scientists and science writers about whether a human embryo had actually been cloned, political leaders throughout the world moved to oppose this kind of scientific work. The head of the German physicians' association referred to the work as a "nightmare," and the European Commission announced its opposition to the cloning of human embryos for the purpose of producing stem cells. Japan's ministry of science and education announced that it would immediately ban the creation of cloned human embryos in Japan.

## Follow-Up Coverage and Reaction

By Tuesday, a consensus was emerging among science writers. The lead in Gina Kolata and Andrew Pollack's story on the front page of The New York Times said:

*"When Advanced Cell Technology, a small biotechnology company in Worcester, Mass., announced on Sunday that it had taken the first steps in producing human embryos through cloning, it could not report lasting success; all of the embryos it created had died. It could not even report that it had used groundbreaking techniques; its methods had already been used in animals. Some scientists even suggested that what the company was doing was not cloning at all."*

The lead in Faye Flam's story in *The Philadelphia Inquirer* ended with the observation that other scientists said that the work reported by ACT "produced little evidence of a true medical breakthrough." Flam reported:

*"The embryos created by the company are 'essentially useless for the long term objective' of making stem cells, said Richard Schultz, a biology professor at the University of Pennsylvania. 'It was a failed, dysfunctional experiment,' said Douglas Melton of the Harvard Medical School. To succeed in making medically useful stem cells, he said that the first objective is getting the embryo to grow. The next is to learn to control the way that stem cells specialize into different types of tissue. 'They didn't even get over the first hurdle,' he said."*

Kolata and Pollack reported that Dr. Ronald M. Green, a Dartmouth professor who headed the ACT ethics board, said that he prefers to refer to the cells as "cleaving eggs" rather than embryos.

By Friday, reporting had turned from the ACT claim to the media coverage of the ACT claim. Anthony Violanti's story in *The Buffalo News* carried the headline "Cloning Story Was the Offspring of Hype." Violanti wrote:

*"The announcement was made on a weekend, usually a slow time for news, when most regular science writers and medical beat reporters tend to be off. Advanced Cell Technology made arrangements to release the story online to a science Web site and also coordinated to have articles published in Scientific American and U.S. News & World Report. It was a full-pronged media assault."*

*"How could you not jump on that story, especially during sweeps week in November," asked Michael L. McKean, a professor at the University of Missouri School of Journalism."*

Professor McKean's suggestion that sweeps week may have influenced coverage decisions is particularly relevant to the decision of "Meet the Press" to collaborate with a small financially in-

terested biotechnology company in launching their claim to have cloned the first human embryo. Nancy Nathan, the executive producer of "Meet the Press," declined to be interviewed for this article, and Barbara Levin, the director of communications for NBC News, declined to answer specific questions about the amount of pre-broadcast collaboration with ACT, saying that the discussion on "Meet the Press" was "thorough and accurate, and we stand by our reporting."

### Some Lessons

What lessons can be drawn from this short history of the first cloned human embryo story? Four lessons merit some discussion.

1. **There is an inherent conflict between reporting the news and managing the news.** In this case, a relatively new electronic journal and at least three major media organizations joined with a small private corporation that has a substantial financial interest in the outcome to promote a story about an alleged new scientific discovery. U.S. News & World Report openly admitted that they had been working with ACT for 18 months in an "exclusive" arrangement, which turned out not to be completely exclusive. In subsequent pieces, the editor of *Scientific American* admitted to doubts about the publication of the article by the three ACT officers, but defended his decision on that grounds that it increased public awareness of the issue. The participation of Tim Russert and "Meet the Press" in a pre-arranged media blitz is more surprising, but may have been encouraged by science correspondent Bob Bazell's general acceptance of the ACT report as a genuine scientific achievement.
2. **Speed is often the enemy of accuracy.** Although some news organizations had been working with ACT for months to coordinate the media blitz, other organizations appeared to be struggling to make sense of the cloning announcement. On the posi-

tive side, the AP writer seems to have had some lead time on the story and used it to talk to other sources and to raise at least some small flags about the magnitude of the achievement. CNN, on the other hand, seems to have had little advance warning and visibly struggled throughout the day. The two CNN medical correspondents featured in their coverage either had not read the original article or managed to get most of the science wrong. The foreign wire services appeared to be operating on a weekend basis and largely rephrased the AP story throughout the day. By Monday, most of the experienced science writers were on the story and the general interpretation of the first announcement turned nearly 180 degrees.

3. **Misinformation multiplied by re-action does not produce good public policy.** Within minutes of the original announcement, reporters were asking public officials around the world what they thought of the first cloning of a human embryo, and most of these individuals accepted the premise that the scientific event had actually happened, and they proposed public policy responses accordingly. The government of Japan imposed new restrictions, and the British Parliament adopted new regulations of human cloning, largely in response to the claims that a human embryo had been cloned. Reaction led to reaction and activated virtually all of the interest groups along the pro-life, pro-choice divide. And millions of adults throughout the world now believe that a human embryo has been cloned in the United States.
4. **The need for expertise in reporting about science—and other equally technical subjects—is compelling.** By and large, most of the professional science and health journalists recognized the exaggerated nature of the original ACT claim and treated it appropriately. Gina Kolata, Andrew Pollock, Rick Weiss, Joe Palca, and numerous other science journalists recognized the lim-

ited merit of the ACT claim and reported serious scientific reservations about the claim in their first stories. They were able to bring their accumulated understanding of biology and their network of credible genetic biology sources to bear on the story quickly and produced balanced discussions of the potential medical value of therapeutic cloning and of the limited evidence of an ACT achievement in this field. Specialization is not a guarantee, however. Unlike their print colleagues, Bob Bazell (NBC), Rea Blakely (CNN), and Elizabeth Cohen (CNN),

appeared to accept the ACT claim without reservation, and the two CNN medical correspondents continued to report that skin cells had been used in the successful cloning.

Looking to the future, these lessons suggest that the era of specialization has reached journalism. The number and type of new scientific claims that are likely to be made and skillfully hyped in the future will grow exponentially, and the present structure of journalism in the United States and throughout the world appears to be minimally ready to deal with it. Editors and pro-

ducers must take increased responsibility for scrutinizing new scientific claims and for conferring with credible sources from the scientific community prior to publication. Neither time nor sweeps week is an excuse for doing otherwise. ■

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## How Does the European Press Address Cloning?

The answer depends on the level of debate and who is saying what.

By Olivier Blond

Only outside of the continent might people think of Europe as being a fully integrated political and sociological entity. From within, there is a great diversity of thought among the 15 members of the European Union. Divergent views about the scientific issue of cloning offer a perfect example of this disparity. Reporters who cover the issue remain largely prudent since cloning is still an unfolding issue about which there are and will be many different perspectives. But, at times, there are sensational clone-related events that lead to an eruption of more debate.

In Germany, the ruins of fascism and World War II still infiltrate most cultural subjects. In the realm of biotechnology, Germany was among the first western European countries to pass a law forbidding embryo manipulation. Most striking was the publication in 1999 of a book, "Rules for The Human Zoo," written by liberal philosopher Peter Sloterdijk. Many perceived it as a

justification of eugenics, whereas Sloterdijk believed he was inviting readers to reflect on new challenges offered by the rapid progress in science.

Starting with a story in the German weekly *Die Zeit*, a long, complicated

debate was engaged. It involved many thinkers and philosophers and resulted in much confusion for everybody, including the participants. Journalists from a number of German and foreign newspapers tried to report accurately on the numerous and evolving points of view, but the debate was blurred because Sloterdijk's text was understood as a justification of eugenics and Nazism. This prominent philosopher argued against these accusations, presenting himself as a left-wing thinker. But the emotions connected with these accusations hindered for a long time any subsequent assessment of his ideas.

In France, history also twists the debate. Many intellectuals want to address cloning while considering policies involving universal human rights. They establish themselves as abstract consciousness for the human being—an echo of the French revolution. The various scientists who have led the national ethics committee, like Axel Kahn,



This photo of Dolly was taken a few days after the news of the cloned sheep was announced. *Photo by © Chris Buck, February 26, 1997.*

frequently addressed the press on the issue of cloning. (Revision of the bioethics law was due in 1998 but is still delayed.) But if this debate is regularly portrayed in the newspapers, it has not yet found its place on the political agenda since it seems that politicians are afraid to take a position on such a sensitive issue. Only a few days after former French Prime Minister Lionel Jospin said he would authorize therapeutic cloning, he withdrew his decision. In the recent presidential campaign, French leaders did not address the cloning issue.

In contrast to theoretical debates in France and Germany, cloning has been considered as an issue of practical concern in Italy. There, citizens wanted to know more about the possibility of giving birth at an older age and about specific benefits they might receive from the current progress of scientific research and new opportunities offered through genetic engineering. Until July 2001, Italy had some of the most tolerant laws regarding the use of fertility science in Europe. A post-menopausal woman could receive implants as a method of giving birth.

In Italy, however, one name became emblematic of this scientific controversy—as Sloterdijk did in Germany. That name is Severino Antinori, a professor of medicine at the University of Rome. In August 2001, Antinori was the first to publicly announce the launching of diverse human cloning programs. Accompanied by slogans such as “reproductive cloning is a form of therapy,” his comments provoked many emotional reactions, as he had obviously hoped they would.

While covering such news, journalists inform readers of the general trend against reproductive cloning, and they often react negatively to Antinori’s flamboyant speeches. But their informative approach was stained for many citizens by how others in the media turned this story into sensationalized and “scoopy” coverage. It should be said that Antinori provokes and manipulates the media with some talent. Recently, he announced the planned birth of the first baby clone in December of this year. Strong words such as “worri-

some” or “horrific” are often used in headlines, but most papers, such as *Le Monde* in France, keep a neutral voice. However, such neutrality is likely to disappear as the situation unfolds.

British press coverage of cloning offers a third way to reflect about the issue. Great Britain has the Union’s most permissive legislation about embryo research. Few people remember the first test-tube baby, created in Brit-



Coverage of Antinori’s first baby clone.

ain in 1978. Many more recall the cute genetically conceived sheep, Dolly, who appeared on the front page of many newspapers when her existence was announced in July 1997. The British Parliament formally approved therapeutic cloning in 2001. In such a context, the British press usually adopts a questioning, wait-and-see tone. Specialists are warmly invited to feed the ongoing debate in the opinion pages.

In 1998, a referendum was held in Switzerland in an attempt to forbid any kind of new research on genes. It was defeated, but only by a small margin. This probably reflects the strength of advocacy that came from the academic research community and those involved in the field of genetic research. Their views were largely relayed by the press whose coverage during the referendum debate became intense and reached a very large audience.

What kind of larger assessment can

be drawn from this wide diversity in the European press? In their editorial positions, most newspapers (at least non-religious ones) unanimously reject reproductive human cloning, but they don’t take sides about therapeutic cloning or use of stem cells. (Reproductive cloning aims at the perfect reproduction of a human being, whereas therapeutic cloning reproduces some cells only, in order to cure diseases.)

In Europe, where the press is very often politically oriented, the traditional clash between liberals and conservatives (left vs. right) is not well reflected in the field of bioethics. European “Green” parties, for example, have been campaigning for a long time against genetic manipulation, as they warn people against the dangers of the biotechnology. But their positions are not well represented in large-circulation newspapers.

Cloning is a new topic for political debate, and the complicated and ever-changing scientific knowledge blurs positions. Confusion is perhaps the most apparent common ground among politicians and reporters. Individual journalists who write for the same magazine might have very different positions about this issue.

Many European journalists would certainly like to stimulate a vigorous debate about cloning. Until now, they have been very careful about not expressing their own views. Instead, they invite scientists, politicians and philosophers to present their opinions. If a referendum about cloning—such as the one in Switzerland—were to be organized in Europe, it would certainly invite the press to become more partisan in how they portray this issue. Considering the diversity of national cultures, religions and history, it is unlikely that any universal point of view about cloning will emerge in the European Union anytime soon. ■

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# Rethinking the Science Beat

Cultural assumptions matter, and journalists need this broader context as part of their reporting.

By Stefanie Friedhoff

Once I was asked to write a caption to a photograph of a mouse with a human ear on its back. At the time, I was news and magazine editor at a daily newspaper in Berlin. I had not a clue as to what to tell readers about this image. But the picture in front of me was triggering a million thoughts.

How should one think about human body parts being bred on or in animals? How would the availability of all kinds of human tissue and donor organs change both medicine and society? Would millions of lives be saved by this, or would only the wealthy be able to afford the benefits of this scientific advance? Would fewer people be killed for their organs in other countries?

And that is why the Page One editor wanted it on the front page. He just didn't bother to make room for a full story. So I just didn't bother asking him and decided to put a story about tissue engineering—the science behind the photo—on the section's back page, which was my part of the paper to edit. The next day, this editor told the editor in chief that I was confusing our daily newspaper with *Nature*, thereby endangering circulation.

This happened in 1996. I remember wondering, even as I struggled to write this caption, how some editors could possibly describe science writing as unimportant, non-political and serving only a niche market. Yet, many did.

Back then in Germany science stories were not regarded as being worthy of a prominent place in newspapers. Science writers scanned academic journals and filled the spots above or next to large advertisements with news of what they found. It didn't require much ingenuity to figure out that there was something wrong with the way my paper and the rest of the German media

Photo withheld from Web publication by copyright holder.

A field trial of genetically modified oil-seed rape is pulled up by environmental activists in Oxfordshire, England, in July 1999. A smoke flare signals the start of the 'action.'

*Photo by © Nick Cobbing.*

were ignoring the ways in which the genetic and Internet revolutions were about to shake the foundation of the way we lived, thought and acted. (In 1997, for example, when for the first time a courtroom verdict was released over the Internet—in the Louise Woodward nanny trial in Cambridge, Massachusetts—we still did not have access to the Web at the B.Z., Berlin's largest daily newspaper.)

It was only when I moved to Cambridge in 1998 and became a science writer that I was aware of how much effort is required to do the kind of reporting I'd wanted to see in our newspapers. It was important to walk into the science labs (instead of just reading science journals) and report in an amusing and enlightening way about how scientists clone mice, grow skin, or modify genes in organisms. Through this reporting, I wanted to intrigue and educate readers back home and per-

haps raise their awareness of the centrality of these issues in their lives.

I discovered, however, that science writing requires more than the ability to understand the science and the guts to confront scientists, some of whom believe everyone should know the little realm they are operating in. It requires more than the ability to use language in an explanatory yet captivating way and to find metaphors of all kinds and social contexts.

When reporting about cutting-edge science, journalists often are among the first who translate a scientific finding into common language. When doing so, they must ask some general questions about the findings that move away from dependence on the scientific lingo. The findings need to be embedded into a commonly understood context. Without a concept of the universe, for example, the discovery of a new "moon" would not make

any sense. Without a basic grasp of mammal reproduction, new technologies such as cloning would not only not be understood but wouldn't raise the concern that they should. All of this can be difficult for the science writer who has to think about communicating ideas and concepts that in many cases were previously unthinkable. To accomplish this, journalists must first overcome their own biases, fears and limitations.

With cloning, for example, it took a while for the concept to sink in, even for those who wrote about it. Until Dolly, the cloned sheep, the notion that reproduction could be possible without some kind of fertilization was unthinkable in the general public. Six years after the news broke, the topic continues to challenge our ability to imagine an utterly different future in how we live and reproduce. Cloning challenges our definition of what life is, when life begins, how a person's identity is constituted, and so forth. It also forces us to make decisions about how to use technologies such as cloning in the future.

### **The Context of Cultural Assumptions**

It is the job of journalists to try to provide the many levels of ingredients necessary for people—scientists, philosophers, religious leaders, politicians and the general public—to engage in thoughtful discussion about such discoveries. At times, this can also mean exploring differing cultural approaches toward the same findings or technologies. For example, in Europe, there has been consistent resistance against genetically modified organisms (GMO's), which has its roots in two decades of a strong ecology movement and in a cultural orientation that emphasizes the individual's right to know and a belief in nature's unpredictability. In the United States, in contrast, the cultural notion is that nature can be designed to people's convenience, and if GMO's make agriculture easier, more efficient, and economically more successful, then farmers should use this technology.

Because of these different orienta-

tions, Europe engaged in an often heated debate on the dangers of GMO's. Some of the results are a demand for testing how modified corn would influence the existing plants, requirements to label GMO-food, and a call for further research into the dynamics of gene manipulations in plants and the implications for humans and the environment. In the United States, on the contrary, there was little discussion about risks and a lot of discussion about how genetically modified rice could solve some of the world's food problems or how enriched vegetables could make vaccination unnecessary.

These cultural differences offer journalists writing about science an expanded context in which to report their stories. By acknowledging particular cultural biases, reactions to scientific findings and advances can be better understood. And by introducing arguments and approaches different from our own, it offers readers the opportunity to rethink and reassess the issues from some new perspectives.

On my first assignment in the United States, a German family magazine asked me to rewrite a story about children and computers. The original article, written by an established German author, was apocalyptic in its tone: Children would lose empathy and their social skills if they used computers before the age of 12 because they would become angry and violent from sitting in front of the machine all the time. Basically, the article suggested that there was no hope. Parents were advised to lock away the dangerous machines. The magazine's editor said, "I can't leave parents alone with this problem. We need to help them understand and handle this change."

The story reflected the mood in the general public at the time. In the Germany I had left, the computer was the dawn of the day the world would fall apart. In the United States, however, the computer was the symbol of a better future. Researchers praised it as the perfect learning tool for children: On it, they could learn according to their own speed, interests and abilities, argued U.S. computer advocates. By combining these two perspectives, I broad-

ened my horizons as well as the article's. Interviews with scientists in both countries allowed for a layout and discussion of challenges and risks, some of which had been invisible to experts immersed in their cultural assumptions.

Taking a look at other countries' conflicts and struggles with new technologies can help avoid feelings of either blind anxiety or naive excitement. This is a good reason to call a British scientist in addition to those in the United States. Or why not call colleagues in Tokyo to ask about Japan's approach towards GMO's, embryonic stem cell research, or cloning? In the age of the Internet, contacts to such experts are not hard to find.

### **In Germany, Journalists Spark Public Debate About Bioethics**

In Germany, there is a very visible example of how national taboos can be broken and discussed by journalists. For decades, historical events had prevented Germans from discussing bioethics. When terms such as "designer baby" surfaced in the media, Hitler's horrible practices were quoted and, in Germany, the topic was buried. However, after the decoding of the human genome in the spring of 2000, the national daily *Frankfurter Allgemeine* not only published the entire code on six pages but also began each day to publish full-page interviews with scientists, philosophers and politicians from Germany, the United States, and other European countries. The paper had Craig Venter (director of one of the genome projects) team up with the German philosopher Peter Sloterdijk and had Cardinal Karl Lehmann as well as the chancellor explain and discuss their view of life sciences.

Other newspapers, especially *Süddeutsche Zeitung* and *Die Zeit*, joined the debate with more explanations on the science behind stem cell research and genetic testing. They brought the voices of other bioethicists and scientists onto the front pages and thus into the public limelight. Correspondents described how the governments in the United States, Great Brit-

ain, and France were handling the issue. Our nation's history, which once prevented such debate, now forced a more meticulous and lengthy discussion than any other nation's.

As a result, a national committee on bioethics was formed. A group of members of the German parliament traveled to the United States in 2001 to study the science as well as the way policymakers dealt with it. New words such as 'biopolitics' emerged in the

debate; words like stem cells and cloning became part of the common vocabulary. And while two years ago a German politician could happily admit not having the slightest idea what a gene is, he would make news confessing such ignorance today.

Within the German media, there now exists a beat called "science politics" or "bioethics correspondent." These positions are filled with journalists interested in both science and politics, both

national and international. It is an essential newspaper beat. It's the beat I was trying to imagine existing on that day when I first saw the mouse with a human ear on its back. Only then, it seemed unthinkable. ■

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## New Complications in Reporting on Science

Scientists have important roles to play in getting the news right, but they are often reluctant participants.

By Cornelia Dean

Scientists often complain to me about the poor quality of science journalism—that the science news they read or hear is too often misinterpreted, overhyped, or just plain wrong. I always tell them I agree. Then I tell them they are the only ones who can do anything about it.

Science journalism is difficult. At The New York Times, we struggle with it, and we have probably the largest science staff of any daily newspaper in the world. We have 13 full-time staff writers and another eight regular contributors on contract with us, most of them former Times staffers. About half of us have science training of some kind. One of our medical writers is a physician, for example, and another has a Ph.D. in physics. Still another stopped just before completing his dissertation. One has a master's degree in the history of science and another trained as an engineer. Our behavior writer has a master's in social psychology. Two of our regular contributors are physicians. The rest of us—the other writers, five editors, a graphics coordinator, an art director, and a photo editor—have no formal science training. But most of us have been involved in science news for a while.

Our science staff is large and has a large knowledge base. Why then are we struggling?

There are several reasons. The demands of the job are huge. We provide science, medical and health coverage for the daily and weekend papers, and we produce the weekly Science Times section. We cover everything from anthropology to astrophysics to atherosclerosis. We advise other departments when a ballplayer is injured or a court overturns a pollution regulation.

Our purview also extends into areas that might not at first glance look much like science. We did quite a lot of the newspaper's coverage of September 11 and its aftermath, including the engineering of Ground Zero, the anthrax attacks, and the vulnerabilities of the nation's infrastructure. We write regularly on topics like Star Wars, crime and advertising practices of the pharmaceutical industry, to name just a few subjects. So our reach has to be broad.

At the same time, science is becoming increasingly specialized. So it is harder for journalists, even journalists with advanced training, to know what is important and what is not important. Not too long ago, an eminent physics journal decided to cope with this spe-

cialization problem by issuing new instructions for would-be contributors, advising them that the first three paragraphs of all submissions must be readily understandable by any garden variety Ph.D. physicist. From the journalist's perspective, this requirement does not set the clarity bar very high. This specialization is more or less apparent across the board, and it is bad news for science journalism.

Another complication of relatively recent origin is the intense, widespread commercialization of research, particularly medical research. Not so long ago, scientists who reported their findings in the journals of their fields could be relied upon to play it relatively straight. The journalist could usually be confident that the scientist would make a good faith effort to put the findings in their rightful scientific context. Now, as more and more researchers turn their labs into test beds for their own companies, or have grants from major commercial concerns, or seek venture capital, they have powerful motives for making the most of their results and playing down anything that might challenge them.

This kind of conflict of interest is now so widespread in science that even

some government agencies have given up regulations that once prevented people from serving on advisory panels on subjects in which they have a financial stake. It was becoming apparent that in many areas no one who was knowledgeable was free of commercial ties. Scientific publications may instruct researchers to disclose potential financial conflicts, but these instructions are not always honored. Even research journals themselves, eager to attract attention, subscribers and advertisers, tout forthcoming reports in press releases that sometimes go significantly further than the research they purport to describe. So journalists are left with another layer of confusion to work through.

If we are insufficiently vigilant we can be sold on something whose true significance is far from clear. Or we might be so cautious that we miss truly important developments, or muffle them in a blanket of cautionary caveats. These are not problems that can be solved by journalists, even journalists with the considerable resources of *The New York Times* behind them. For journalists at most news outlets—many of which are fortunate to have one or two full-time science or medical writers—such problems are insurmountable.

These difficulties can be addressed only by scientists committed to explaining their work to the lay public in clear and dispassionate terms. But while some researchers are all too eager to discuss the importance of their own work, others are unwilling to talk at all. This reticence is starting to give way, and it is less a problem for those of us at major news organizations like the *Times*, but it still exists, and for reasons that are easy to understand.

For most scientists, talking to the press is still a no-win proposition. Reputable scientists do not normally communicate their findings in the lay press; they report them in scientific journals or at scientific meetings. Newspaper articles do not necessarily help them in tenure decisions or grant applications. Plus, if their work is described inaccurately, and often it is, it reflects badly on them. Finally, even if everything works perfectly and their research is

described clearly, their colleagues may dismiss them as publicity hounds.

The result is that scientists have little incentive to speak to the press, and their inexperience shows. Often, they are shocked and dismayed that reporters are not already up to speed on their research. When they are asked to explain their work in simple terms, they are at a loss. Scientists need to realize that even specialist science journalists cannot possibly stay on top of every field they might be called upon to cover. If scientists want science reporting to be clear and accurate, they must help to make it so.

When I speak with scientists, I tell them they should prepare for a press interview the way they would prepare for a professional presentation: They should know what their most important points are, and they should know how to convey them clearly and simply. They should have graphs, charts, photos, maps or whatever other material helps explain their work. They should encourage reporters to ask questions, even if the questions are ill-informed or silly.

Once reporters get the story, though, another battle sometimes begins. They must sell it to their editors. And for a long time it has been a truism in journalism that science is a hard sell in newspapers. Though many papers started science pages or science sections 10 or 20 years ago, today many have scaled them back or eliminated them. This problem does not really exist at the *Times*, which established *Science Times* in 1978, when it already had a long history of supporting science and reporting on it.

A *New York Times* science writer, William Laurence, was the only journalist told of the Manhattan Project, for example, and the newspaper actually helped finance some of Admiral Byrd's peregrinations. Though we have gotten out of the business of supporting research ourselves, the *Times* is still enthusiastic about covering science. Our editors regard thorough coverage of science and medical news as hallmarks that differentiate our newspaper and our Web site and television efforts from those of other news orga-

nizations. Though we do not always get every inch of space we want and not every story we pitch for Page One ends up there, the newspaper's management is proud of the *Times's* science coverage and generally does well by it.

People often ask how we decide what to write about. These decisions come out of the constant conversations between reporters and their news sources and editors. All of us look regularly at major scientific publications for reports that look important. The science editors and reporters converse early in the day to decide how much space we will need in the next day's paper for the spot news and enterprise we hope to produce. Usually we get what we need. And when our stories do not get the play we think they deserve, it is often because we have done a poor job communicating, clearly and quickly, why they are important. This is the kind of problem we can (and do) remedy.

We are guaranteed a fixed amount of space in the weekly *Science Times* section, and space configurations on some of its inside pages are guaranteed, so we can plan art and photo layouts in advance. And anyone who reads the section knows that we think photos, graphics, maps, charts and so on are crucial to telling our stories, and we devote considerable attention to them.

Do we succeed? I don't know. Certainly Americans remain ludicrously ill-informed about science. According to one recent survey, for example, only about half of us realize that the earth revolves around the sun. But more and more of the day's important political issues involve scientific questions. Stem cells, antimissile defense, nuclear waste disposal, and other topics are all issues voters can expect to confront in the polling place. So as our job gets more difficult, it gets more important. ■

*Cornelia Dean is science editor of The New York Times.*

# Scientific Conversations

After interviewing political leaders, a journalist uncovers the *real* revolution by talking with scientists.

*In nearly 30 years as a magazine and newspaper journalist, New York Times writer Claudia Dreifus honed her skills as a political interviewer as a witness to revolutions and civil wars and domestic political crises. In 1998, she joined the team at Science Times as a contributing writer at the invitation of its editor, Cornelia Dean, who wanted to add an interview feature to the weekly section. In an edited excerpt from the introduction she wrote to her recent book, "Scientific Conversations: Interviews on Science from The New York Times," Dreifus describes how she transferred her skills from the coverage of politics to science.*

By Claudia Dreifus

**I**t turned out that my outsider status to the culture of science was a plus; it gave me the chance to be a kind of medium for the reader with hard-to-grasp concepts. I didn't come into interviews with a lot of baggage. And in science, as in politics, there exists the counterpart of ideology.

As a newcomer to the field, sources didn't have any particular notions about who I was and what I thought, and so they distorted themselves less to please me than they might have with a science insider. Moreover, the procedural reality that every time I faced a new topic I needed to teach it to myself meant that I was an excellent translator for difficult ideas. In order to "get it" myself, I had to break things down to their simplest level.

And then there was another bonus. Scientists, unlike politicians and film stars, had not, for the most part, been over-interviewed. More often than not, they came to an interview without a posse of professional handlers, but with great unheard stories to tell. In an era when Jennifer Lopez's outfits are the stuff of headlines, the media had mostly

ignored this crowd. My science sources were not spoiled.

One of the cardinal rules of interviewing is to try to pick subjects who actually want to talk. With a science beat, I now had a whole field full of virgin subject matter to explore. All this freed me to be far more creative, I believe, than I've had the chance to be before.

Interviewing, to me, is an art form—but it is one where both sides of the process must be willing to perform. I am more of a developmental than a confrontational interviewer; I prefer to like the people I write about and through a process of exploration and empathy, extract their stories from them. On the science beat, I'd hit interviewer's heaven.

## Covering A Real Revolution

By leaving the world of politics, I was astonished to discover that I was getting a chance to witness a *real* revolution. Over the years, I'd reported on the upheavals of my time. I was in Northern Ireland in 1969 when a civil rights campaign exploded into the vicious civil conflict still known to the world as "The Troubles." I went to Nicaragua in the 1980's and to Chile in the winter of 1990, when an election pushed a dictator out of the presidential palace and opened the door to the redemocratization of that wounded nation. But on the fourth floor of The New York Times building, the place where the science section of the paper is produced, I've witnessed an extraordinary amount of real social and, ultimately, political change.

Think of this: In the time I've been working in science, Dolly the Sheep was cloned, the Genome Project's completion was announced, signs of water on Mars were photographed, new planets were discovered, the

Internet became ubiquitous, and many of the mysteries of Alzheimer's were untangled. And within science itself, there has been an internal revolution to observe: the changing face of who gets to do the research. In 1970, when I was just out of university, the number of women in science was at 13.6 percent; 20 years later, it was 33.5 percent, and growing.

One of the things I came to abhor on my old political beat was how packaged most politicians had become. In the 1960's, when I first began writing, public life was full of vivid characters. In the U.S. Senate alone, there were giants like J. William Fulbright, Barry Goldwater, Robert F. Kennedy, and that constitutional curmudgeon, Sam Ervin. In this era of sound bite wariness, most officeholders are so cautious that there's rarely a point to a question-and-answer-style interview. The openness to make a Q. and A. successful is, mostly, absent.

But scientists-as-subjects were certainly not overinterviewed and they were certainly not prepackaged. The entire field—from astronomy to zoology—was chock-full of quirky individuals who had no problem with being themselves. Artificial intelligence guru Marvin Minsky met me at the door of his Boston home wearing a shirt festooned with masking tape. Primatologist Emily Sue Savage-Rumbaugh lived with her family of bonobo apes at their facilities within her Georgia State University Research Station. The great mathematician Sir Roger Penrose had Lego toys strewn about his office at Oxford University. This gentle genius *liked* playing with them.

## Interviewing Techniques

In my 1997 book, "Interview," I wrote extensively about the Zen of interviewing. Except for the subject matter, in-

interviewing techniques are similar in politics, culture and science. Some of my methods may sound obvious. But in journalism, as in cooking, the simple can be sublime. One of the great journalists of the 20th century was a Timesman named Homer Bigart who, in the field, asked questions with the ingenuity of a child.

My basic rules for any type of print interview: Pick an interesting interviewee who wants to talk, learn your subject matter as well as you can, prepare a line of questioning in advance, but don't necessarily stick to it. The vital thing is to stand back and let the interviewee do the talking.

The most important decision interviewers make is in picking a subject. Because in a Q. and A. the words that are elicited are what ultimately make up the body of the article, finding an articulate source is key. This might seem terribly obvious. But in Q. and A.'s, a journalist does not have the saving option of filling out a disastrous interview with interesting reporting. If the discussion on tape is sparse, the interviewer will go home empty-handed—a situation highly displeasing to editors. This fact of life can lead to some heavy-handed triage in the choosing of subjects. But I'd say: In most cases, if a source has a reputation for being a poor storyteller, if they are known to be reticent, or to talk pre-packaged sound bites, it's best to pass on them.

I try to prepare for an interview the way a Ph.D. candidate might for their orals. I read everything about the subject that I can get my hands on. I look at competing works for ideas about alternate theories or practices or both. Though it's gauche, I'll phone up a would-be source and see how they fare in a dry run over the telephone. Moreover, I may ask the subject to give me the names of close friends or colleagues so that I can do a preinterview with them. Often I ask them, "Tell me something about Dr. So and So that no one knows about her." Then, I'll fashion a question from this tidbit of intelligence.

The first question I ask in the actual interview session is critical. It sets the tone for everything that will happen

subsequently. It shows that I'm serious, that I've done my preparation, and thought a lot about the subject and his or her work. I often spend a huge hunk of my preparation time on fashioning a lead question that I hope will create some good ignition.

## The Interview

About what happens in the interview session itself: Some of it is magic. Don't ask me to quantify it. What can be said is that successful interviews are about being a good listener—about the spark of conversation and ideas, about the chemistry of personalities. I'll have my bag of questions, but I'm always willing to stray from them.

Very often, I'll ask to do the interview in a setting that the source is comfortable with, but one where they will not be posturing—for example, their office or their laboratory. I best like to interview people in their homes. They'll be relaxed there, and I'll also find clues around—artwork on the wall, books in the library, photographs on the mantle—that can lead to revelatory insights. Sometimes—and this usually works well—an interview will take place in the field. I interviewed ornithologist Luis F. Baptista in San Francisco's Golden Gate Park while he described the soap opera life of his local friends, the sparrows, to me.

When I return to my desk, I'll transcribe the tapes myself. Though this is tedious and no doubt an invitation to carpal tunnel troubles, it does give me a sense of the subject's language rhythms, intonations and what they actually mean by a specific phrase. It's important to leave real language in; one wants to hear distinct voices. Later, I'll rout through the finished transcript, eliminate dull or repetitive sections, find the spine of the piece, and pull it all together.

When it comes to the writing stage of the interview, I like to think of myself as something like a playwright. In effect, I am creating a two-person play—where the journalist is the minor character. I try to use my questions to move the interview along, not to show the readers how clever I am.

The tendency for interviewers to use their stories to show themselves off is one of the lamentable results of undisciplined interviewing. Not every journalist is an interviewer. It's a skill that requires training, tact and, most certainly, restraint. The reporter who can't stand back shouldn't do it.

At the same time—and this is not contradictory—interviewing is a part of journalism that requires that the reporter use more of his or her personality than other types of work. When I walk into an interview, I am bringing everything I am—my personality, my education, my ideas, my temperament, and my life experiences. I am looking for a kind of intimate connection with my subject—something like transference—and I'm looking to establish it quickly.

Back to science interviewing: At the end of the day, what makes science interviewing such a blast is how marvelous the people are and how many of the important changes for our lives and societies in the 21st century will, very likely, come from them—revolutionaries, indeed.

Indeed, in these times, a good political journalist must, absolutely, know her science. As I write these words, just about every major policy issue that the administration of President George W. Bush is confronting has a science component to it—global warming, homeland defense, fetal tissue research, stem cell therapies, the proposed anti-missile defense system, the possible resumption of nuclear arms testing, oil drilling in the Alaskan arctic. By moving onto a new beat, I've recovered my old one, and it is a privilege to have gained the knowledge that permits me to be a part of the debate. ■

*Claudia Dreifus is a contributing writer to the Science Times section of The New York Times. Text reprinted by permission © 2001, The New York Times. From "Scientific Conversations: Interviews on Science from The New York Times," Times Books/Henry Holt.*

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# Technology Enables New Scientific Images to Emerge

‘This new process in science communication will produce a different kind of journalistic thinking . . . .’

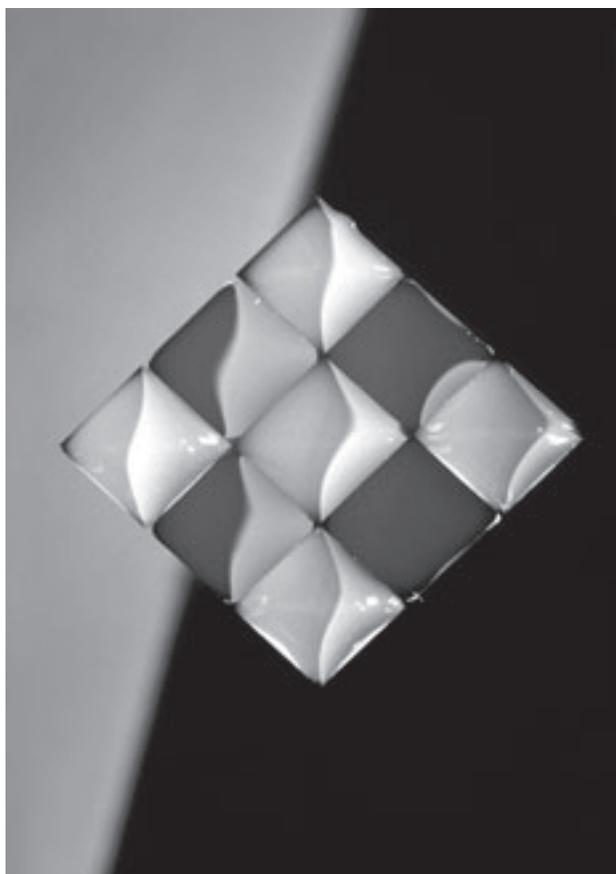
By Felice Frankel

A few months ago, a particularly breathtaking astronomical image appeared on the front pages of newspapers around the globe. These stunningly colored shapes captivated those who saw them. The picture, captured by the Hubble Space Telescope, was of the Cone Nebula, but the colors in the image were not actually *seen* by astronomers. They were, in fact, a construction from three separate sets of digital readings taken in blue, near-infrared, and hydrogen-alpha filters.

Interestingly, that Cone Nebula image is fundamentally the same as the one of nanowires that I made with a scanning electron microscope. [See photo on page 30.] Both of these pictures are visual displays of numbers; they are representations of data. My nanowire image is a manifestation of the data made with image-processing algorithms that enable us to see structure. After collecting that data, I digitally colored the image. By doing this, I was essentially changing the data, just as the astronomers did when they balanced the values of their three-data sets to create a readable image. But in this case, the color choices I made had nothing to do with the material. Mine were purely aesthetic decisions that provided representations to help create a more engaging image than the original.

As scientific research becomes more visual with the advancement of sophisticated image-capture techniques, we are now able to “see” beyond what our unaided eyes allow. Like Hubble, although on a completely different scale, an atomic force micro-

scope or a scanning electron microscope (which I used for the nanowire picture) can capture images and analyze structures never before seen. Now they can be measured in nanometers,  $10^{-9}$  meters or a billionth of a meter.



Square drops of colored water in a grid pattern. The surface on which each four mm drop was placed is chemically patterned so that drops form squares. Research: G.M. Whitesides, Harvard University. *Photo by Felice Frankel.*

And with other new instruments we are able to detect the femtosecond,  $10^{-15}$  of a second, allowing us to comprehend the enormity of this diminutive flash of time and begin to “see”

molecules in motion and study how they operate.

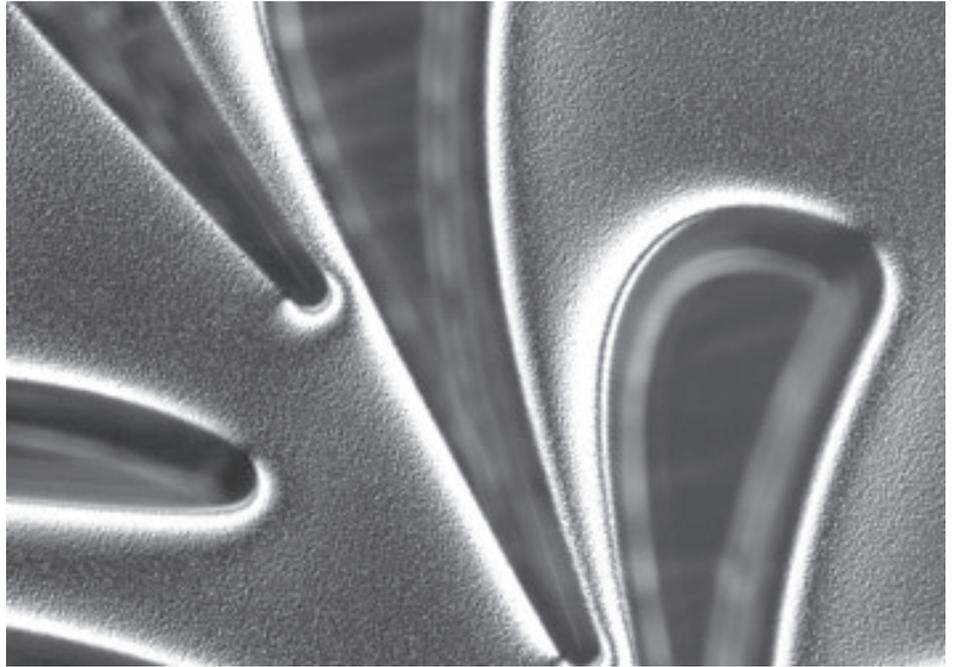
That such images can be “constructed” does not diminish their value in increasing our appreciation for and understanding of the scientific advances they reveal. Scientific pictures previously made on film, for example, are as much of a construction and a *representation* of reality, only made with silver instead of pixels. The adjusted colors of the Cone Nebula are not simply imagined, rather they were created through the human interpretation of technological data. Gaining this kind of extraordinary view offers us a remarkable window, but opening it requires adherence to the scientific integrity of the process. Certainly the misuse of this technology is possible, but so it was with film. It is just easier to manipulate images in digital form. Journalists should simply be more aware of this as images of all kinds come into wider use.

Even as these previously unfathomable concepts are clarified through advancements in imaging and technology, we are still in desperate need of new vocabularies to better communicate these ideas among ourselves, as scientists, and to the public. And in the years ahead, pictures will assume an increasingly prominent role in communicating scientific information. When published along with the drawings and illustrations currently made by graphic artists, images will become powerful tools in making difficult concepts accessible and inspiring to the non-scientist.

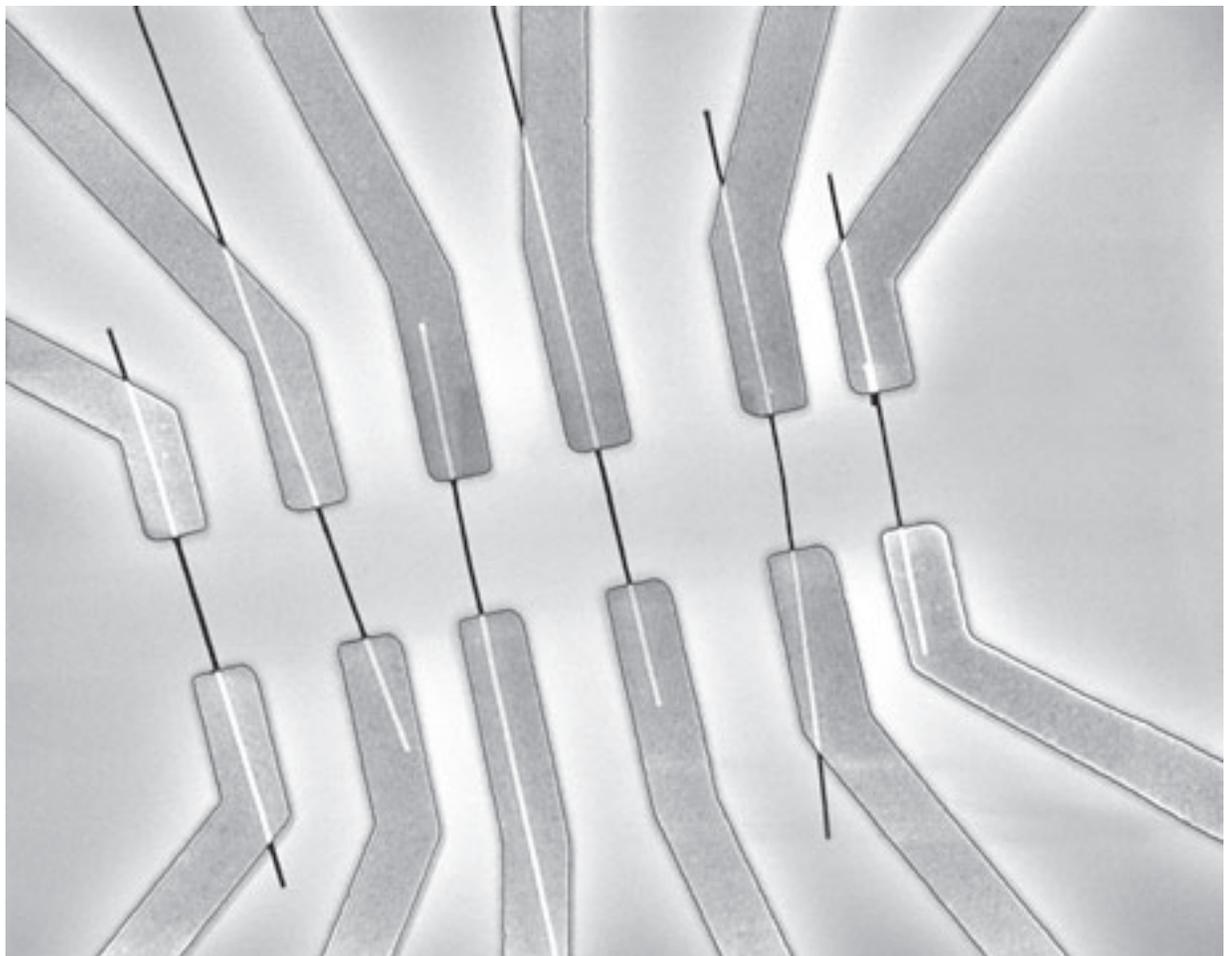
These technological tools will result

in the emergence of an entirely new community of image-thinking writers and editors, illustrators, information architects, photographers and scientists, along with a fresh approach to science journalism. The creative process of telling scientific stories will become a collaboration among writers, editors *and* picture makers. Together they will develop a new and rigorous visual vocabulary of science as a compliment to the written word.

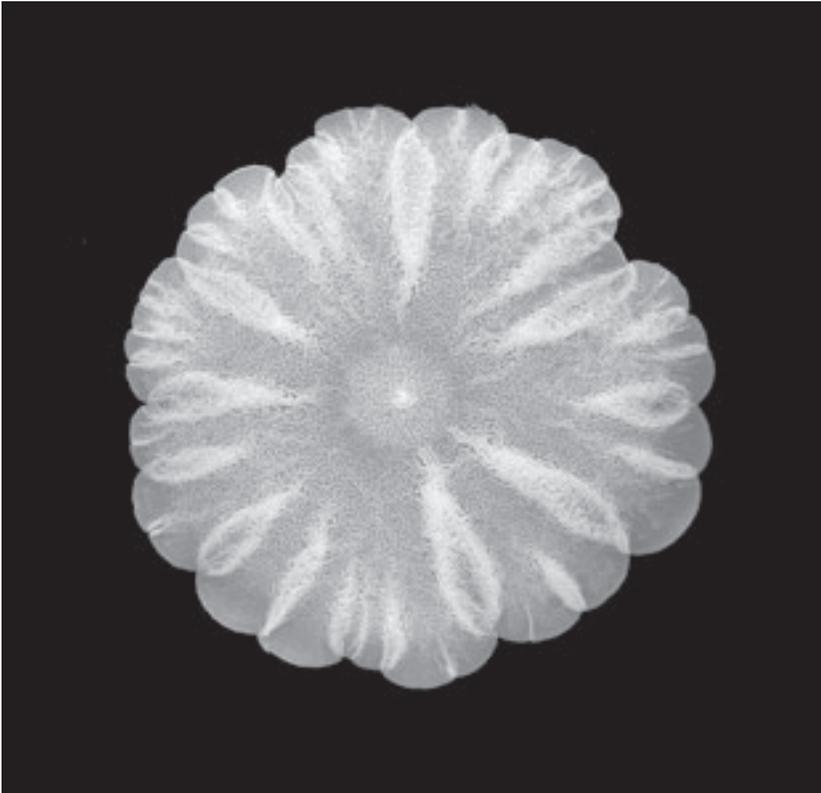
This new process in science communication will produce a different kind of journalistic thinking by contributing richer and more informative visual tools not only to the public, but also to the research community as a whole. And with this new thinking will emerge a well deserved, if belated, respect for the power of the image. ■



A microscopic image of a detail of a microrotor. The large curved blade measures about fifty microns cross. Research: A. Epstein, MIT. *Photos by Felice Frankel.*



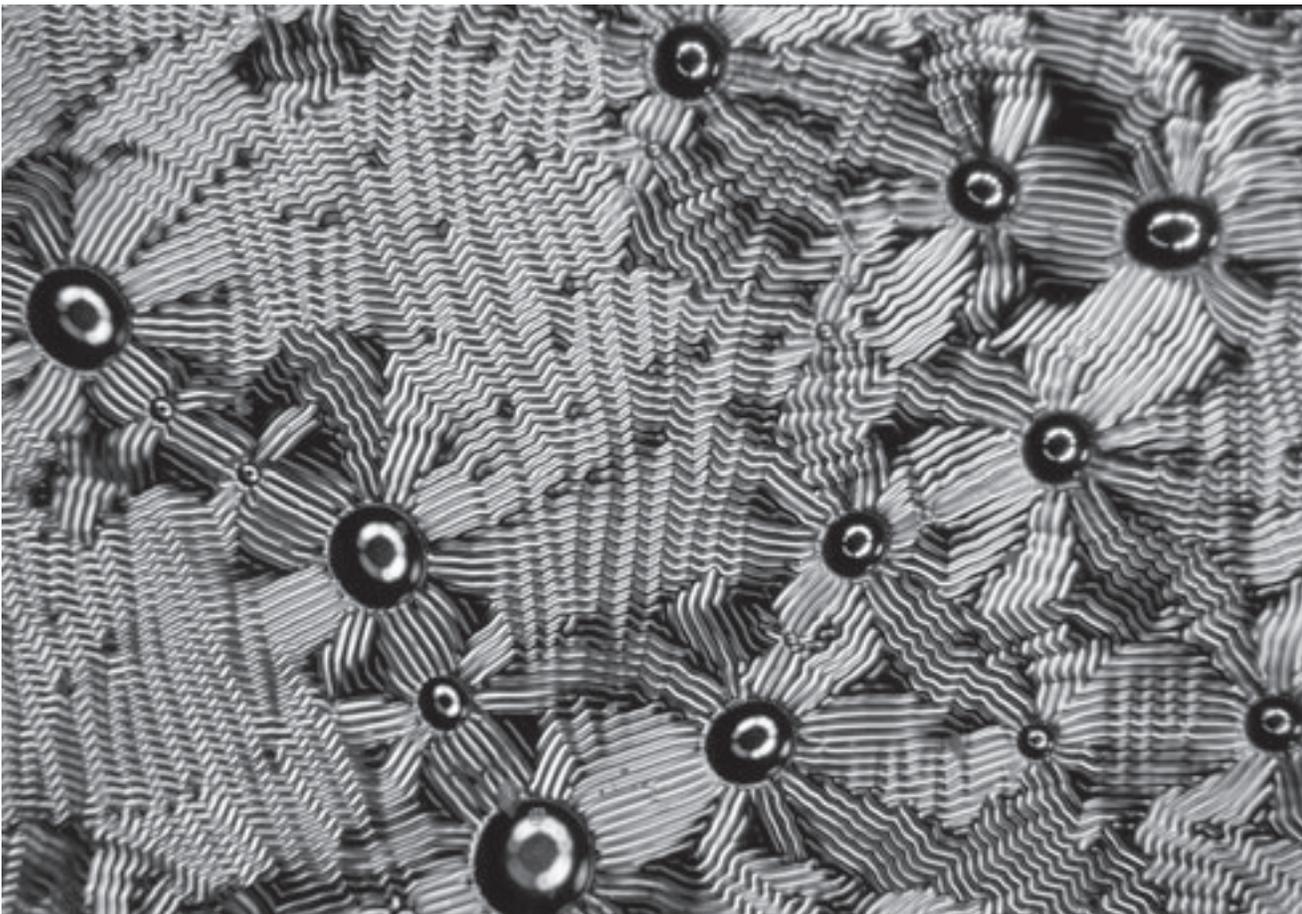
Nanowires, measuring 2-5 nanometers, span across electrodes. Image taken with a scanning electron microscope. Research: C. Lieber, Harvard University.



*Science photographer Felice Frankel is a research scientist at the Massachusetts Institute of Technology. Her recently published book, “Envisioning Science: The Design and Craft of the Science Image” (The MIT Press, 2002), guides researchers and students in how to produce more communicative science images. She is director of the Envisioning Science Project at MIT and is coauthor with George M. Whitesides of “On the Surface of Things: Images of the Extraordinary in Science” (Chronicle Books, 1997). Each of the images reproduced here were originally in color. Her work can be found at [web.mit.edu/felicef](http://web.mit.edu/felicef).*

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A colony of yeast in a floral arrangement in a petri dish (left). Research: T. Reynolds, G. Fink, MIT’s Whitehead Institute. *Photos by Felice Frankel.*



A thin layer of gold buckling in patterns on the surface of plastic. Photo taken under a microscope. Research: N. Bowden, G. M. Whitesides, Harvard University.

# Bringing Science to a Television Audience

Too often, spectacles—like mummies and volcanoes—triumph over the reporting of modern science.

By Jon Palfreman

In the late 1960's, some farsighted BBC producers had an interesting idea—why not try to make television documentaries about science? Working on 16mm film, these pioneers set out to report on what, to viewers, had been a completely closed world of science. For the first time, film crews went out to visit research labs, interview scientists, and follow field expeditions to remote exotic places. In short, the goal was to show viewers what scientists actually do. This resulted in a weekly series called “Horizon” that, to the surprise of many people, was both popular and critically acclaimed. “Horizon” became the model for PBS’s “Nova” series.

As originally conceived, the intent of series like “Horizon” and “Nova” was partly journalistic: a mission to report on new science, thereby helping the public to understand the momentous changes that science and technology were bringing about. Contrary to most people’s tedious experience of school science, these documentaries revealed a world that could be exciting if not cool. Working as anthropologists do, producers brought back fascinating reports from different scientific tribes. They created programs about the mysteries of sleep and dreams, the secrets of the atomic nucleus, the magic of lasers, the puzzle of the Bermuda Triangle, and the “miracle” of brain surgery. The power of visual technology—be it cine-microscopy, cine-endoscopy, time-lapse photography, or digital animations—brought new and exciting imagery into viewers’ living rooms.

The audience liked much of it. Critics described it as quality television. It was a great time to be a science producer.

By the time I joined “Horizon” in the early 80's, the novelty of the science documentary had started to wear off for the audience, and producers were grappling with the harsh reality of producing 20 to 30 new science documentaries year after year. What, we wondered, was the secret of success?

Some films seemed to stand out. In 1985, I made a film called “The Case of the Frozen Addict” that had everything going for it. It was a terrific yarn about how a bunch of young California drug addicts ingested some “designer heroin” and mysteriously “froze up,” acquiring the symptoms of Parkinson’s disease. The bizarre cases were noticed by a smart and highly articulate neurologist who realized he had stumbled on a medical breakthrough. The story had an almost perfect narrative arc. It had plenty of fascinating science. It had interesting characters whose lives were caught up in a human drama. It had tragedy. It had hope and the prospect of redemption.

But “Addict” was the exception. Most programs I worked on were a struggle and, like most producers, I had my share of failures. The reality we all faced was that many scientists did not seem to lead very exotic lives. The visual environments in which these scientists worked—the labs—were usually unexciting. Worse, we found that most scientists did not project appealing personas. Indeed, we found the very qualities that make many scientists good researchers—dedication, focus, consistency, caution, thoroughness, attention to detail—militated against them being expansive, playful communicators.

Our successes and failures appeared to have no relationship to a field’s scientific importance: some of the most

dynamic and exciting areas of science—like molecular biology—yielded some of the duller films. In desperation, some subjects, like chemistry, were abandoned entirely. Engineering was treated very unevenly. Space exploration, aviation, war technology—in other words large-scale engineering topics where things could be seen and which moved—did very well in this visual medium and so they attracted producers. Small-scale engineering—materials science, semiconductor physics—were avoided.

Since modern scientific stories like “Addict” were rare, producers gravitated to broad areas where they had a chance of success. Producers liked medical stories because there were human beings involved. But we soon discovered that non-human characters could work just as well. Films dealing with exciting natural phenomena—volcanoes, tornadoes, earthquakes, lightning—were extremely successful, as were films about large or fierce animals—sharks, whales and dinosaurs.

Despite the temptation for everyone to do dinosaur and volcano films, the early executive producers of “Horizon” and “Nova” felt a moral obligation to cover scientific advances even when they weren’t “sexy.” Some of the best science documentaries came from this commitment, unpacking complicated and fascinating stories such as the mystery that surrounded Legionnaire’s disease, the emergence of AIDS, the rise and fall of cold fusion, and the Exxon Valdez disaster. Executives also ordered producers to tackle difficult but important topics—oncogenes (cancer-causing genes), the human genome, artificial intelligence, even mathematics.

Working under pressure, producers tried everything to draw viewers in,

including relighting the scientific laboratory with “X-Files” lighting. Producers constructed careful story arcs. They coached scientists to give short, pithy answers. They added lush music tracks.

Occasionally these unpromising films turned out surprisingly well. While the smoke and mirrors helped, the main reason for success was usually the discovery of a stellar scientist-communicator. Richard P. Feynman—the legendary Caltech physicist—proved that, in the right hands, even the most abstract, arcane concepts in physics could be riveting. Feynman could captivate an audience whether he spoke about quarks or quasars. While his explanations were clear, his success came from his emotional bond with the audience. His excitement and enthusiasm were infectious. His mischievous smile made you like him. Viewers could discern that here was a big thinker: Here, viewers said, was a smart and interesting person.

This was the evolving story of the long-form television science documentary until the early 1990’s. Then, in my view, things began to go downhill as the television environment changed. The Public Broadcasting System [PBS] found itself facing competition from new cable outlets like the Discovery Channel and, as the market fragmented, audiences for this kind of science documentary fell. In the scramble to hold onto viewers, executives conducted market research to see which shows attracted the biggest numbers. Given the high costs of production, timeless subjects, which could be repeated over and over again, appeared more cost-effective than time-sensitive ones. The combined demands of ratings and long shelf life led executives in the United States (and later in the United Kingdom) to progressively turn away from journalistic films (which would quickly go out of date) and to avoid un-sexy but important science (which audiences might find boring). They settled instead for a limited set of bankable topics that would bring in viewers.

With almost no exceptions, the long-form television science documentary has come to be drawn from a small handful of approved genres:

- “Archeology and Legends” genre (“Indiana Jones” science), which deals with expeditions, lost treasures, mummies, dinosaur bones, mammoths and the use of forensic methods to uncover the past.
- “Forces of Nature” genre, which deals with volcanoes, tornadoes, mountains, sharks, etc.
- “Modern History” genre, which explores certain mysteries left over from past wars such as missing submarines of Hitler’s Third Reich.
- “Boys and Their Toys” genre, which deals with cool gadgets like racing cars and helicopters.

There is also a very popular genre that deals with war technologies such as bombs, biological and chemical weapons, military aircraft and submarines. And the emergence of cable outlets like Discover and The Learning Channel in the 1990’s has pioneered new genres such as popular psychology, alien abductions, and paranormal phenomena.

Excellent though many of these films were, they began to have less and less connection with what was actually going on in America’s research labs. A viewer watching long-form television science documentaries on PBS and cable during the past decade would hardly have realized that American science was reshaping the world.

Did television science journalism die? Not quite. There were isolated exceptions to this rule that reminded viewers about high-quality science journalism’s potential. Two notable recent examples are Larry Klein’s “Nova” film “Why the Towers Fell,” about the collapse of the World Trade Center, and Nancy Linde’s “Nova” program “Cancer Warrior,” about the life and work of cancer researcher Judah Folkman. I also played a modest role in keeping television science journalism alive. But I did it by moving from “Nova” (PBS’s flagship “science” series) to work at “Frontline” (PBS’s flagship public affairs series.)

“Frontline,” known for its in-depth coverage of current issues, is an oasis of quality television journalism in a desert of fairly desperate news maga-

zine shows. While “Frontline” generally reports on topics such as terrorism and political scandals, from time to time they take on critical scientific issues involving medical, educational or environmental controversies.

In 1993, I set out to make a film for “Frontline” called “Prisoners of Silence” about a controversial (and bogus) new teaching technique that claimed to unlock the hidden literacy of autistic children. That experience was so positive that it resulted in a long relationship with “Frontline,” a relationship that has allowed me to once again practice true television science journalism. During the 1990’s, while most science producers were obliged (willingly or unwillingly) to craft timeless films about mummies and aircraft carriers, I had the good fortune to work for a series in which topicality matters. Each year I was assigned the controversy du jour—silicone breast implants, climate change, genetically modified food, power line electromagnetic fields, tobacco, Gulf War illness, and nuclear energy.

I have “Frontline’s” executive producers, David Fanning and Michael Sullivan, to thank for this renaissance in my career. If they have realized the value of in-depth science journalism for unpacking a complex modern controversy, I have learned an enormous amount about the values of ethical public affairs journalism—values such as honesty and fairness. I have become interested not just in the science at the core of a controversy, but in the psychological reasons why people hold the beliefs they do, whether they’re mistaken or correct. I have learned that the task of communicating messages that people don’t want to hear—not because they are bored but because it conflicts with their current belief system—is among the most interesting challenges for a science journalist.

Most important, the move to public affairs helped me to find a solution to the problem that has plagued the science documentary from its origins—getting an audience to care about science in the first place. Television is a very complex medium, and there are a million tricks that skilled producers

use to tell stories. But at the bottom, effective communication depends on getting some emotional leverage with the audience. This can be done by invoking the awe and fear that an earthquake or volcano elicits, or with the excitement of fast cars and aircraft carriers, or by telling a morbid mystery about mummies. But, in my view, it's more interesting to do it with living people.

So what is the emotional potential of living scientists? The minimum emotion necessary to get someone to listen is enthusiasm. Feynman demonstrated this just by projecting his love of science. Strong narratives, like "Addict," in which scientific tension and emotional conflict converge, evoke other emotions that audiences relate to.

Intense controversies, however, reach emotional spaces that films about mummies, volcanoes and astrophysics can't penetrate. When a group of people feel their children are dying from some agent in the environment, they are scared and angry. Their predicament grabs our attention. When a powerful group of lawyers takes on a powerful corporation in court, we wonder who is going to win. As we, the audience, get drawn into a controversy, and come to feel as though we know the protagonists, we are motivated to learn more and more about the issues that are so important to them and their situations.

Often in the telling of a raging con-

trovery, with plausible arguments on both sides, it can be very difficult to know whom should we trust. While for most of my career I have bemoaned most scientists' lack of color, I no longer complain so loudly. In an expository "Nova" about astrophysics, a scientist's lack of charisma might be a big handicap. But in an intensely controversial film, filled with skilled dueling advocates from politicians to plaintiff lawyers, moments of "dullness" can be a virtue. In a stormy debate, viewers seek a credible moral compass, someone they are willing to believe. A mild-mannered scientist, who appears to have reasons and evidence for his or her conclusions, can fill that role. Remarkably, in my "Frontline" films I have found that modest—and yes, dull—scientists often become the heroes of the story.

As the newspapers continually remind us, modern technology brings risks as well as benefits. Do power line electromagnetic fields or cell phones cause cancer? Is it safe to move nuclear waste on America's highways? Should therapeutic cloning be banned? Is margarine safer than butter? Are coffee and saccharine dangerous? What levels of ozone emissions should the EPA set? Is genetically modified food sufficiently well regulated? Should surgeons be allowed to transplant organs from transgenic pigs into humans? Should post-menopausal women take hor-

mone replacement therapy? There are dozens of such questions that are complex, fascinating and important.

Three decades ago, the producers who pioneered television science documentary thought that what they were doing might help citizens to better navigate the modern world. This remains the most important justification for what I do. And while I realize that mummies and volcanoes will probably continue to dominate what viewers see on television, I would like to make a plea that we should keep television science journalism alive. If we lost these various windows into our scientific journey, we'd miss them. ■

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## Radio's Relentless Pace Dictates Different Coverage

'The *doing* of science is rich territory for radio, since it's full of sound, if not fury.'

By Christopher Joyce

“The universe is flat so that the total density of the universe throughout is equal to the critical density.” Hmm. Maybe this needs some more explaining. Try reading the following paragraph, carefully, so that you understand it.

“If the composition of the universe

consists only of matter and no other forms of energy, then there is a density known as the critical density which divides an open universe which is forever expanding from a closed universe which expands to a point, then eventually contracts due to the self-gravity of the matter contained within it, and the

in-between position between open and closed is, as I say, a universe with a critical density, is what is called a flat universe.”

Get it now?

Did anyone read back over a sentence or two? Well, you cheated. In radio, you can't do that. A radio story is

a train that doesn't stop. You get on at the beginning. If you get off, wave goodbye—you don't get back on again.

The speaker above was a physicist explaining a hypothesis about the cyclical expansion and contraction of the universe. To be fair, I should note that after about 15 minutes of this, the physicist did manage to get the National Public Radio reporter interviewing him to understand what he was talking about. But the passage above got left on the cutting room floor (actually the digital recycle bin, but newsroom clichés die hard). In fact, most of the interview never made it to air. The reporter had to script the difficult concepts in language the listener could understand and use whatever intelligible tape he could salvage from the interview to a.) add insight or offer analogy and b.) show the listener that the reporter did actually interview the scientist whose work was becoming news.

Herein lies one of the difficulties of writing about science on the radio. Radio is the most ephemeral form of mass media. Once the story starts, it unrolls without pause. It waits for no person, cosmologists included.

In print (the domain where I learned journalism), the words stay put on the page. The reader can go back and re-read, if confused. The rest of the article will wait. Although television shares radio's linear inexorability, there are images to focus the mind and flesh out ideas. After the narrator's words have fled, the associated image might remain on the screen, allowing the viewer to chew over the idea being presented at least for a few extra moments. In these venues, there is a more deliberate pace: The moving finger writes, and having writ, moves on.

Moreover, the newspaper or magazine reader has made a commitment. Often, money has been paid for the privilege of reading this page full of print, which fills the reader's field of vision and does a fairly good job of blotting out distractions. Likewise, the television screen glues the eye and mind to that square box of moving images. If you don't think it commands attention, try interrupting a 10-year-

old watching a favorite Saturday morning cartoon.

Radio, however, is fraught with competition. Its strength—that one can do other things while listening—is also its greatest peril. The baby needs changing. The kettle is boiling. That garbage truck on the right is making a dangerously wide turn. Miss 10 seconds and you've lost the thread.

A radio journalist is Scheherazade, risking her head should the king yawn and change the station. This relentless forward motion is particularly hard on science stories, where complicated concepts and unfamiliar terminology abound. Science calls out for background information. A story about education reform or a coal mine rescue doesn't require anyone to understand neurochemistry or plate tectonics. But science journalists *do* report on those subjects, and that often requires a "pocket tutorial"—the one-or-two-sentence explanation of that basic principle of biology or physics that the consumer needs first to understand the news in this particular science story.

That's fine for print. But radio eschews stops and starts, parentheticals, dependent clauses. The well-turned radio story is like the chassis of a sleek sports car: no gewgaws and curlicues. Simple declarative sentences. To the point. Punchy.

This is doable. But the price is paid in lost detail. I spoke at a seminar for biologists and environmental scientists who complained that the press in general and broadcast media in particular don't report the nuances of their work. I played a tape of the interview with the physicist, and I think some of them understood why we sometimes gloss. And some did not, because scientists live in a world where every point and counterpoint must be discussed. When they write scientific papers, they are like chess players in mid-game: Each move is a potential mistake that could expose an error—and their egos—to competitors, who will gleefully pounce on them. So no detail of method, no citation of previous work goes unmentioned: "Picking the fly shit out of the pepper," as one seasoned science journalist once described it.

No journalist can or should match that attention to scientific detail. Remember, we're trying to get people to put down *People* magazine and pay attention to us, instead. And that goes double for the tumbling tumbleweeds that are radio stories.

Even with all of these difficulties, I would never go back to print. For every scientific detail I must leave by the wayside, there is a joy that's unique to radio—the human voice, for example. Since *Homo sapiens* invented language, we have learned about life from listening to stories told by the human voice. Since we were babies, we have listened to stories: ontogeny recapitulates phylogeny, story-wise. And in radio, we have the voices of the experts, the scientists themselves, to convince our listeners of the truth behind the stories we tell.

The medium is also wonderful in presenting the *way* science is done. The process of science can be fascinating, and it humanizes scientists, yet it's often ignored by science writers intent on reporting only the results of research. The *doing* of science is rich territory for radio, since it's full of sound, if not fury. Pick the scientist to match the sound: boot-sucking mud, wind tunnels, birdcalls, scuba tanks, telescope gears, even gene-sequencing machines. (If someone figures out what kind of sound mathematicians make, please call.)

So how does one adjust to write science for radio? Well, the first thing is to write short, declarative sentences with active verbs. When you interview scientists, realize that you don't have to "dumb down" the concept. Complicated and abstract ideas are fine; just eliminate complicated and abstract language. Embrace analogy. Eschew jargon and long-winded explanations. Remember that if the listener pushes the "pause" button in her head to figure out what you or your source really meant, she's stopped listening to the story.

Here's an excerpt from a story by National Public Radio science reporter David Kestenbaum. He tackled a tough idea: why scientists say the universe is flat.

Kestenbaum: “Now for those of us reared in three dimensions, curved space is impossible to visualize. So pretend the universe is two-dimensional, like a piece of paper. If the paper is curved into a ball, like the surface of the Earth, then two people walking north and parallel would meet at the North Pole. Alternately, the universe could be bent like a Pringles potato chip. Then parallel lines would move away from each other. But the universe appears to be flat, like a tabletop, so parallel lines go on and on and on. Such geometrical perfection is odd, says Caltech physicist Andrew Lang.”

Lang: “The flat geometry is unstable, and so for it to be still flat after over 10 billion years of evolution tells us that in the very, very early universe, something must have driven it—must have

driven the geometry of space to be precisely flat.”

Kestenbaum: “Fortunately, science has an answer, an idea called inflation, the invention not of Alan Greenspan, but of Alan Guth, a physicist at MIT.”

Guth: “Inflation really gives us a description of the driving force behind the big bang itself. And the key feature that’s responsible for the flatness is simply the fact that inflation does what the name suggests. It causes the universe to expand by an unbelievably large factor. And when you take something that’s curved, say a tennis ball, and you imagine expanding it to something, say, the size of the Earth, it looks flat, the surface of the Earth looks flat to us.”

Kestenbaum: “Guth’s basic theory is gospel these days, so most physicists

are more relieved than surprised when they see data suggesting a flat universe.”

A creditable job, made far more accessible than it might have been by the clever use of analogy and, most important, visual images. Remember, radio is actually a visual medium. If the reporter can create a little movie in the listener’s head, then the two of them have formed a willing—and hopefully happy—collaboration. ■

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## Teaching Journalism Students to Report on Science

They learn how to put science into its broader economic and social context.

By Douglas Starr

Once upon a time science writing was simple: A reporter would read published studies in the scientific literature and write about the latest wonder of research or miracle of medicine.

Things have gotten more complicated since those early days of science journalism. The spread of pollution, the Vietnam war, the Chernobyl meltdown, the Challenger explosion, the emergence of AIDS and antibiotic-resistant bacteria have all revealed a darker, more vulnerable side of science. This is not to say science has gone bad: Our lives have been extended through medical advances and improvements in diet and made more convenient with personal computers and inventions so ubiquitous we take them for granted. Science has become a complex story that can no longer be portrayed as an isolated or idealistic

pursuit. What happens in science affects us all and is influenced—even shaped—by money, special interests, and politics. In short, we need to report science as part of the real world.

Given that reality, we teach our graduate students at the Knight Center for Science and Medical Journalism at Boston University to view science in a more interwoven way than it was reported in the old days. Increasingly our discussions focus on context—fleshing out the scientific, economic and social aspects of issues to illuminate their relevance and meaning.

A few years back, students in science journalism courses would be asked to find newsworthy journal articles and “translate” them for the public. Nowadays, we no longer do this exercise since the most skillful journalists act as analysts, not translators. That is not to say that reporters shouldn’t follow the

literature—with extensive science backgrounds, most of our students already do. But rather than focus their work on a single study, our students use such reports as a point of departure for interviews and other research to reveal the broader currents in the field.

In doing so, they investigate the work on several levels. First, they flesh out the intent of the study—for example, whether it demonstrates correlation or causation, a straightforward distinction that reporters sometimes miss. They determine whether a study’s conclusions follow logically from the methods. (You’d be surprised how often they don’t.) They challenge the statistics: When a study reports a 50 percent increase in brain cancer among laboratory rats exposed to a certain chemical, the results might sound alarming until the reporter asks about the sample size. If the researcher re-

plies “three,” the finding is less significant.

They also ask contextual questions about how this particular study compares with others in the field. What similar studies have come before? How is this one different? And perhaps most importantly: How does this study add to or contradict the existing body of scientific opinion? Such questions situate the work and help separate genuine news from institutional or media spin.

Nowhere is context-setting more important than in medical and nutrition reporting. Readers infer advice from our articles, whether or not we intend it. Plagued by fad diets and simplistic solutions, consumers are often confused by successive articles suggesting conflicting advice. For this reason, it’s especially important to spell out the difference between a definitive study and a work in progress and to compare the current work to the broad consensus of scientific opinion.

Two questions are particularly helpful:

1. Are the studies so powerful that readers should change their medication, diet or behavior?
2. What would be the effect of changing those behaviors versus keeping them as they are?

The perils of ignoring such questions became apparent in a cover story last summer in *The New York Times Magazine*. This bold and contrarian article alleged that the conventional food pyramid we’ve come to rely on actually has *caused* the national obesity epidemic, and as a solution resurrected the largely discredited Atkins high-protein diet. The article presented an intriguing theoretical case, but left out the evidence that the readers need most—definitive studies showing the Atkins diet to be safe and effective. The article did indicate that a few preliminary studies suggested that the Atkins diet caused weight loss, but none of those studies had been published or peer-reviewed. Nor did the article include crucial information about the people who had taken part in those

studies—how many people participated, under what conditions, whether they had particular health problems or other characteristics, and whether the results could be generalized to other people. Yet the argument came through in such an unequivocal tone that some people who read the article later reported changing their eating habits to one that most nutritionists would consider unhealthy.

Such contrarian articles are popular among editors—they’re surprising and edgy. But they misserve the public if they substitute one simplistic explanation for another. The best such stories invite readers to cast aside preconceptions and see an issue with more subtlety and depth.

It’s not always reporters who lead readers astray. In the increasingly privatized world of corporate and university research, the release of information may have more to do with money than scientific relevance. Last January, for example, PPL Therapeutics, the British company that cloned Dolly the sheep, issued a press release announcing the birth of five cloned pigs whose organs lacked a gene that triggers rejection. The development would represent an important advance in the effort to transplant pig organs into human and sounded like a great story.

It later turned out that the company announced the results before submitting them to a peer-reviewed journal, a key filter of scientific credibility. Furthermore, an American company had actually beaten them to the discovery. They were holding their announcement pending publication in the peer-reviewed journal *Science*, which would happen in two days. It also was revealed that Dolly, the cloned sheep, suffered from arthritis.

Normally such developments would cast doubt on PPL’s cloning technology and perhaps send the company’s stock into a decline. Yet the cleverly timed press release short-circuited the real story. After reporters wrote about the cloned pig results, PPL stock shot up 46 percent. “The company’s spin doctors may have raised hackles in the scientific community but they undoubtedly caught the attention of financiers,”

according to the *Financial Times* of London. Those journalists who reported the pig cloning as an isolated breakthrough became unwitting accessories to the company’s spin.

After years of teaching about context in science writing, my co-director, Ellen Ruppel Shell, and I have modified some of our most cherished journalistic beliefs. These include:

- **Balance:** Traditional practice teaches us to provide balance by giving both sides their due. The practice might work in stories involving our political system, but rarely on the science beat. Many science issues have more than two sides; others cannot be posited as equal and opposite sides of an argument. On the issue of global warming, for example, should we give as much weight to the handful of naysayers known to be supported by the fossil fuel industry as we give to the more than 2,000 climatologists from 120 countries represented on the Intergovernmental Panel on Climate Change?

The answer is not merely to *present* these opinions, but to *weigh* them. The majority opinion might not always be right, but it is important to state where the consensus of scientific opinion lies and reveal the sources of support of the various opinion-makers. This contextual reporting avoids the “he says, she says” dilemma of traditional reporting and gives readers a true sense of balance by providing depth.

- **Uncertainty:** Most editors shy away from uncertainty, worried that it leads to vague, unfocused stories. We encourage students to pursue it. Areas of uncertainty represent the cutting edge of science and provide insights into scientific debate. Part of what makes the global warming debate so compelling, for example, is what society should do given the uncertainty about the dimensions of the problem.
- **Complexity:** “Boil it down,” is the advice of most editors, and we agree that clarification is essential. Yet to ignore complexity is to present only

a partial and, at times, misleading story. Such was the case last winter, when scientists reported that certain parts of the Antarctic ice sheet were thickening. As journalist Key Davidson of the San Francisco Chronicle points out, some newspapers simplistically editorialized that the findings cast doubt on the theory of global warming. Actually, the findings shed light on the incredibly complex movement of polar ice sheets, including the likelihood that global warming will produce unstable weather patterns.

The requirement to report science in context creates a lot of extra work for our students, but it has helped them write in a probing and sophisticated way. Some years ago, one of our graduate students was working on a story about the PCB pollution in the harbor of New Bedford, Massachusetts. Local

people had tried for years to get the EPA to pay attention to the problem. Their efforts were finally rewarded with an indictment against the polluter and a cleanup of the harbor. No sooner had the cleanup begun than they bitterly protested the incinerator the EPA was using to destroy the harmful chemical.

Fleshing out the science, our student found that the kind of high-temperature incinerator the EPA installed did in fact destroy the PCB's. Still, the protests continued. Not wanting to write a typical "he said, she said" article, this student searched deeper for meaning in the city's economic and social history. He learned about New Bedford's prosperous whaling days and its subsequent downward spiral. He realized that the present-day Portuguese fishing community had seen one promise after another of prosperity and urban renewal fade away. In their eyes the EPA was no different from the

factory owners—just one more group of outside experts who claimed to know what was best for the town.

The story wasn't only about whether fumes from the incinerator were poisoning the neighbors. Underlying these fears was a trail of broken promises and betrayal. It was the story of a local community who had learned to trust no one—even the agency that was working to improve their lives.

The story appeared as the cover article for a regional Sunday magazine. The arduous process it took to piece its meaning together illustrated a valuable lesson: The relentless search for context leads us closer to the truth. ■

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## Meshing Science, Money and Politics in a Book About AIDS Vaccines

'Narrative was an obvious tool for approaching such a story. . . .'

By Patricia Thomas

It was October 1996 when the idea of writing a book about AIDS vaccines came to me during an early morning shower. I was working on a Harvard Health Letter story about the year's top medical advances, and high on the list was the dramatic, life-saving impact of new drug cocktails for HIV/AIDS. I remembered the early 1980's, when many journalists weren't sure we would ever be writing a good news story about treatments for this horrible new disease. Now that scientists had accomplished this miracle, why didn't we have an AIDS vaccine—a product that could protect against HIV infection in the first place?

I never imagined that answering this question would consume the next five years of my life. Nor did I anticipate

that in this story, science would be inextricably linked with big business and with politics on a grand scale. Because of this story's expansive context and my decision about how best to tell it, my book, "Big Shot: Passion, Politics, and the Struggle for an AIDS Vaccine," would be unlike anything else I had written.

Reading the scientific literature is always a good place to begin such a reporting journey. Journal articles and related news coverage led me to conceive of this story as a man vs. bug tale, in which the central issue was the technical challenge of making a vaccine against a highly mutable virus that attacks the very cells meant to defend against infection. I put together a list of leaders in the field and hit the road

with notepad and tape recorder, going to scientific conferences and setting up interviews at companies, universities and government laboratories.

From the start, experts wanted to talk about a lot more than the scientific difficulties of designing HIV vaccines. Dozens of people told how politics, money and the culture of science itself had all been roadblocks to vaccine development. And, without my asking, they all brought up an event in June 1994, when the National Institutes of Health (NIH) pulled back from what was expected to be the world's first efficacy trial—a clinical study large enough to demonstrate whether either of two vaccines could protect thousands of high-risk volunteers against infection.

NIH's decision was applauded by researchers who thought these specific vaccines were worthless. The products' sponsors vehemently disagreed. Others in the field were angry with NIH's decision because the reaction of many drug companies was to downsize or cancel their HIV vaccine programs, believing that the government could not be trusted as a business partner. Regardless of where vaccine insiders stood on the wisdom of this decision, they couldn't stop talking about it. They agreed about only one thing: Eventually, huge clinical trials would be needed to arrive at a safe, effective vaccine to prevent AIDS.

At this point, I was six months into my research. Although no experimental AIDS vaccine had yet entered an efficacy trial—the final step in clinical testing—dozens had been tested in small Phase I trials aimed at demonstrating safety. This is of paramount importance because vaccines, unlike therapeutic drugs, are given to people who are healthy. It seemed to me that the world would be far closer to having a vaccine to prevent AIDS if more candidates had been tested in more people earlier on. I knew this was going to be an important theme in whatever I wrote, although I hadn't a clue where it would fit in.

About this time I heard that researchers at the NIH Clinical Center were enrolling volunteers in a Phase I test of a new kind of vaccine against HIV. DNA vaccines were the hot technology of the moment; I had interviewed the inventor and understood the product, and I was game to enroll myself in this trial. My family was opposed because they didn't want me to be a guinea pig, and some friends thought it was inappropriate for a journalist to become involved a story in such a personal way.

After three decades in journalism, I was certain that I could tell the stories of competing research teams in a fair-minded way, even if I had rolled up my sleeve for a product made by one of them. So I went ahead with the trial and got my first shot during Thanksgiving week of 1997.

That same week, the auction of my book proposal was a dismal failure. I

had pushed aside a mother lode of material about power and money and politics and stuck to my preconceived notion of a man vs. bug story. At the same time, my agent had urged me to write a first-person narrative in which my participation in the vaccine trial would be front and center. My proposal was a mishmash of technical jargon and reluctant memoir. "Why would anyone want to read this?" editors asked me, when my agent and I cabbed from



one publishing house to the next in New York. Apparently, I didn't have a good answer.

In an article about narrative journalism, Pulitzer Prize-winning science writer Jon Franklin [see Franklin's story on page 8] once advised reporters to tell the story they have, not the story they wish they had. With his words posted on the bulletin board over my desk, I once again burrowed into my files and 11 months of notes from interviews and scientific conferences. There was a dramatic story embedded somewhere in all this material, and it wasn't simply about AIDS vaccines. There were larger points to be made about how science was done—and not done—in late 20th century America.

Narrative was an obvious tool for approaching such a story, but what did I know about narrative? Accustomed to working as a traditional, "just the facts,

ma'am" science writer, my carefully prepared questions had delved into the minutia of AIDS vaccine research. I almost never asked about a person's hopes or fears or about how anger and elation played out in the lab, clinic, or boardroom. My notes about settings where the action took place, or about how people looked, weren't especially vivid.

So I set off again, to gather the reporting I'd need to create a narrative thread. It took nearly another year for me to re-interview dozens of sources, going for story as well as substance, and to incorporate this material into a second book proposal. This one fared much better than the first. Over the next two years, as I worked to finish "Big Shot," my interviews probed both the science and the scientists, and the financial and political pressures that shaped their work. In the end, this turned out to be a story with lots of colorful characters, some laughs, a few tears, a dash of suspense, and some appalling behavior by people who should know better.

What the book does not contain is a single word about the trial I participated in at NIH. Eventually the study coordinator called to say I had gotten the vaccine, not the placebo, and that it appeared safe but otherwise not very promising. Although I jumped on the narrative train and hacked away at the spaghetti tangle of science, business and politics, I never wrote about my personal experiences as a vaccine volunteer. Still a traditionalist at heart, I stuck with the old-fashioned view that the reporter is not the story. ■

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# The Science of Producing Food

As science's role in the food chain increases, journalists need to 'get it right.'

By Anne Fitzgerald

Every spring, P.W. Maher planted corn with precision, dropping seed so he could row the crop two ways—from one end of the field to the other and from side to side. Come fall, he would select the best ears for the next year's seed. Tying them together with husks, two at a time, he would hang ears of corn on nails pounded into the crossbeams of a farm building, high overhead and well out of raccoons' reach.

Farming in Iowa was like that a century ago: simple, slow, precise. Before hybridization and mechanization, it was also an act of faith. You plowed, planted and prayed for a good crop. Science, meaning nature, was left to work its magic. Harnessing it meant watching the sky, reading the Farmer's Almanac, and keeping your fingers crossed. In those days, people produced much of their own food—gardening, canning, butchering and baking—or at least bought locally, making do with what the land allowed.

Producers now practice precision farming, employing Global Positioning System (GPS), biotechnology and spreadsheets. Consumers—short on time and full of demands—expect high-quality food that is safe, convenient and cheap.

Food today is a far cry from the farm-fresh produce of generations past. From top to bottom, scientific discoveries are revolutionizing the food chain. While much of the world's food still is grown on a small scale and consumed locally, increasingly food production is a science-based business controlled by massive, multinational corporations racing to unlock the genetic secrets of plants and animals and to control their discoveries by patenting them.

Readers wonder what this means about the food they eat. They want to know what's in their food and whether it is safe. They want to know about



An Iowa field packed with corn plants reflects the intensity of modern farming. Scientific discoveries have made it possible to use corn and other crops as vehicles for producing all sorts of products, including pharmaceuticals. *Photo by Anne Fitzgerald.*

changes in the food chain, but they want someone else to sort out the science. They want reliable, unbiased information about what they eat and drink. They expect journalists to provide this information and explain how the genetic revolution is affecting food production and processing.

Why, then, in this age of biology, do news organizations give science such short shrift, or worse, get it wrong?

Certainly, science can be complicated, technical and difficult to understand, particularly for journalists more schooled in sentence structure, sequence of tenses, and the public's right to know than functional genomics and the differences between DNA and RNA. Also, science stories take time to develop and are hard to photograph—two drawbacks in a business where quick, simple and scintillating sells. Of course, journalists reflect the general population in knowing little about science. But as science's role in the food

chain has grown, so has the need to report on it and to get it right.

## The Knowledge Gap

Last year, during the outbreak of foot-and-mouth disease in the United Kingdom, there was a national debate over whether to vaccinate livestock against the highly contagious disease, rather than slaughtering thousands of animals that had shown no symptoms. Joe Brownlie, head of the infectious disease and pathology department at London's Royal Veterinary College, said vaccinating cattle was not like vaccinating a dog, meaning that it would be more difficult and costly with a less certain outcome.

"Professor Brownlie says 'No' to vaccination" was posted on the BBC's Web site. The professor said the headline didn't capture his meaning. In fact, he found it misleading. "It's a serious issue, because journalists are so power-

ful,” Brownlie said. “They shape perceptions, and no one’s ever held to account. No one ever does a postmortem.”

Later, after the UK had been declared free of foot-and-mouth disease, two sheep were found with antibodies to the virus. A reporter mistakenly took that to mean there was another outbreak of the disease. Brownlie explained that was not the case. So, the reporter persisted, how had the sheep caught the antibodies? Brownlie replied that animals don’t “catch” antibodies; they produce the specialized proteins to neutralize antigens, or foreign substances in the body.

“I am really very concerned about the gulf in scientific understanding among journalists. It is just monstrously bad,” Brownlie lamented one day last spring, sitting in his office, 20 miles north of London, surrounded by scientific texts, a collection of news clips from the foot-and-mouth disease crisis close at hand.

This British vet knows that the public generally does not understand science, and he believes journalists, similarly uninformed, are unwilling to educate themselves. “The public would rather a simple lie than a complex truth,” he says, citing Alexis de Tocqueville. “It seems to me that’s where we are, and I don’t know how we get over it.”

His lament is common. Food and agricultural experts—and not just scientists—often complain about how badly reporters botch scientific information. What can we do about this? How can we do science justice and get it right, while winning readers?

Start with something ordinary, like breakfast—cereal produced from genetically engineered crops; berries, bananas and peaches, likely treated with pesticides, and milk from cows injected with synthetic growth hormones and fed transgenic grain. Next up—crops engineered to deliver pharmaceuticals, from insulin to contraceptives, crops in which science, health and medicine merge.

It is essential for journalists to realize that factors fueling changes in the food chain—the pace, the depth and

breadth of changes, the cost, the complexity and the controversy—all are linked somehow to science.

## Science and Nature

Observe the world around us and see science at work. Take the corn growing just outside my kitchen window on 50 acres of gently rolling, rich black farmground that yields a sweet scent with the spring thaw. In mid-April, a huge tractor costing as much as a house pulls into the field. In P.W. Maher’s time, it would have taken a farmer with a team of horses several days to plant the field; today, it takes but a few hours, even though thousands more seeds are planted per acre.

No scientific advances, however, can correct the unusually cool, wet weather. Luckily, the farmers planted ahead of the rains and used seed corn capable of sitting in the ground for weeks until soil warmth triggers germination. By the Fourth of July, corn that a generation ago would have been knee high is head high. Our biennial privacy fence of dark green, leafy corn is in place for a summer of grilling and late-night stargazing.

Although I grew up on a central Iowa farm, I cannot describe in detail what it is that makes plants do what they do, much less the ways in which plants are being transformed into factories for human and animal pharmaceuticals.

I decide to get a closer look at science in action and plow my own ground, planting two dozen tomato plants that sit in soil for weeks, stalled by cool, wet weather. In May, the plants perk up one day, only to droop and wither the next, victims of a late spring frost. I plant again, doubling the count, assuming a 50 percent survival rate. Wrong again. By mid-summer, tomatoes have taken over the garden—a jumble of leafy vines. I plant lettuce seeds too tiny to be dropped one by one, as the package instructs, and get lanky lettuce because the plants are so crowded together. Then I open a package of radish seeds, which says that the seeds are patented, bringing me back to the genetic revolution.

## Covering the Genetic Engineering Debate

In the mid-1990’s, U.S. farmers began planting soybeans genetically engineered to tolerate application of a popular herbicide called Roundup. Within just a few years, the majority of U.S. soybean acreage was planted with the biotech-based seed, and growers in countries such as Argentina were planting the seeds. Genetically engineered corn followed.

Critics believe the crops have the potential to harm the environment and human health. But proponents contend the crops are good for the environment, in part because they can reduce the need for pesticides and reduce risk of ground water contamination. Supporters also believe the crops are safe for human consumption. They argue that “sound science” should be the arbiter of regulatory wrangling and trade disputes, but what does that mean? Do they mean science that confirms their own views or scientific analysis free of emotional, fear-inducing claims? And how do we, as journalists, sort through increasingly complex and vociferous arguments to present reliable, current information to our readers?

A journalist’s job is to pursue the truth and inform the public. But if we don’t understand science well enough to know the hard questions to ask, then we risk giving readers misleading or erroneous information. We need to be on guard against both grandiose claims and unsubstantiated criticism. We need to know who pays for research and watch for conflicts of interest. We also need to be reading the literature—scientific journals, the mainstream press and alternative publications, both in print and online. And we need to be aware of the vast difference in attitudes toward food, agriculture and science. U.S. and European consumers, for instance, differ in their views of transgenic crops in the food chain—a difference with ramifications for farmers, processors, regulators, retailers and world trade.

Science is sometimes learned best by doing, so at every opportunity I get

out of the office and into laboratories, fields and food processing plants to talk with those actually making scientific discoveries and applying them. I also talk to those who shun souped-up science and to consumers who increasingly drive decisions in the food chain. Many Saturday mornings during the growing season, I roam the downtown Des Moines farmers' market, one of the biggest in the country. I note consumers' comments and visit with growers who produce food the old-fashioned way—simply, slowly, precisely.

Before dawn on 26 consecutive Saturdays, from mid-May through October, Cindy Madsen leaves her farmstead in Audubon County and drives 80 miles to the market where she sells free-range eggs, antibiotic-free pork, and other farm-fresh foods. By mid-morning, she sells out of some products. So do Neil Sauke, who bakes bread for a living, and Larry Cleverley, who grows lettuce, garlic and beans. Last spring, Cleverley struggled to raise a lettuce crop, victimized by extremes in weather. I have had no such trouble, every few days harvesting a bundle.

Into late summer, I am washing lettuce left to grow tall and tart. Leaf by leaf, I remove soil and sorry edges, watch various shades of green emerge,



Part art and part science, producing food requires patience and precision. Even then, the weather and other forces determine the outcome. *Photo by Anne Fitzgerald.*

marvel at how seeds so tiny as to be almost imperceptible, plunked into soggy, springtime soil, now yield luscious growth bursting with vitamins and nutrients and promising more of the same until the first frost.

Like P.W. Maher, my grandfather, I take my time, noting color and taste and texture, wondering what pests have perforated leaves, quietly enjoying what

nature has wrought. Or was it science?

If we want more readers, we have to be credible. With science, that just might take dirt under the nails. ■

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## Reporting on Science in South America

International coverage is good, while local research often isn't well covered.

By Marcelo Leite

This year two major events suggest a coming of age for South American science journalism and for its achieving international quality standards. In November, the Third World Conference of Science Journalists will take place in Brazil. And earlier in the year, two Latino editions of the most traditional U.S. science magazine, *Scientific American*, were launched: *Scientific American Latinoamérica* is published in Spanish, printed in Mexico, and distributed in countries such as Argentina, Uruguay and Colombia; and

*Scientific American Brasil*, written in Portuguese, is now available in Brazil.

What we might conclude from all that is happening is that there is widespread demand in South America for news and information about science and enough expertise in science journalism to provide it, as well. However, this is not quite the case. Here's why.

Currently, the Latino editions of *Scientific American* are hiring almost as many translators as journalists, if not more. (It is true, however, that the Brazilian publisher, Alfredo Nastari, has

promised to fill the news hole with 50-70 percent domestically researched stories.) The fact is that the science writing jobs on this continent are few and vanishing, and this means that young journalists do not have the incentive to choose the science beat and to put in the many extra hours of classes and readings required for such specialization.

A typical science desk of a South American daily newspaper employs two to five journalists, although two is more typical than five. At my newspaper,

Folha de São Paulo in Brazil, I am the editor, and I have an assistant editor and one reporter, down from three reporters in March 2000. This reduction in reporters is a result of cost-cutting forced by the continuing economic crisis in Brazil. Nevertheless, our small team remains responsible for covering the natural sciences and putting together a daily page (up to 50 percent of which might be taken by advertisement) in the first section, just after the op-ed, national and international affairs—a very prominent location in a Brazilian newspaper.

La Tercera in Chile, for example, relies on a staff of five science journalists. However, at that paper, these journalists might also report on such subjects as health, computers, environment and society. This mixture of expected expertise pushes them dangerously close to the broad category SMEERSH (science, medicine, energy, environment, research, and all sorts of other sh...), so named by Dorothy Nelkin in her 1987 book, "Selling Science: How the Press Covers Science and Technology." One can hardly speak of specialization under such circumstances.

South American science journalists struggle hard to improve their background in natural sciences, but few opportunities are readily available. What makes this difficult is that in many South American nations (including Brazil and Chile), journalists are required by law to study journalism before going into the profession. Those who major in natural sciences and have a gift for writing are not allowed to join news staffs, and specialization courses are seldom available. In Brazil, it wasn't until 1999 that the São Paulo State University of Campinas (Unicamp) introduced a pioneering course of study

in science journalism at the graduate level.

Often, South American science journalists in search of specialization go to a foreign country to study. I took this route twice in the past 13 years. In 1989, I went to Germany with a fellowship from the Krupp Foundation for internships in science media outlets such as Bild der Wissenschaft and Kosmos. In 1997-98, I went to Harvard as a Knight Latin American Nieman

many science journalists working for mainstream media outlets in South America are able to perform as good a job in science reporting as their counterparts in North America and in Europe. With similar academic backgrounds and a good command of the English language, they have access to the same sources through Web sites such as <http://press.nature.com> or [www.eurekalert.org](http://www.eurekalert.org) that are maintained by peer-reviewed and indexed

journals. The access-restricted and embargoed press digests provided weekly via e-mail by these journals usually indicate all kinds of contact information to reach the leading authors of scientific papers throughout the world. Because these alerts arrive a week before publication, there is time to report the stories well. And because we share these similar conditions for journalistic research, the result is often similar science coverage.

This way of covering science has its downside, too.

South American science journalists are often criticized by local scientists for not paying enough attention to research carried out in their own countries, and the criticism is to a great extent well deserved. There are too few stories about Brazilian scientific research in Brazilian newspapers and magazines, and this is likely true in much of South America. This is caused not so much by sloppy reporting but because of a general deficiency in the circulation of scientific information inside of these countries.

There are no journals published in Spanish or Portuguese that compare with publications like Nature or Science, nor is there a Latino EurekAlert



A story from the science page of Folha de São Paulo in Brazil.

Fellow. Less than two years later I was lucky enough to get a mini-fellowship from the Knight Science Journalism program at MIT to attend a very productive one-week Genes & Cells Boot Camp put together by Boyce Rensberger. [See Rensberger's article on page 11.] It is probably more than a happy coincidence that two out of 10 recently named 2002-2003 Knight Fellows at MIT come from Brazil, Ruth Helena Bellinghini and Alessandro Greco. Covering annual meetings of the American Association for the Advancement of Science have been very useful crash courses for Latino science writers, as well.

Because of seeking such training,

to bring news of what is being done in South American labs to science journalists. And so the public does not receive this information, either. To gather such material, reporters would have to keep tabs on dozens of scattered labs, universities and research institutes, and this is not practical to do given our staffing. For us, it is easier to learn about a newsworthy piece of research done by a local scientist when the findings are published in, for example, the PNAS—Proceedings of the National Academy of Sciences (U.S.)—than to rely on a hint or note from the press office or PR staff at the research institution. Here, there is just no tradition of working with journalists in this way, in part because research funding is not as tightly linked to public mechanisms of control as it is in more developed countries.

On those occasions when South American researchers publish their findings in a major article in an internationally renowned journal, the local press tends to overcompensate. It was the case with the genome sequencing of *Xylella fastidiosa* (the first plant pathogen to have its whole DNA sequence unveiled) by a Brazilian team. These findings made the front page of Nature

in July 2000. In the Brazilian press, rivers of ink flowed in praise, as if our countrymen had come close to the feat of sequencing the human genome, announced less than a month before by President Bill Clinton and Prime Minister Tony Blair.

Additional hurdles for science reporting also turn up in the communication with researchers themselves. Scared off by previous shocking experiences with unprepared reporters and not at all accustomed to addressing the general public in search of recognition for the social relevance of their workings in the lab, South American scientists can be more difficult sources than foreign scientists. American researchers, in particular, always seem ready for interviews and for the chance to boost the impact of their findings among the international scientific community (and, consequently, increase their citations in the database index of the ISI—Institute for Scientific Information.) This is a trick young South American researchers are learning pretty fast so, on average, the situation of media access is improving.

Even as the average level of science reporting in South America is improving, there remains a lot to be done.

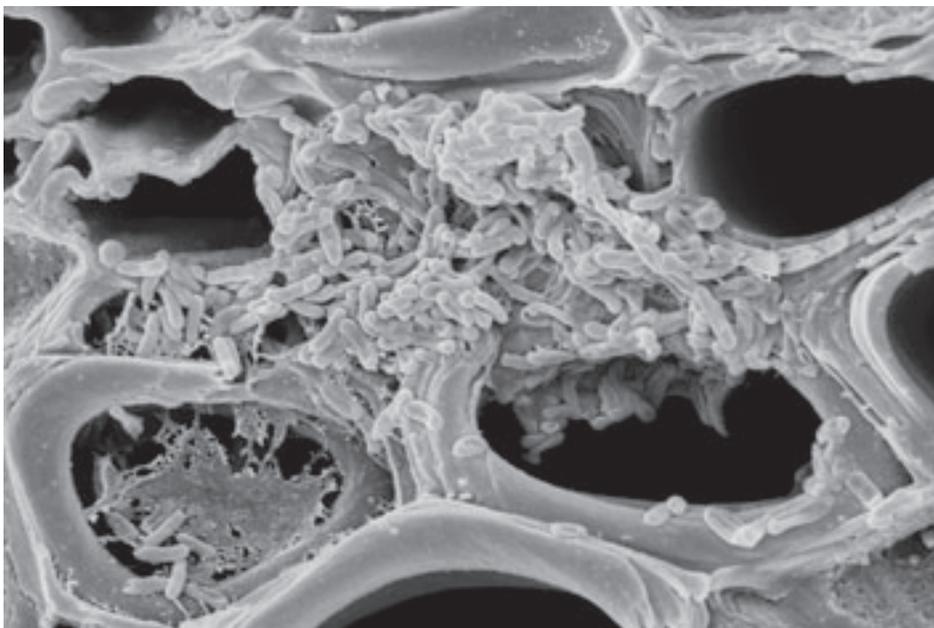
Quality newspapers are experiencing increasingly low circulation rates in highly populated countries with no more than two million copies being sold in Brazil, which has 170 million inhabitants. And science pages rank among the least read by subscribers; at *Folha*, the figure is about 20 percent. Too many readers complain they cannot fully understand science stories. And it is likely that even fewer would be able to recall them at all after a few minutes.

Experts on the public understanding of science are discussing the validity of scientific literacy (deficit) models in post-industrialized societies. These experts conclude that stuffing newspaper pages with science stories is not nearly enough to enlighten and engage the public in a true democratic debate about the uses, abuses and risks of modern science and technology. Nevertheless, this is clearly the case in South America; the word “deficit” summarizes what is not going on between the worlds of research and the public sphere. This is of great concern when one recognizes how often these nations’ policymakers are entangled by decisions that involve the complexities of issues such as transgenic foods, assisted reproduction technologies, genetic information privacy, and environmental disruption.

Given this need for understandable and accurate scientific information to underpin democratic public policy decision-making, South American journalists cannot wait any longer to progress from “good” science reporting to the kind of independent evaluation and criticism of science that the public needs and deserves. ■

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Scanning electron micrograph, shown at about 4,000x magnification, of the bacterium *Xylella fastidiosa*, causal agent of the citrus variegated chlorosis, present in the xylem vessel of an infected sweet orange leaf. Photo by E. W. Kitajima (ESALQ/USP/Brazil).

# Listening to Scientists and Journalists

By hearing what they say about themselves and each other, researchers try to find common ground to improve reporting.

By Rosslyn Reed and Gael Walker

The last third of the 20th century has seen a lot of tension and conflict between scientists and journalists about the way the media treat science stories. Survey research in the United States shows remarkable continuity in the areas of contention. Journalists see themselves as engaging in criticism, entertainment and information. Scientists continue to want scholarly communication and public education about science and expect this to come from journalists.

Given the findings' resilience, it seems surprising that researchers continue to propose the same sorts of solutions—science education for journalists and communication skills training for scientists. Many journalists (as distinct from science writers) opted out of studying science in school, so when in the course of general reporting they find themselves assigned to science stories, they are unlikely to welcome more science study. And some scientists are reluctant starters when it comes to interacting with journalists and are unlikely to voluntarily undertake media training. Perhaps a different approach to the problem is needed.

We have to confess to having been ignorant of this fertile field for research until the late 1990's. A former college public relations colleague, who had been our student in a Masters in Communication Studies course, contacted us about her experience and suggested a research project to be conducted here in Australia. From her studies and experience as a working journalist, she could see how easy it was for journalists to underestimate what went into scientific research. And when working in public relations in a government agency, she had run up against journalistic reluctance to publish articles on worthy topics related to public health.

When she worked in public affairs in the private corporate sector, she found herself battling with scientists who had something of practical importance to tell the public but who were reluctant to engage with everyday journalistic practice. Hers was a coaching role, and it was very hard work.

We began our research with two focus groups—one with scientists, the other with science journalists. For scientists, it was a prerequisite to have made some attempt to engage with the media. We wanted concrete experience rather than hearsay and prejudice. The scientists told us about their grievances. Among them were that the media wanted to set up “fights” in the name of debate, the difficulty of getting risk reported accurately, and also the frustration with rejected attempts to set the record straight when politicians and “shock jocks” played with emotions on an issue such as recreational drug use by young people.

Science journalists enlightened us about the futility of convincing editors and producers that “worthy” stories would do well on commercial television (and even public television) when a large segment of the public turns them off. And they told us that when promos focus on sensational bits of an upcoming science report, it annoys (and embarrasses) scientists who participated and journalists who reported the story. But sometimes that is simply the price of getting a good story on television current affairs. They also told us brutally about the really “bad talent” out there among scientists.

## Focus Groups Sharpen the Issues

So, where were we to go from here? We decided to explore a few topics in depth

with three journalists, three science writers/journalists, and three scientists. We framed these discussions in terms of each group belonging to a particular occupational community or subculture that went back a long way and embodied sets of principles and values that were integrally bound up with their sense of professional identity. Of course, the science writers had a foot in each camp—science and journalism. But this intersection was useful because we didn't want to simply categorize people or even ideas. We wanted to see if there was some common ground among them and if, in this common ground, there were any shifts away from the sorts of well-recognized tensions, conflicts and dissatisfaction.

More understanding, we thought, might provide a better basis for improvement. We found that the occupational subcultures, or what the French sociologist Pierre Bourdieu calls “habitus” (ways of holding and orienting oneself and the practical ability to cope with a wide range of situations unconsciously), went a long way in explaining the sources of tensions. Take the term “research” as an example. Both groups use similar words but with different meanings, and they have no idea that this is the case. Scientists are heirs of Enlightenment thinking, and approaches to their work and the ways they write and talk about it are generally unconscious. Journalists are heirs of another significant social tradition. As members of the “Fourth Estate,” they regard themselves as the protectors and watchdogs of democratic ideals. While this view is often more in the forefront of their thinking, they don't perceive it as an obstacle to finding out the truth (or, more accurately, the “truths”) about science.

Given these orientations, once a

sense of misunderstanding develops, each becomes wary of the other. In fact, in the name of professional integrity members on each side can be led into some fairly unprofessional actions. Journalists sometimes forget their usual tools of the trade. They stop asking questions and rely uncritically on publicity releases. They avoid talking with scientists and resort to using stereotypical frameworks from past reporting experiences. Scientists also may refuse to speak with members of the media by not returning calls in time to meet publication deadlines. In terms of public accountability, some scientists regard their responsibility for reporting their findings to be to grantmakers, as opposed to the public at large, and thus don't feel a need to respond to journalists' queries. Journalists, with some justification, think they have a role in scientists' accountability to a wider public interest.

Our findings were not all doom and gloom. On the contrary, we found journalists to be as concerned about accuracy as scientists. And we found scientists concerned about making knowledge accessible to audiences. All parties were willing to suggest ways of bridging the gulf between science and journalism. For example, some media-savvy scientists have suggested that individuals who are working together on a project or in a lab be given a name, such as "The X Research Group." This avoids the cumbersome problem some science stories present when researchers demand that journalists name each individual associated with the research group. Given space constraints, this demand can make it difficult for a reporter to devote the space necessary to accurately explain the science involved.

### The Role of Public Relations

There remain strongly held views on both sides. Interestingly, public communicators emerged as having some potential in reconciling the two sides, even though our research found that the public relations (PR) role was regarded as a source of much controversy. Journalists are critical (and sometimes wary) of the "canned" story from

pharmaceutical or PR firms. Many want to do their own reporting to avoid being led to a particular point of view. Others just want the story told to them and welcome the help of communication professionals, especially from universities. We also heard criticism of journalists for failing to check stories they write through press releases, which are published almost verbatim.

Our research revealed a much more complex relationship between public communication and journalism. One science writer suggested that scientists are as entitled to public communication assistance as other sectors of society are—but they are not entitled to just any PR. Science public relations people need to know more about science if they are to be effective. Scientists who take up this sort of role would also need to understand the needs and role of the media. As one scientist put it, "If they are going to be a link between the two, they must understand both beasts."

While deploring the use of sophisticated, slick packages and provision of resources from private sector corporations and consultancies, journalists wanted universities, research centers, and government departments to provide the same quality and quantity of assistance as the private sector does in the interests of enhanced science communication. In other words, it was the source that was distrusted rather than the techniques used. If a relationship of trust existed, journalists' complaints were about receiving not enough help rather than too much. At the same time, journalists realized this was a "big ask" in the context of declining resources for research and when scientists were canceling subscriptions for important but not essential journals.

Another role advocated for public communication intervention was the media training or coaching one. This included how to answer questions and present a news angle. Being able to answer questions concisely helps to avoid manipulation and reduces the risk of having bits of information (often in sound bites) taken out of context.

A content analysis of some newspaper coverage of science followed. We

chose three Australian papers—two broadsheets (The Australian and The Sydney Morning Herald) and a tabloid (The Daily Telegraph) that carries some quality reporting. We chose June to August 1999, when the Pacific Science Congress was in Sydney. It also included the 30th anniversary of the Apollo 11 moon landing. We looked to see how science stories were framed. While the good reporting was more "informative" than "educational" in the view of scientists, we found plenty to increase public understanding of science. On the other hand, there was still a lot of stereotyping (especially of gender) and "gee whiz" emphasis on technological artifacts rather than additional focus on the explanation of important abstract ideas and processes. Sensationalism of the "shock horror" type hadn't gone away, but we found fewer stories of the type scientists complained about than we might have expected.

Some suggestions for better science journalism that we'd seen in earlier research and put forth in our own are being put to use in print as well as television. These include an improved use of metaphors (though the tendency to overuse them is still visible) and of some creative "layering" techniques with text, pictures and graphics. We still think there is room for much more research. Better understanding of both the problems and what has been happening to improve science journalism might bring about even better suggestions for change. ■

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# Journalist's Trade

With more newspapers now using graphics to display information, **John Maxwell Hamilton**, dean of the Manship School of Mass Communications at Louisiana State University, along with several colleagues, examined how accurately USA Today—a leader in the graphics revolution—reported information in its front-page Snapshots. Their article describes what they found.

**Russell Frank**, who teaches journalism at Penn State University, looks at the various ways in which newspapers that publish narrative articles explain reporting and storytelling techniques to their readers. Despite these attempts at accountability, Frank writes, “the ultimate message . . . is: trust us, our reporter has done the legwork, it all checks out.” But Frank wonders if readers should always be so trusting.

“The printed word virtually defines our society,” writes **Ralph Hancox**, who is a visiting professor emeritus at Simon Fraser University in British Columbia, Vancouver. Yet the printed word comes at high price. It is, Hancox notes, “arguably the most egregiously wasteful and obsolete industrial process of our time.” He describes the devastation of natural resources and accumulation of waste that is part of the process of printing news. ■

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## Graphics and Journalism

In USA Today, some of its ‘Snapshots’ have not given the full picture.

By John Maxwell Hamilton, David D. Perlmutter, and Emily Arnette Vines

On January 22, 1997, USA Today ran its customary Snapshot in the lower-left corner of Page One. Given intense feelings about the killing of animals to make fur coats, the paper’s lead graphic of the day qualified as news. According to Responsive Management, cited as the source, a whopping 86 percent of adults either strongly or moderately agreed that “people should be free to choose to wear fur.” To get that many Americans to agree about anything is to tap into sentiments akin to those for the flag.

Perhaps to convey that spirit, USA Today’s graphic artists created a nifty, attention-grabbing pie chart superimposed on Davy Crockett’s all-American coonskin cap. The tag line was “I’m OK, your fur’s OK.”

What USA Today’s Snapshot did not report was that the Fur Information Council of America (FICA) paid Responsive Management to do this poll. Had they known that, busy readers

might have stopped briefly to question the data. Was the survey conducted in a way that made its results completely unbiased? Or were the numbers accurate but ambiguous? Were Americans saying it was okay to wear fur? Or were they responding that freedom to choose was an inalienable right? If the latter, wasn’t it more interesting that 11 percent would limit fellow Americans’ free economic choice in order to protect furry creatures? That, too, would be news, but would lend itself to quite a different backdrop, a pie chart superimposed on a splayed Bambi.

Not so long ago, newspapers had just about as much interest in dressing up as the Amish. But fear of losing readers to TV and more recently to the Internet, and the advent of new graphics technology, has changed that. Editors are investing in presses that print brilliant colors, in photographic equipment that gets the most out of images, and bigger layout and design staffs.

USA Today has been a leader in this graphics revolution. Along with its widely emulated weather map, Snapshots are a signature item. On the five days it publishes each week, the newspaper runs Snapshots on Page One of each of its four sections. “Snapshots are part of our strategy to establish a consistent identity for the paper, one that sets USA Today apart from other newspapers,” Richard Curtis, managing editor for graphics and photography, wrote several years ago. “They are a clear (some would say persistent) signal that USA Today is a visual newspaper.” Proud of its work, the newspaper uses Snapshots from the previous year in a calendar it gives to advertisers and others.

Several years ago, curious how graphics measure up as sound journalism, we looked in detail at the Snapshots appearing on USA Today’s front page during January 1997, a month chosen at random. Intrigued by the

journalistic failings we found, we later looked at two other randomly selected months: April 2001 and January 2002. In our entire investigation—in which we checked the accuracy, clarity and sourcing of each Snapshot published—about one-third of them fell short of established journalism standards.

We started our analysis by assessing the fundamental verity of journalism: getting facts right. Each of the months we scrutinized had 22 Snapshots. Three were inaccurate in January 1997, five in April 2001, and two in January 2002. A few errors were small: A January 1997 graph said losses to private insurers due to highway crashes were \$82.76 billion a year; in fact, they were \$82.215 billion. An April 2001 Snapshot reported that Williston, North Dakota had a mean temperature of 40.1 degrees. The source for the graphic put the mean temperature at 40.8 degrees.

Other mistakes were more substantial. What follows are some examples:

- A Yankelovich survey found that 51 percent of respondents did not want a genetic test to warn them that they were susceptible to certain diseases; 46 percent said they wanted to know. A 1997 Snapshot reversed the figures, changing the message.
- On April 6, 2001, USA Today presented a Snapshot titled "Americans fear school shootings." No problem. The Snapshot accurately presented data from Gallup, which has a partnership with the newspaper. But not even three weeks later, on April 24, the newspaper used the same data again in a Snapshot with the headline "Some Americans fear school shootings in their community." Worse, the second time around it mixed up the numbers. It reported that 31 percent of Americans (instead of 13 percent) thought it "very unlikely" that a school shooting would occur in their community and 13 percent (instead of 31 percent) considered it "very likely."
- A January 2002 graphic reported that 73 percent of Americans support the idea of women serving in special military operations behind enemy lines and 63 percent support them

serving on submarines. In fact, the numbers once again should have been reversed.

Accuracy was only one problem we looked at in our analysis. Even though Snapshots, which are essentially stand-alone news stories, offer an efficient, interesting way to give readers information, it is, unfortunately, difficult to provide balance and context in one-source news stories. Moreover, reliance on a single, compelling graphic image—Davy Crockett's coonskin cap is a good example—can result in misleading oversimplification. Typical of these problems is a 1997 graphic about attitudes toward travel. It shows an airplane swerving out of control and offers this tag line: "Just plane scared." The rationale: 22 percent of adults are afraid to fly. With 78 percent not afraid to fly, though, the tag line might as well as have been "Just plane safe."

An April 2001 Snapshot, which oversimplifies a complex calculation, reported the number of firearm deaths during a 20-year period. After examining their files, USA Today staff believes that the figure of 670,000 is a "conservative" estimate provided by Handgun Control, a nonprofit organization whose name is indicative of its agenda. Handgun Control based its 20-year estimate on 19 years of hard data from the Centers for Disease Control (CDC). CDC and Handgun Control are each cited in the Snapshot, but the reader is given no idea how the estimate was arrived at. In fact, the graphic does not acknowledge that it is an estimate.

The desire to not clutter up the graphics with lots of text also results in Snapshots like this one from April 2001: A survey asked respondents how much they would like to hear people like Bill Clinton and Colin Powell speak. The categories were "very interested," "somewhat interested," "not too interested," "not at all interested," and "no opinion." The Snapshot combined "very interested" and "somewhat interested" in a new, nebulous category called "most interested."

Yet other examples of the perils of simplification are two Snapshots reporting survey results in January 2002.

Neither indicates if respondents chose from a list of alternatives in expressing their opinions or if they answered open-ended questions.

Editors at USA Today are candid about the entertainment value of Snapshots. These graphics are supposed to add a spot of fun to the news. They draw people into the paper. The newspaper's surveys show that graphics have higher readership than news stories, although editors don't expect readers to spend a lot of time on them. "It is a snapshot," explained Fred Meier, a USA Today editor. "If you have to sit and stew over it, it probably hasn't been done well."

Perhaps that is true. But Snapshots should hold up if someone does bother to think about them. Too often, however, under a little scrutiny they lose credibility. What should someone make of the Snapshot that appeared in January 2002 with the headline "Most Native Hawaiians, Pacific Islanders live in the West?" And what about the finding that 41 percent of the public say that "making the world a better place" is "always on their mind?" Can anything always be on anybody's mind? Does anyone ever think about making the world a better place?

USA Today has an elaborate review process for Snapshots. By Richard Curtis's count, staff members "touch" each one at least seven times and very often much more than that because of the frequency with which senior editors check work. Ideas for Snapshots originate with news researchers, graphics editors, and reporters. Many ideas, Curtis said, do not make it past the news editor for graphics or Bob Reynolds, who is the graphics director for the graphics and photography department. The staff is expected to check and double-check facts. They also are supposed to contact unfamiliar sources to ensure that the data are legitimate.

Checking out sources is a crucial part of reporting, particularly when only one source is used in a story. Accordingly, we tried to contact each source used during the three months of Snapshots that we examined. Although employees at these "source" organizations frequently said that no

one from USA Today had been in contact, this is not particularly meaningful. These organizations have many employees as well as personnel turnover. What we can assert is that USA Today staff sometimes does not probe sources deeply.

The Fur Information Council of America study is the most dramatic example, but it is not the only one of its kind. In determining the accuracy of a January 2002 Snapshot on the number of police officers shot in the line of duty in the previous year, we found that USA Today staff initially worked off a press release from the National Law Enforcement Officers Memorial Fund. The fund's PR person subsequently e-mailed at least two updates with new numbers. The fluidity of numbers might have suggested to the staff that they get the report and look at it—or wait until the numbers were no longer preliminary (a caveat not noted in the Snapshot). But they never looked at the original report.

Failure to get original reports also led to mistakes in an April 2001 Snapshot about the percentage of women applying to law school. USA Today accurately reported the data published in JD Jungle magazine. If USA Today staff had checked with JD Jungle, however, they would have learned that the data came from the Law School Admissions Council (LSAC). And if they had checked with the LSAC, they would have found that JD Jungle had

misreported the findings.

To be fair, we detected improvement in the Snapshots during our final look in January 2002. Furthermore, we learned from Curtis that the April 2001 time frame that we chose at random to investigate happened to coincide with the illness of a key staffer. We were impressed by the attitude of the editors with whom we spoke. "Our goal is zero errors," Reynolds said. "All errors are indefensible." After he had initially heard of our findings, Curtis arranged a lunch so that one of us could talk with staff, including one member who works with the newspaper's accuracy task force. Staff members said that they do get many calls asking for guidance on how to reach Snapshot sources, but very few about inaccuracies. Further improvements might come as a result of editor Karen Jurgensen's error reduction program for the newspaper.

In their early phase of development, journalism graphics have been akin to the time 150 years ago when outrageous sensationalism by the penny press ultimately led to the higher journalism standards widely accepted today. USA Today has the glory and burden of being a pioneer in this aspect of contemporary journalism. It produces more than 1,000 Snapshots annually, and that is only a fraction of the newspaper's total graphics output. How it deals with this challenge of conveying information graphically but also accurately has significance for jour-

nalism generally.

Newspapers are grappling with two serious problems. One is to attract readers. The other is to maintain credibility. The worst solution—graphics long on looks and short on substance—accentuates both problems over the long run. And when one section of the paper shows by its actions that it has neglected such basics as accuracy, who is to say that other sections won't follow? And even if they don't, lessening of standards in one section will lead readers to doubt the paper's overall reliability.

Anyone inclined to dismiss this as a pedantic concern should consider how seriously Responsive Management treated the Snapshot from the Fur Information Council study. In its promotional literature, it boasted that its work has appeared in USA Today. ■

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## 'About This Story'

Newspapers work to make narrative journalism be accountable to readers.

By Russell Frank

When reporters write stories that read like good fiction they inevitably arouse suspicions. Reality is messy. Speech is messy. If a story is tidy—if the plot is too seamless or the quotes are too eloquent—the reporter probably juiced it a little.

Reconstructed scenes are particularly suspect. Instead of relying on tape

recordings or notes of their own observations, reporters rely on the memories of the people who were there. If there is dialogue, they ask us either to believe that interviewees recall exactly what was said, or to relax our definition of a quote: It's not (and never has been) a transcript, but an approximation that is true to the spirit, if not the

letter, of what was said. If there are minute details of setting or behavior, the writers ask us to believe that interviewees remember that the jam was apricot, not strawberry, or that they rolled their sleeves up, not down, on the morning of the pivotal events upon which hang the tale. Try to remember your own breakfast table be-

havior and conversations from a memorable day six months or six years ago.

Suspensions surrounding narrative journalism are nothing new. "This can't be right," Tom Wolfe wrote in a parody of his detractors in 1973. "These people must be piping it, winging it, making up the dialogue.... Christ maybe they're making up whole scenes, the unscrupulous geeks...."

Reporters who have spent hundreds of hours asking questions and perusing documents don't like being called unscrupulous geeks. So editors are appending "About This Story" notes or boxes to narrative stories to tell readers that the reporter spent hundreds of hours doing just this. In some cases, the notes specify who was interviewed and which documents were consulted. If you want to know how the reporter knew all this stuff, the notes are effectively saying, here's how.

Two questions: Are such notes necessary? Are they sufficient?

## Trust Us

Reporters have long felt a responsibility to enable readers—and editors—

to gauge the reliability of their work by including information about where they got their material. The system couldn't be simpler. Information obtained from documents or via word of mouth—interviews, speeches, statements, press conferences, and so on—will be attributed to the source. The absence of attribution signals that the reporter was a witness. When we read an unattributed description of the twisted metal of a child's bicycle and the film of ash on the dishes in the front yard of a house destroyed by fire, we are to understand that the reporter was at the scene and is telling us what he or she saw.

Of course, readers are also expected to bridge the gaps between attributions. When a story begins, "America's interstate highways are a mess," and the next paragraph refers to a report of the Federal Highway Administration, we are to understand that the unattributed assertion in the lead is a fair summary of the report. Similarly, when a direct quote is followed by attribution, an indirect quote and an unattributed direct quote, we are to understand that we are hearing from

the same speaker until a new attribution tells us otherwise.

Reporters who pipe quotes or enliven observed scenes with imagined detail risk being challenged by their sources (though sources who wish they hadn't said what they said are likelier to complain about an accurate quote than sources who think the reporter made them "sound good"), or by witnesses, including rival news accounts. Ultimately, however, it is an honor system to which nearly every journalist adheres. Savvy reporters usually know when they can get away with a little poetic license while "hitchhiking," as author John McPhee once put it, "on the credibility of their more scrupulous peers." But not always: consider The New York Times Magazine's recent embarrassment when it turned out that writer Michael Finkel had passed off a composite character as a real boy in a November 2001 story about slave labor on West African cocoa plantations.

When reporters move from observing events to reconstructing what took place before they came on the scene, they operate outside the rules of jour-

## Examples of 'About This Story' Boxes

### 1. The Oregonian

How We Wrote the Story  
Saturday, September 30, 2000  
By Jack Hart, Managing Editor

To report "The Boy Behind the Mask," Tom Hallman, Jr. spent hundreds of hours, over more than 10 months, poring over medical records, reading Lightner family journals, hanging out at the Lightner house, attending school with Sam, interviewing Sam's friends, and twice traveling across the country with the family. He saw virtually every important development with his own eyes and heard every key conversation with his own ears. As a result, relatively few scenes in "The Boy Behind the Mask" are reconstructed, and

those are the result of careful interviews with all key participants. Every such scene contains attribution to the memories of the participants. No dialogue appears within quotation marks unless Hallman heard a conversation himself.

### 2. The Virginian-Pilot

"Love and Loss in a Navy Town"  
By Matthew Dolan

This account is based on dozens of interviews, court transcripts, detectives' notes, and other documents introduced into evidence during the trials for the murder of Michelle Moore-Bosko. Contact writer Matthew Dolan at 757-446-2287 or mdolan@pilotonline.com.

### 3. The Cincinnati Enquirer

"Circle of Friends"  
About this series

John Johnston, 41, has been an Enquirer features writer for nine years. This series is based on two months of interviews with students, faculty and parents in the Finneytown School District, who agreed to share their story. Some scenes were drawn from their accounts, others were witnessed by Mr. Johnston. [He] welcomes your e-mail at [jjohnston@enquirer.com](mailto:jjohnston@enquirer.com).

### 4. The Kansas City Star

"Justice: the Christine Elkins Story"  
About the series

nalism. Strictly speaking, every last detail of a reconstructed scene requires attribution. But narrative journalists don't want to quote for us what people remember or deduce. They want to tell us what happened as it unfolded in time. The illusion the narrative journalist is striving for is the cinematic flashback in which a character's recollection of events dissolves to the playing out of the events themselves. Attribution would shatter the illusion.

In a story that barrels along like a freight train, Wall Street Journal editor Mike Miller told the Poynter Institute's Chip Scanlan, attributions are like speed bumps, destroying narrative momentum. So they get left out. Do readers notice? When the writing crackles with you-are-there immediacy most readers are probably more interested in what happens next than in how the reporter knows what he knows: When you're "hitchhiking," it helps to be a good raconteur.

But not everyone is so trusting. For at least some readers there must come a hey-wait-a-minute moment when they realize that the reporter could not have been present when the killer pulled

the trigger. Somehow, reporters don't just know approximately what happened: they know *exactly*. That's the irony of narrative journalism. Instead of lending verisimilitude, the exhaustive detail casts doubt: How could they know all this (the unscrupulous geeks)? The "About This Story" or "About This Series" box aims to set those inquiring minds at rest.

### Due Diligence

The Narrative Newspaper ([www.inkstain.net/narrative](http://www.inkstain.net/narrative)), home to about 30 narrative stories from newspapers that have become known for their hospitality to the genre—The Oregonian, the St. Petersburg Times, the Providence Journal, and The Philadelphia Inquirer—is a convenient repository for these boxes. A composite "About This Story" box would look something like this:

The reporter spent

- more than 10 months
- four years
- two months
- almost two years

...conducting

- nearly 200
- hundreds of hours of
- dozens of

...interviews and poring over

- more than 4,000 pages of police reports, court documents, and other records.
- diaries, letters, scientific literature, photographs, news accounts, and medical and legal records.
- transcripts of military radio transmissions.
- virtually every investigative record produced in the nine-year-long case and thousands of pages of trial transcript.
- court transcripts, detectives' notes, and other documents introduced into evidence during the trials.
- medical records [and]...family journals.

As impressive as all this accountancy is, its ultimate message (in stories in which no direct references to sources are made) is: trust us, our reporter has done the legwork, it all checks out. Just don't ask us to tell you which bit of

The Kansas City Star was given extraordinary behind-the-scenes access for this series, "Justice: the Christine Elkins story." In addition to covering events in the case as they unfolded, staffwriter Matthew Schofield reviewed virtually every investigative record produced in the nine-year-long case and thousands of pages of trial transcript. Beyond that, he conducted hundreds of hours of interviews, talking to dozens of investigators, attorneys and others involved. Certain portions of this series, including some dialogue between key figures, are taken directly from court documents. All descriptions and conversations were constructed through use of official reports, court files, photos, audiotapes, videotapes

and the firsthand recollections of those connected to the case.

### 5. The Providence Journal

About this series

"Into the Heart: A Medical Odyssey," is a nine-part series, beginning on Sunday, January 10 and running through Monday, January 18....

Providence Journal staff writer G. Wayne Miller, author of eight earlier series for the newspaper and three Random House books, has spent almost two years reconstructing the story of open-heart surgery. He conducted nearly 200 interviews, and then confirmed the interviewee's recollections through diaries, letters, scientific lit-

erature, photographs, news accounts, and medical and legal records. His reporting took him to Minnesota and Alabama, and he watched several open-heart operations in Providence and Boston.

Miller uses direct quotations only when he heard or saw (as in a letter) the words; he paraphrased other words—omitting quotation marks—once he had confirmed that they had been spoken. There are no composite scenes or characters in this story. No names have been changed. ■

*These examples were taken from the Narrative Newspaper Web site at [www.inkstain.net/narrative](http://www.inkstain.net/narrative).*

information came from which source, or which scenes were observed and which reconstructed.

Beyond the inventory of time spent, interviews conducted, and documents examined, some of the “about” boxes also address concerns about the authenticity of quotes and scenes as a way of helping the reader understand how the story was constructed. According to the box that accompanies Tom French’s Pulitzer Prize-winning “Angels and Demons” series in the St. Petersburg Times, for example, “Some ... were witnessed firsthand by the reporter or photographer or were taken from police reports or transcripts of official proceedings; others are by necessity based on people’s recollections.”

If it is indeed “necessary” to have quotes and scenes that the reporter did not hear or witness, then yes, they must be based on people’s recollections. But are the quotes and scenes necessary? And how do we know which were “witnessed firsthand” and which were based on recollections?

The Providence Journal and The Oregonian seem to do a better job of sorting these issues out. In reporting “Into the Heart: A Medical Odyssey,” the Journal tells us, G. Wayne Miller “uses direct quotations only when he heard or saw (as in a letter) the words; he paraphrased other words—omitting quotation marks—once he had confirmed that they had been spoken. There are no composite scenes or characters in this story. No names have been changed.”

The Oregonian employs the same distinctions. As a result of all the hanging around reporter Tom Hallman, Jr. did, “relatively few scenes in ‘The Boy Behind the Mask’ are reconstructed, and those are the result of careful interviews with all key participants. Every such scene contains attribution to the memories of the participants. No dialogue appears within quotation marks unless Hallman heard a conversation himself.” Here one could object to the vagueness of “relatively few” and wonder whether “careful interviews” are unusual at The Oregonian, while applauding the maintenance of strict standards for the use of quotation marks.

The most remarkable avowal on the Narrative Newspaper site comes from the South Bend Tribune’s “about” box for Gina Barton’s “Justice for Becky,” “a true crime mystery in 19 parts”: “Although it is written in the form of a novel, it is all true.” So it has come to this: newspapers assure readers that events it is chronicling really happened.

This brings us to what Chip Scanlan, writing for the Poynter Institute’s Web site, called the “historic” box tacked onto The Wall Street Journal’s October 11 reconstruction of the desperate scramble to escape the World Trade Center on September 11. Here, for the first time in the Journal, if not the first time in any newspaper, we get a breakdown of the provenance of about a dozen details that might cause a reader to wonder how the reporter knew them.

If you’re curious, for example, how the Journal reporters knew that Diane Murray paid \$43 for a pair of black sneakers after walking down from the 92nd floor of the south tower in heels, the note says the price came from a credit card receipt. (Since Murray lived to tell the tale, it’s unclear why this detail needed to be substantiated.) Having provided all that detail, Journal editors still felt compelled to add in a second note on top of the story that “all dialogue was witnessed by reporters or confirmed by one or more people present when the words were spoken. All thoughts attributed to people in the article come from those people.”

Online responses to Scanlan’s piece about the Journal’s “about” box were mixed. One reader contrasted the exhaustive sourcing of the World Trade Center story with the paper’s routine use of (non-)attribution to anonymous sources. Another, Liz Carvlin, thought the Journal was protesting too much. “If you are a respected and generally accurate and careful newspaper,” she asked, “don’t you believe that your audience trusts that you have not written fiction?... The task of identifying some facts and not others seems only an attempt by editors to show off how responsible they have been. I would hope that they are as diligent with every story, not just one that uses the narrative style.”

## Beyond the Appearance of Accountability

Oddly enough, the surge of interest in narrative journalism has coincided with a surge of skepticism among newspaper readers. Readers are being asked to believe that a story that reads like a work of fiction is entirely grounded in fact at the very moment when they are inclined to not trust the scrupulousness of reporters. Little wonder that editors are going the extra mile to assuage reader doubts.

The problem with “about” boxes is the problem with disclosure in general: If they don’t go far enough they create an appearance of accountability while falling short of the genuine article. Just as the words “Photo Illustration” under a digitally altered photo do not absolve editors of the intent to deceive if the type is too small for most readers to notice and the term is too vague for them to understand, editors cannot substitute general attestations of reportorial thoroughness for the specificity of in-story attribution.

In most stories, even most narrative stories, the traditional approach to attribution should remain the norm. In stories that rely to an unusual degree on reconstruction, The Wall Street Journal’s end-of-chapter style notes could serve as a prototype. Instead of telling readers that the reporter must know a lot because he spent this much time interviewing that many people, just tell them what attribution has always told them—where each piece of information came from.

Of course, no amount of disclosure gets a newspaper off the hook for a composite character like Michael Finkel’s Youssouf Male. A composite character is a fictional character. End of story. ■

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# Environmental Consequences of Our Reliance on the Printed Word

Waste and pollution are the result of the paper that fuels the timber industry.

By Ralph Hancox

One part of a great conundrum of our time is that, psychologically, the most efficient way to convey literate intellectual property from one mind to another is through the silent reading of words and graphics printed on paper. The printed word virtually defines our society. The first intellectual skill we acquire as children, after learning to talk, is the ability to read. We read to learn, to entertain ourselves, to enlighten our understanding of society and of the universe, to protect our rights and freedoms, and to keep abreast of our times and the discoveries of our contemporaries.

It is no accident, then, that print has become a dominant medium in the transfer of complex information despite the warnings of Marshall McLuhan about the pervasive negative influence on print of radio and television and despite the digital revolutions of the last century.

Paralleling the growth in literacy, and in search of many noble (and occasionally frankly ignominious) objectives, more paper and ink are consumed industrially today than at any time in history. And that consumption shows no signs of abating.

The paradox is that the production of the printed word is arguably the most egregiously wasteful and obsolete industrial process of our age. No other activity in a contemporary industrial society comes as close to the enormous devastation of natural resources, to the accumulation and propagation of redundant information, or to the mountains of discarded rubbish to be disposed of, than the publishing industries.

In the half a century that I have been variously employed in publishing, the depredations of the environment and



“Near Moosehead Lake”—a view of a fresh clearcut in Maine, 1996. *Photo by © Barbara Shamblin.*

the problems associated with garbage disposal have mounted almost daily and continue to do so. Environmentalists should take a look in their search for scapegoats at the contribution publishing has made to the accumulation of human detritus and see what is required in the process of transferring intellectual property, via print, on paper.

Paper today, of course, starts with trees. Some plastics are currently used and so are a few other natural fibers like cotton, sisal and hemp. But trees are overwhelmingly the base raw material of the printed word. To satisfy the current pulp, paper and lumber demand from Canadian forests we annually cut or clear more than one million hectares of forest growth—approximately 4,000 square miles. The area implicated is equivalent to clearing a

parcel of land the boundaries of which stretch from Buffalo, New York, 30 miles north to Niagara Falls, 70 miles east along the shore of Lake Ontario to Rochester, and 85 miles west back to Buffalo twice each year. In Ontario, Canada, we cut or clear an area equivalent to 46 kilometers square (29 miles square) each year. And, in provincial pulp and paper production, we are led only by Quebec in quantity produced.

The trees involved that are “harvested” are at least 25 years old and frequently—as in British Columbia, which is third in provincial output—much older. The cut timber is ground to wood chips for shipment, or is transported directly, to pulp and paper mills to be converted into pulp that is either shipped as such or made directly into paper.

The process of making industrial

web paper is at once awesome, miraculous and a prodigious engineering accomplishment. It takes place on industrial papermaking machines—these are about 300 meters in length and 60 meters wide—and consume immense amounts of natural water that is discharged back into the environment, after the papermaking process, as a largely sulfurous effluent. Engineering has not yet provided an adequate solution to disposing of the noxious effluent that the process produces. That is yet to come.

In 1999, Canadian shipments of pulp and paper amounted to some 31 million metric tons, with sales of \$22 billion (Canadian). Last year, Canadian production of newsprint, pulp, packaging and printing and writing papers all increased about 10 percent over the previous year. That growth continues.

The domestic destination for the enormous stream of resulting paper is—for the most part—the publishing industry: that is to say newspaper, magazine and book publishers, with a significant amount going to the direct marketing and advertising industries. And here the vexing conflict begins between the most efficient way of transferring complex knowledge and the spectacular waste and hazards of the manufacturing process needed to do so. Printing requires volatile inks. The solvents for these inks are as noxious to the atmospheric environment as the effluent from pulp and paper manufacture is to streams and rivers. Still, efforts to “scrub” the evaporating solvents before they are released into the air are being made and, to some extent, enforced.

It is estimated that 47.7 percent of Canada's 10,820,000 households take a daily newspaper—the most visible daily result of papermaking and printing. Some take more than one. The average weight of newsprint delivered to the doors of households in metropolitan areas and across Canada each week is about 2.43 kilograms (5.35 lbs.). Thus to supply all subscribers who take a local newspaper and those who take a metropolitan or national daily in addition, newspaper publishers must distribute some 12,500 metric

tons (13,800 tons) of newsprint to Canadian households around the country each week.

The implications of this on the efficiency of transmitting a plethora of information thus produced to the recipient are environmentally catastrophic.

The Globe and Mail edition of a Thursday, for example, customarily contains 120 pages—the equivalent of three-and-a-half 240-page paperback books—much more on a Saturday. That's about 210,000 words awaiting a reader. A good reader, taking in about 300 words a minute, would need 11 hours and 30 minutes to read the content of all 120 pages.

The Globe and Mail is just a convenient example and not particularly singled out. A similar case could be made with The Toronto Star, the National Post, The Vancouver Sun, or any large metropolitan daily in Canada.

Statistics Canada reports that, on average, only 34 percent of the adult population would spend one hour and 18 minutes a day reading books, magazines and newspapers. Women spend slightly more time reading than men do. The majority of Canadian adults 15 years of age and over spend less than 24 minutes in daily reading—compared to two hours and 12 minutes at the TV

set or VCR. (These statistics don't take into account the reading time devoted to education, incidentally. Nine percent of adults 15 and over spend an average of six hours a day in educational pursuits, so there is more reading done there.)

But the point is made. Large amounts, up to 90 percent of printed pages in newspapers, go unread. No one reads the entire stock tables, for example. Nor every word of the report on business. Nor all the classified ads. Not many women, statistics show, read much in the sports section.

Special advertising supplements and inserts are largely ignored by both sexes, as are weekly giveaways, fliers and the newsprint advertising that reaches most metropolitan and urban households today. Households generally throw out their newspapers each day or each week. So the process of making data available, that began by cutting down a tree, pulping the log, making the paper, printing the material, distributing to the household, ends unceremoniously in the recycling bin. The majority of the content of Canada's 106 daily newspapers is thus entirely redundant and unread.

How about magazines? For the 1,552 Canadian magazine publications reported to Statistics Canada there is a



This mill on the Powell River in British Columbia produces about 227,000 metric tons of newsprint each year—a little over a quarter of the total newsprint production of its parent company, NorskeCanada. *Photo courtesy of © PhotographyTips.com.*

slightly different, better, although not very encouraging story. Magazine readership—particularly by those who have a subscription—is more assiduous than that of newspapers. Better than half of a magazine's content is read by about 65 percent of its readership for most paid circulation consumer magazines. For the controlled circulation periodicals—and this includes much of Canada's business press—the story is very different. Few of these publications are more than glanced at.

Subscribers keep paid circulation consumer magazines around the household—normally until the next issue arrives. Some, like Reader's Digest, National Geographic, Canadian Geographic, Canadian Living, and other such magazines, are kept in the house for several months, sometimes for years—though, in that time, they are seldom if ever referred to.

Newspapers and magazines have multiple readers—anything from 2.6 to 3.7 readers per copy, and these publications are picked up and read on more than one occasion. So-called newsstand magazine and newspaper copies—in reality, single-copy sales mostly at supermarkets—tell a different story. To keep sales racks full, for every single magazine copy sold, one is thrown away. Canadian Living, for example, with a single-copy sale of 160,000 copies a month, must throw out the equivalent numbers unopened and unread. Enormous quantities of glossy magazine publications are similarly thrown out, unopened and unread, in North America every year. The covers are simply torn off by the retailers and sent back to the distributors for a credit on their portion of the cover price. The insides are dumped for recycling.

With paperback and hardcover books, the fate of the pages is not so different. For every popular paperback book that is sold, at least one—and sometimes as many as three—is thrown away; shelf life in a retail store for a popular paperback is about six weeks. About eight times a year, the paperback stock is cleaned out and replaced with new titles. For some popular authors, with a print run in the millions,

hundreds of thousands of copies are junked every four to six weeks.

A purchased copy of a hardcover or paperback book—except for those purchased by libraries—is normally read once before it is put on a bookshelf to be warehoused for the lifetime of the owner. It is seldom referred to again. Up to 50 percent of all hardcover titles found in independent and big-box bookstores—fiction and nonfiction—are returned to publishers each year either to be remaindered—that is sold at or below production cost—or to be warehoused prior to destruction. And 15 to 20 percent of the content of landfill sites in North America before the advent of recycling consisted of dumped paper.

Today, recycling is alleviating part of the paper wastage and the decimation of forests. But the slogan that a product or publication contains recycled paper bears close scrutiny. Recycling of paper in the printing industry usually means the recycling of pre-consumer waste. This waste is simply make-ready paper used in setting up papermaking machines and printing presses before the production or the publishing print-run starts. Recycled printed paper, because of the progressive reduction in the length of the cellulose fibers caused by the recycling process, diminishes in grade with each recycling from fine papers, newsprint and other white printable stock, to corrugated board and packaging material. And the effluent from recycling—bleaching agents and the like—is sometimes worse than the reducing effluents from the papermaking process in the first place.

This all adds up to a gloomy picture of the publishing industry—one that is ignored, overlooked and pushed aside in our considerations of those segments that are classed as a sensitive cultural industry in Canada in need of protection from the predatory forces of foreign ownership and competition.

Is relief in sight? Most newspaper news content is now available online. Technology and digital data processing hold out some hope. For example, printing-on-demand is a looming potential book publishing innovation.

One merely needs to retain digitized text and illustrations electronically and load onto a digital printer to provide an immediate copy when needed at the point of sale.

Downloading digitized text onto reusable, sensitized, plastic pages is another innovation under experiment. In this ingenious process it is possible to download up to 20 pages of readable text from the computers of experimental publishers onto a paper substitute that has all the appearances of a small book. When that has been read, it can be electronically deleted, ready to download the next 20 pages—on an endlessly reusable publishing page.

Cost is the current obstacle to the widespread use of that technology. There are doubtless other potential advances in the offing but, as always, economic factors will determine the rate and extent of their implementation. At the moment, there is an abundant supply of trees. Insect infestation and forest fires destroy more forest than is cut and cleared annually for pulp and paper in Canada.

The pulp and paper, publishing and printing industries are worth nearly \$100 billion (Canadian) annually to the Canadian economy and provide employment for better than 500,000 people. Forest industries are by far the largest net export component of Canada's international trade and are its most widely dispersed industrial employer, supporting 350 or more communities across Canada.

And, when all is said and done, the printed word—despite the formidable inefficiency, waste and redundancy of content it carries in all its manifestations—is still the most profoundly effective means of transferring intellectual property from one mind to another. And there's the dilemma. ■

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# Words & Reflections

*"They are pictures from the heart, of devastated buildings and of devastated people. They are images of us—the living—trying to mourn our invisible dead."*

These words—part of a reflection on the connections we've made with the vast array of images from September 11, 2001—belong to photographer, author and former newspaper editor **Frank Van Riper**. In an essay he wrote to explore the impact photographs have on us and the impact this event had on the medium, Van Riper urges us to think about how "photography's power to move immediately from the cerebral to the visceral" has shaped how we've been affected by what we've seen. He writes about early attempts by officials to not allow photographers to be at Ground Zero, but then conveys the thoughts of two photographers, Peter Turnley and Stan Grossfeld, who were there. [Their photographs and words appear below.] "There will always be those who view journalists as voyeurs and parasites, but these two shooters give powerful voice to the compelling need of journalists, not only to do their jobs, and thereby bring an important story to the world, but also to offer up at a terrible time what skills they have—as reporters of words and pictures—in the collective and somber effort of rebuilding," Van Riper writes.



"When I first saw Ground Zero, I literally felt as though I had been punched in the stomach. In this photograph, a firefighter at Ground Zero throws up his hands in despair." *Photo by Stan Grossfeld.*



"What moved me was a sense of a life being transformed by an experience in a way that there was no going back. You could never be the same person after that night. And this man will certainly never be the same person." *Photo by Peter Turnley.*

In reading Todd Gitlin's book, "Media Unlimited," journalist **Ellen Hume** emerged disheartened by the American media culture he describes and by the apparent lack of concern Gitlin expresses about the direction in which it seems headed. As Hume writes, "He portrays media as one might describe a prostitute, offering sensual engagement that demands nothing and means nothing except a moment's pleasure and a bit of commerce." Hume's displeasure is amplified by how Gitlin sees journalism's place in this media environment: "Trying to bear witness and report the facts seems pointless in Gitlin's world," she writes, "since the media audience is not trying to construct meaning, but to flee from it."

Jim Bellows' retrospective book, "The Last Editor," provides an apt contrast to Gitlin's futuristic perspective. As the Nieman Foundation's special projects director **Seth Efron** observes, Bellows' memoir reminds us "that even as newsroom executives are mired in ledger balances and spread sheets, it is still editors and reporters—and fine storytelling—that are the heart and soul of journalism." ■

# September 11: The Impact of Photography A Year Later

Photographers help 'in the collective and somber effort of rebuilding.'

By Frank Van Riper

**O**f the senses, it is the one that most often betrays us—yet most often, too, the one that gives us hope.

We are, it turns out, generally poor eyewitnesses. How many times have we been sure of our visual memory, only to see that, after all, there were four cars in the parking lot, not two? Any cop or detective will tell you that a witness's recollection often is faulty or plain wrong.

The gift of sight is precious and flawed. Yet what is more precious than sight, to see one's beloved or to view the dawn?

Or, now, to bear witness.

## The Collective Eye

In the year since the horror, we have seen many images. Too many, in fact, or perhaps more accurately too many of the same images too often. How many times did we need to see the planes crashing into the Towers?

Yet in the year since the terrorist attacks on New York and Washington, and the one that was thwarted over a lonely field in Pennsylvania, photography, both still and video, has helped us deal with this tragedy and, if not achieve a kind of closure, at least put parameters and faces to what has befallen us.

Inevitably, there were critics on both sides, each with legitimate claims. Why did the media play up ad nauseum the horrific images of riot and death? When will we look deeply into ourselves and others to understand the *causes* of such malignant hatred?

Or, on the other hand: Given the horrible nature of these crimes (as crimes they surely were) why was there not *more* coverage of the actual bloody carnage, to bring home how god-awful was this infamous, cowardly attack? (The New York Daily News, in a gutsy,

if also graphic, display of what happened that day, ran in its late edition, and briefly on its Web site, a horribly beautiful picture of a cleanly severed hand lying in the street near the collapsed Trade Center Towers. The picture prompted howls from some that this was not suitable for a mass-circulation newspaper. The tabloid's editors replied with characteristic and welcome bluntness: "This isn't high school. It's the real world and we shouldn't shield our readers from it.")

This view flew in the face of one theory put forward over the past 12 months that truly graphic picture coverage of a tragedy like 9/11 might best be left to the Internet, where a viewer might be warned in advance (i.e.: before accessing the photos) that the content might be distasteful.

Philip Brookman, curator of photography and media arts at Washington's Corcoran Gallery of Art, was driving to work on September 11 when the third plane plowed into the Pentagon. "Watching the Pentagon go up in flames from across the river" so seared his memory, Brookman recalled, that "I didn't look at a lot of pictures after 9/11. I couldn't watch it replayed on TV.... It was enough—too much—to witness it as I did ...."

And yet Brookman knew instinctively photography's power to move immediately from the cerebral to the visceral. He knew what my friend and former teacher Neil Selkirk knew long before any of this happened. "The process of looking is more akin to smelling or tasting than it is to reading," Neil wrote me years ago. "One's response is immediate and instinctual, more like a reflex, which dispenses with the conscious brain as being too cluttered and lacking in spontaneity ...."

Largely for that reason Philip Brookman has brought to his museum

"Here is New York: A Democracy of Photographs." It is a huge, unconventional, uncredited and controversial collection of images from 9/11, hung in the gallery on wires and with binder clips—hung like laundry, in fact—to best let viewers share a welter of imagery in a comparatively small space and thereby renew the collective experience of that terrible day as "a cathartic rather than a journalistic experience."

"Here is New York" began as a storefront exhibition in SoHo shortly after the terrorist attacks. Photographers of all stripes were asked to submit work that best showed their own personal reaction to the tragedies. The understanding was that no one's name would accompany a photograph—the pictures would stand on their own and speak for themselves.

The response, from shooters great and unknown, professional and amateur, was overwhelming. When the show moves to the Corcoran this month with upwards of 2,000 digital inkjet images, it will be the largest photographic exhibition ever mounted at the museum. The show is slated to travel widely and internationally.

"This is not ... about good photography or technique," Brookman told me over the summer as the show was being mounted. "Certainly some of the professional pictures stand out graphically but there are ... unique images from amateurs that personalize the exhibition [and] bring it home to everyone ...."

That is because, arguably, the largest number of people in all of history now view what happened on September 11, 2001, as an epochal, "where were you when it happened?" event. Just as Americans of a certain age will remember where they were on Pearl Harbor day, or on the day JFK was shot, or on the day we landed on the moon,

so too will people the world over, friend and foe, recall what they were doing just before 19 young men, fueled by hate and armed with box cutters, made us realize with pathetically late-blooming clarity how precious—and vulnerable—is our democracy and our homeland.

“The subtlest change in New York is something people don’t speak much about,” one writer says in an essay that is excerpted at the photography show. “The city, for the first time in its long history, is destructible. A single flight of planes no bigger than a wedge of geese can quickly end this island fantasy, burn the towers, crumble the bridges, turn the underground passages into lethal chambers, cremate the millions. The intimation of mortality is part of New York now: in the sound of jets overhead, in the black headlines of the latest edition.”

The writer of those words is Andy White—E.B. White, of “Charlotte’s Web,” and “Stuart Little” fame, and author of countless flawless essays and articles in *The New Yorker* and other magazines.

But White died in 1985. He wrote his somber warning more than a half century ago, in 1948, near the end of an otherwise lyrical paean to the city that appeared in the old *Holiday* magazine, when war was just a fading memory of victory and when New York was a vibrant symbol of a better post-war world. The following year, White’s 7,500-word piece was published as a small book that remains in print today. The book was entitled “Here is New York.”

“We certainly took the title from White’s essay,” said writer Michael Shulan, one of the photography show’s organizers, along with photojournalist Gilles Peress.

It astounds people to read that passage, Shulan added, when they near the end of the photography show and see it posted on a wall.

Shocked, perhaps, but not surprised. Or at least they should not be. After all, we played this same game in reverse, at Hiroshima, and none but the foolish ever would think our invulnerability to sneak attack was permanent.

## The Invisible Dead: Covering Shadows

The enormity of the deed was in the paucity of the dead and the injured.

Perhaps that is why the images made after the attacks have resonated so strongly over these months. They are pictures from the heart, of devastated buildings and of devastated people. They are images of us—the living—trying to mourn our invisible dead.

Within hours of the attacks, people raced to hospitals to give blood, only to be told that there was no pressing need. Doctors and nurses at St. Vincent’s, the nearest hospital to the twin towers, waited on the sidewalk with gurneys and wheelchairs for the ambulances that never came.

“By now ambulances were pouring in from the suburbs and were being staged in front of the Chelsea Piers at the end of our block,” photographer Neil Selkirk said in an e-mail last September 16. He and his wife, Susan Spiller, live in lower Manhattan, south of the first quarantine line, below which no civilian vehicular traffic was allowed. Selkirk said he’d never seen so many ambulances. “The line was endless and they were being given ID’s which were being taped crudely onto their windshields .... That evening we went back to St. Vincent’s and again we were told that no blood was needed there. Again there stood the waiting medics and still no ambulances came ....”

Even after two or three days, Neil said, the ambulances hadn’t moved. “But a little further south on the West Side Highway there was now a long double line of huge refrigerated container-trailers, presumably awaiting the dead.”

“It is now Sunday,” Neil’s e-mail went on, “and most, if not all, of the containers are still there, their refrigeration units not yet turned on ....”

You cannot bury those whom you cannot see, those whom you cannot touch. So many of the dead simply had been obliterated—erased—leaving behind only fragments: a pair of glasses, a ring—or a disembodied hand. It was the absence of bodies that may have been hardest on the rescuers.

The police, fire and other aid people knew that there were victims in there, thousands of them. Only in the ruin of the just-crumbled towers, they knew as well that the number now included hundreds of their own colleagues, their “family,” who had run toward the danger as others had fled it. And there was no way in hell to get most of them out.

It is an axiom of journalism under fire that you are no good to your editors or your audience arrested or dead, and that became the critical distinction between police and fire personnel heroically risking their lives in an inferno and journalists trying to do their jobs without being jailed or bodybagged.

(In fact, the physical [as opposed to emotional] toll on journalists was minimal. David Handschuh of the (New York) *Daily News* suffered broken legs from falling debris. Many others suffered lesser injuries. One photographer, Bill Biggart of the Sipa picture agency, died in the collapse of Tower Two, his final images retrieved from his demolished Canon D30 and published around the world.)

It created intense tension, especially in the early days, as officials in New York hastily banned all photography of the “crime scene” and literally confiscated film and cameras from those unlucky enough to be caught. As often happens, having a press credential actually became a hindrance—an easy way to single you out—and journalists, especially photographers, wound up sneaking into Ground Zero like thieves in the night, hiding cameras under clothing, so they could work.

To veterans in the business, this censorship by police and government officials was nothing new—just more overt. It was motivated in part by anger, by fear, by frustration. And also, I believe, by shame.

Shame that this happened here. Shame that it happened on their watch.

Shame that the dead were ours.

Photojournalist Peter Turnley, one of the few photographers able to penetrate the perimeter at Ground Zero the night of 9/11, hiding his cameras and sneaking in, was unapologetic for his stealth. “The reason I would justify that cameramen and photographers

and journalists be present at these situations is not because they're making money or because they're parasites," he told a seminar of Nieman Fellows at Harvard last winter, "it's because 50 years from now, it's important that people contemplate the decency that so many people demonstrated in trying to do the right thing in a situation that was difficult. I don't know how that can be communicated without images, without words, without film."

"The first thing I noticed at Ground Zero was the reverence people had for each other," Boston Globe photographer Stan Grossfeld wrote last winter in Nieman Reports, echoing Turnley. "This is sacred ground, where innocent people lost their lives, and you can feel that. The massive movie klieg lights and lack of unnecessary chatter give this place a surreal feeling. It is devoid of laughter and [is] one of the few places in the world where you can feel the energy and the horror and a sense of history washing over you at once. The Wailing Wall in Jerusalem is like this, as is Gettysburg and Hiroshima and Nagasaki."

Which also is why a 64-year-old fine art photographer like Joel Meyerowitz became the unlikely chronicler of the

chaos, nervily yet respectfully muscling his way into the site with his huge view camera, to create the historical record in large format. He began his project risking arrest; he ended it as the personal photographic representative of the mayor.

"To me, no photography meant no history," the wiry Meyerowitz recalled. And to a New Yorker whose city had been raped, that was unacceptable.

Turnley, Grossfeld, and so many other print and photojournalists who were there at the beginning spoke of paying tribute to the men and women who worked the wreckage, both at Ground Zero and at the Pentagon. There always will be those who view journalists as voyeurs or parasites, but these two shooters give powerful voice to the compelling need of journalists, not only to do their jobs, and thereby bring an important story to the world, but also to offer up at a terrible time what skills they have—as reporters of words and pictures—in the collective and somber effort of rebuilding.

### Epilogue

The camera is an unseeing, yet also all-seeing, eye. It is the photographer

behind the lens who gives it humanity. "You can most definitely show someone in your eyes and in your face and in the way you look at them that you want to honor them," Peter Turnley noted. "A lot of people are surprised that people all over the world, in situations of suffering, want other people to know and to feel and to think about their suffering .... Very often in fact [they are] honored by the presence of a camera, if it's wielded in the right way ...."

This is exactly what Turnley, Grossfeld, Meyerowitz, Handschuh, Biggart and so many others did in the days and weeks after September 11, as we and millions like us struggled with our grief.

That is why, one year later, we are, and will be forever, in their debt. ■

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## Zombies on Roller Coasters

American media transport too many people to nowhere.

### Media Unlimited

**How the Torrent of Images and Sounds Overwhelms Our Lives**

Todd Gitlin

Metropolitan Books. 260 Pages. \$25.

### By Ellen Hume

When people talked about the "media" 10 years ago, they usually meant the "news media." And, more often than not, they were unhappy with what they saw, according to polls by Andrew Kohut and other analysts. "People are incredibly angry at the media. They think that all the media moguls and journalists have access to massive

amounts of information that the public doesn't ever see," observed scholar Margaret Gordon of the University of Washington after conducting focus groups in Seattle during the 1992 presidential campaign.

But something shifted by the time Todd Gitlin sat down to write "Media Unlimited," his new book. To Gitlin,



"media" aren't really about journalism at all, or about anything real. They are an alternative universe, a parade of surrogate experiences and disposable feelings, delivered through films, tele-

vision, music, radio, advertising, print publishing, cell phones, and computer games. Now America's "vast circus maximus, our cultural jamboree of jamborees" has become a central experience of modern life, seducing the entire globe with pointless pleasure.

What Gitlin notices most about this media arcade is that it requires nothing from us, not even our attention. Everything is made to be taken lightly and to pass by quickly. We are zombies, strapped into roller coasters. Part of the thrill is the speed of the media ride. None of it is real, but it sure is fun, Gitlin reports.

A famous chronicler of the sixties who is a professor of journalism and sociology at Columbia University, Gitlin seems oddly unperturbed by the trends he examines. He portrays media as one might describe a prostitute, offering sensual engagement that demands nothing and means nothing except a moment's pleasure and a bit of commerce. There is no Gitlin handwringing about the degradation this implies.

The constantly changing media environment is anti-intellectual, and "accomplished language is, if anything, an impediment," he notes. Gitlin's perspective of journalism is that for its audiences it is just another sideshow, full of sound and fury, signifying nothing. Trying to bear witness and report the facts seems pointless in Gitlin's world, since the media audience is not trying to construct meaning, but to flee from it. Embracing Neal Gabler's view that the owners of the penny press invented news to be more efficient entertainment, Gitlin emphasizes that media images are "not supposed to help us discern reality; they are supposed to deliver feelings and sensations." Indeed, in the case of network television, Gitlin's extreme vision may be coming true, as more executives abandon their news audiences (such as ABC's idea of replacing Ted Koppel with David Letterman), because entertainment is so much easier to monetize.

At least Gitlin's "the media have no message" analysis challenges the old canard that most journalists are sneaky ideologues from the left or the right.

"Political critics, convinced that the media are rigged against them, are often blind to other substantial reasons why their causes are unpersuasive," Gitlin observes. The less popular the cause, the more likely its proponents will blame the news media for its failure. Nevertheless, conservatives do play better on television, he correctly discovers, because the medium favors a simple, passionate message, and conservatives tend to be "more Manichean than liberals" and "more zealous about their politics."

It is not just journalists, but most citizens who suffer in Gitlin's turbo-culture. Ithiel de Sola Poole's technologies of freedom and Marshall McLuhan's global village crash into the rocks as Gitlin's media torrent rushes us along. People enjoy their common media pleasures privately, thanks to Walkmen, cell phones, point-to-point instant messaging, and VCR's. If there is any global "village," it is only a shared language ("American"), not a hallowed public space, Gitlin says. Even television hasn't brought us together in any lasting or meaningful way, in Gitlin's analysis. What about the Internet? This might have been the most valuable part of his book, but Gitlin ducks the subject. The Internet is too new to measure yet, he says.

So civic life withers in this media smog whose very appeal is the "absence of ideas." Although studies find that news watching skews toward political participation, Gitlin notes that overall media saturation has the opposite effect, retarding public mobilization for reform or change. "If political life is going to compete with entertainment for scarce attention, it will have to produce continuing narrative, melodrama and emotional jolts—ideally, gigantic scandals," he concludes.

Who benefits from the inert, anesthetized, privatized public that Gitlin describes? The status quo is served by the media culture, which "demobilizes" democracy. Princess Diana's car crash or the Condit/Levy scandal might seem to gather the public together with a common frame of reference, but eventually viewers grow numb. Violent movies and games are the equivalent of

"insensitivity training," but their critics are "shallow" because they cannot prove actual damage is done, Gitlin says. Even the famous "CNN effect," where journalists spotlight crises crying out for intervention, washes away as the audience moves on to the Next Big Thing. "Media-stoked passions prove evanescent, too," he concludes.

Gitlin's book is an artifact of the pre-September 11 era, a summary of where we were when the rest of the world was still someone else's problem. It is written like the culture it describes, moving images quickly across the page, without offering deeper meanings, feelings or any call to action. While Gitlin cruises through the various media consumer "navigation styles" and notes some historical foreshadowing by de Tocqueville and others, he fails to examine how historically significant this media morass ultimately will be, or what alternatives are rising up to challenge it.

Now that the stakes for democracy are more obvious, such a book seems both annoying and naive. There are important matters to address, including the rise of a potent, new counter-culture that is more interesting than the American entertainment it detests. "With socialism largely discredited, and each world religion checked by the others, the way of life with the greatest allure turns out to be this globalizing civilization of saturation and speed that enshrines individuals, links freedom to taste, tickles the senses," Gitlin concludes, oblivious to the reactionaries gathering force offshore. Coke and Mickey Mouse are the unifying symbols for the world, at least for now, he posits. "There is no going back to the forest clan or the village ... there is no avoiding the spread of American-style pop." Only a "catastrophic breakdown of civilization" can stop the media flood, he says.

Gitlin's discovery of hedonism is as old as time, but so is every generation's search for meaning. People keep stepping in front of the Tiananmen tank, challenging the abuses of power. If the media content providers aren't part of that alternative, something else—like the Taliban—will be. "Unless we are

prepared to make demands on one another, we can enjoy only the most rudimentary kind of common life," the late Christopher Lasch warned in 1995 in "The Revolt of the Elites." The "limited-liability" media pleasures that Gitlin describes have had an impact after all, making the world a less understanding, less tolerant place, George Packer asserts in an April New York Times Magazine essay ("When Here Sees There"). While media images become glamorous and international, most people's lives remain miserable and parochial. "What America exports to poor countries through the ubiquitous media—pictures of glittering abundance and national self-absorption—enrages those whom it doesn't depress," Packer writes.

Perhaps it was too much to expect Gitlin to anticipate the terrorists' rage or to understand the impact of media outside America before September 11. Journalism remains important around the world, even if its commercial value still isn't amortized properly by most

media companies. It has been the tor-  
toise to Gitlin's speeding hare. Some of the best and worst journalists in the world are inciting action every day, in more desperate corners of the globe and even here at home. In the former Soviet state of Georgia, Eduard Shevardnadze had to fire his entire cabinet last fall after the Rustavi-2 television station broadcast a corruption exposé. Reporters are getting killed in record numbers, not just by terrorists in Pakistan, but by their own governments and by people who fear their power. Do the images of misery from around the world really float away, as Gitlin contends? Or is Packer right that they are building up within all of us, to poison our future? "We carry around the mental residue of millions of suffering human beings, for whom we've done nothing," Packer writes. "If the world seems to be growing more, rather than less, nasty these days, it might have something to do with the images all of us now carry around in our heads."

If what Gitlin sees is even partly

true, we are poorer for it. Bad content does have an impact, even if American culture is, in Gitlin's words, a collaboration "between venal, efficient suppliers" and consumers, receptive to their wares. Gitlin emphasizes that media are not driven by some megalomaniac American supercorporation trying to impose its ideology, but by the drive for audience numbers. "Because they have no other goal than to be popular ... [media corporations] have no cultural commitment whatsoever," Gitlin says. The problem is that Gitlin thinks that's reassuring. Unfortunately, collateral damage can be just as destructive as a deliberate assault. ■

*Ellen Hume, a journalist and teacher, recently completed "The Media Missionaries," a study for the Knight Foundation on U.S. efforts to develop journalism around the world.*

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## With Passion and Joy, Jim Bellows Enlivened Journalism

### The Last Editor

How I Saved The New York Times, the Washington Post, and the Los Angeles Times from Dullness and Complacency

Jim Bellows

Andrews McMeel Publishing. 349 Pages. \$28.95.

### By Seth Efron

All the talk these days about the direction of American journalism seems to emanate from the Wall Street pronouncements of corporate CEO's. Now, along comes Jim Bellows' memoir, "The Last Editor: How I Saved The New York Times, the Washington Post, and the Los Angeles Times from Dullness and Complacency," to remind us that even as newsroom executives are mired in ledger balances and spread sheets, it is still editors and reporters—and fine storytelling—that are the heart and soul of journalism.

From 1947 to 1981 Bellows worked

for eight newspapers. Four of those newspapers—the Miami News, The New York Herald Tribune, The Washington Star and Los Angeles Herald-Examiner—no longer exist. But Bellows' impact on these papers, particularly the Herald Trib, the Star, and the Herald-Examiner (second-place papers in their cities) has had a lasting significance on those communities, the competition, and the way news is reported. As noteworthy as anything he did to keep these struggling papers afloat and credible, Bellows ushered in "new journalism," a then controversial



movement that has evolved into the established practice of narrative journalism.

The book's audacious title—like Bellows' newspapering style—isn't without some merit, seriousness and

sheer fun. For a time, he did “save” these underdog newspapers and, in turn, revitalized the competition. In New York, Bellows needed to carve a place for the Herald Tribune to contrast it from the dull and plodding, but comprehensive, global and authoritative New York Times. Bellows also needed to position the paper apart from the city’s sensational tabloids.

In lively chapters, Bellows delights in tales of how his second-place papers pricked and punctured haughty community institutions—including the competition. In a Tribune article Tom Wolfe wrote about *The New Yorker* magazine, he described it as a painting of “a room full of very proper people who had gone to sleep standing up.” *New Yorker* Editor William Shawn responded by sending the Trib’s publisher a letter calling the article “libelous” and “a vicious, murderous attack.” When Trib publisher John Hay (Jock) Whitney asked Bellows what he was going to do, Bellows sent copies of Shawn’s letter to the press sections of *Time* and *Newsweek*. The story (and the Herald Trib) wasn’t just the talk of the town in New York, but this incident became the buzz of journalism around the nation.

About a decade later, in the nation’s capital, *The Washington Star*’s innovative gossip column, “The Ear,” pecked in a cheeky tone at the larger *Washington Post* as the “O.P.” (the Other Paper.) The column offered peeks into the personal doings of *Post* Editor Ben Bradlee and writer Sally Quinn (who would, in time, get married) as well as lofty D.C. political, cultural and social powers. It made the *Star* a daily topic of conversation around the capital.

The fun stuff shouldn’t overshadow Bellows’ devotion to serious news and the influence good reporting and writing can have on a community. Bellows brought Rowland Evans and Robert Novak together at the Herald Tribune for a national political column and later gave columnists Jack Germond and Jules Witcover the same opportunity at the *Star*. Each of these hires went on to become well recognized analysts for national political news.

The Trib examined New York City—

the way the city was run and the impact the city’s bureaucracy and institutions had on people who lived there—under the microscope of strong metropolitan reporting. Jimmy Breslin’s articles about life in Harlem, based on reporting he did while living there, opened a window on the often-overlooked, largely African-American neighborhood. “City in Crisis,” a major series headed up by the late Dick Schaap, went beyond the daily tabloids’ overblown coverage of crime and petty corruption to look at the roots of the city’s problems and the systemic “smugness and indifference” that made these urban ills fester.

In 1979, when at the helm of the Los Angeles *Herald-Examiner*, Bellows took a news brief buried inside the Los Angeles *Times* about the police shooting of a 39-year-old black woman over the payment of a \$22 utility bill and turned it into a major examination of the conduct of the city’s police department. Up to that time the Los Angeles Police Department (LAPD) was an institution that had been largely ignored by the *Times* and other local news operations. The *Herald-Examiner*’s reporting on the conduct of the LAPD was the first major examination of a police department that even now is struggling to recover from revelations of poor officer conduct and corruption.

The book, like Bellows’ personal style, has a staccato feel. Its pace is reflective of the directive Bellows gave Diana McLellan as she was starting as co-writer of the attention-grabbing gossip column “The Ear.” In the companion documentary, “The Last Editor,” broadcast on PBS stations around the nation, McLellan asked Bellows what he wanted the column to be. “Bip, bip, bip,” Bellows replied.

Each chapter is sprinkled with little “bips” from colleagues he nurtured along the way. There’s an introduction by Breslin, whom Bellows discovered and elevated to a columnist at the Herald Tribune. There are snippets of notes, memos and recollections from Tom Wolfe, whom Bellows brought to New York from Washington, D.C., where Wolfe was languishing at *The Washington Post*. There are notes and

sidebars by Art Buchwald, Dick Schaap, Ben Bradlee, Pat Oliphant, Maureen Dowd, Ben Stein, Gail Sheehy, Judith Crist, Clare Booth Luce—well, you get the idea. At times, the book drips with the kind of name-dropping that Dick Schaap would have loved. You get the idea that Schaap came by his name-dropping honestly when early in his newspaper career he worked as city editor at the Herald Tribune under Bellows.

The writing isn’t grand. Bellows frankly admits he isn’t much of a writer and notes that the book is titled, “the last editor, not the last writer.” He had significant help crafting the book from Gerald Gardner. But that doesn’t diminish the fun we have in reading about his newspaper war stories or the lessons to be learned from them. “The Last Editor” is far more than a romp through the daisies of one person’s career. Bellows doesn’t come off as either stately or sagely, but as someone who was in critical places at critical times and believed that news is serious business in need of passion. Despite the constant budget cuts, clashes with publishers, strikes and daunting resources of the competition, Bellows is exuberant about his work and the sheer joy he finds in it.

Bellows offers some caution to those who care about the newspaper business today: “I’m afraid that newspapers have a perilous grasp on their souls today. They are fighting for eyeballs, advertising dollars, and the thumbs-up from Wall Street for maximizing profits (not serving the public) as their primary goal.” However, by the end of the book, Bellows is back to extolling the fun to be found in a newspaper career. “I encourage those of you burning with idealism to climb aboard. A career in news will let you change the world, and if you do it with passion and zeal, make it better. And you’ll have more fun than you ever dreamed work could provide.” ■

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## The Impact of Middle East Pictures and Words

As conflict in the Middle East has intensified, scrutiny of the press coverage has likewise increased, with charges of biased reporting being made from all sides. Often such charges lead to internal reviews within news organizations; some examine not only the selection of words but also the choice of photographs that tell the story in ways words never could.

In our series of stories, a photojournalist, photo editor, reader representatives, and deputy managing editor describe the decision-making process that brings photographic images from the homes and streets of the Middle East to the pages of daily newspapers, and they speak to the reaction their selections have received from readers. **Courtney Kealy**, a photojournalist for Getty Images based in Beirut, explains what went wrong when her provocative photograph of a Palestinian child, dressed as a suicide bomber, ended up being used for an unintended political purpose, and she shares with us recent images of Palestinian girls who have volunteered to be suicide bombers.

**Randy L. Rasmussen**, assistant director of photography at The Oregonian, explores the ways in which reader reaction is factored into decisions made about which photographs to publish and where to place them. He offers insight into the key questions editors ask as decisions are being made. **Dick Rogers**, San Francisco Chronicle readers' representative, writes about the charges of editorial bias that photo selection engenders and tells us how he worked with a group of readers to inform his newspaper's response. What readers told him "reminded photo editors and senior editors that day-to-day news decisions have lasting impacts on how readers view the paper." Arizona Daily Star reader advocate, **Debbie Kornmiller**, developed a similar listening approach to analyzing her newspaper's pictorial Mideast coverage and, based on readers' suggestions, the paper made changes. **Michael Larkin**, deputy managing editor/news operations at The Boston Globe, explains how a particularly graphic photo of a dead child ended up on the paper's front page.

**Joel Campagna**, who oversees the Middle East at the Committee to Protect Journalists, describes the dangers associated with covering the Intifada. "The situation, where the rules of engagement can change daily, poses increasing risks for those seeking proximity to the action—cameramen, camera crews, photographers and stringers in particular," he writes. Former Boston Phoenix media critic **Dan Kennedy** writes about the Phoenix's decision to link its Web site to the propaganda video of Wall Street Journal reporter Danny Pearl's execution and to publish two photos from the video on its editorial page.

**Beverly Wall**, director of the Allan K. Smith Center for Writing and Rhetoric at Trinity College, works her way through "the minefield of language" that makes news coverage of the Middle East so difficult. And **Rami G. Khouri**, a Jordanian-Palestinian syndicated political columnist, explains why he doesn't think that U. S. policy in the region is affected by the journalists' selection of words and pictures. ■

# Photographic Images Can Be Misunderstood

‘I had hoped people would view this boy from Ain el Helweh as I had seen him, a tiny tragic figure.’

By Courtney Kealy

I knew not to ask their names and concentrated on the girlishness belied by their suicide belts and kalashnikovs. Subtle feminine clues appeared. They whispered to each other behind cupped hands in front of their covered faces. A small delicate wristband, purple platform sandals, or long-lashed wide eyes peeked out from their militant attire and offered up contradictions.

It’s often a simple gesture or small symbols in a larger political context that gives a photo its strength and offers some universal humanness. But after covering breaking news in the Middle East for four years, I fully realize the political repercussions of stories like this and sadly know both sides often cannot see each other as human.

It took four months of preparation consulting with a writer to arrive at this meeting of female suicide bombers with the al-Aqsa Brigades, training for future operations inside Israel in a small Palestinian camp in Northern Lebanon. I own all rights to these possibly contentious photos of female suicide bombers. After their first publication in a Sunday supplement to a Scottish newspaper, *The Herald*, I will make sure they do not get published alongside text that offers some sort of biased argument for one side or the other. My hope still is that photographs such as these can prompt people to ask why people do the things they do. But I have learned how difficult it is to work in this region, where tempers simmer beneath a thin veneer of calm, and those on all sides constantly accuse journalists of bias.

Four years ago, as a photojournalist, I brought myself to the Middle East and settled in Beirut. The 10-year ban on Americans traveling to the country had been lifted 14 months earlier, and the

city had become one of the largest reconstruction sites in the world. Yet editors I visited before my move told me they didn’t have much need for

stories from this region.

Often my introduction to the culture was lightly amusing. On a Hezbollah press tour, one of the first of



*These unidentified girls from the Beddawi Palestinian camp in Tripoli, Lebanon, have volunteered to be suicide bombers for the al-Aqsa Brigades in future operations inside Israel. As Kealy writes, “My hope still is that photographs such as these can prompt people to ask why people do the things they do. But I have learned how difficult it is to work in this region, where tempers simmer beneath a thin veneer of calm, and those on all sides constantly accuse journalists of bias.”*

*Photos by Courtney Kealy.*

its kind, an overexcited assistant press officer kept trying to tell me that Hezbollah suffered from its stereotype as a terrorist organization. “It’s a stereotype, they think we are the terrorist!” he said. I raised an eyebrow ironically and asked rhetorically that maybe I, too—an American woman in the Middle East—could understand what it meant to be a stereotype? “Yes, yes,” he exclaimed, “It is true, it is true, they think we are the terrorists and you are the sex machine!”

But after the Israeli withdrawal from South Lebanon, the death of Syrian President Hafez el-Assad, and the start of the Palestinian Intifada in 2000, things changed considerably. Then the events of September 11 sparked an almost hysterical demand for news from the Arab world. As an American and native New Yorker, the political became intensely personal.

On a Sunday in mid-December 2001, I was on assignment in Ain el-Helweh. More than 70,000 Palestinians live there, making it the largest Palestinian refugee camp in Lebanon. Hamas, the Palestinian Islamist group, organized a rally to commemorate their 14th anniversary. My purpose was to merely cover this small event inside the camp to show the Palestinian refugees in Lebanon supporting Hamas’s actions inside Israel and the occupied Palestinian territories. Although the organization had taken responsibility that weekend for suicide bombings that killed more than 25 people in Israel, leaders from Hamas have stated that they do not conduct military training or operations from inside Lebanon.

Children in the Palestinian refugee camps often trail alongside me repeating in high pitched voices “saurini, saurini, saurini,” which in Arabic means, “take my photo, take my photo, take my photo.” They love to pose for photos when a photojournalist arrives. I used to view it as a distraction to my concentration, but realizing how it amuses them I now take the time to snap my shutter when they ask. By the end of the march of Hamas supporters through the camp that day, I felt relaxed and very aware of the multitudes of children darting through the crowds.

Girls shyly followed me around, a curious female presence, no headscarf, clearly foreign, and doing what is thought of as a man’s job.

As some adults listened to a Hamas spokesman’s speech, others readied themselves for the requisite end-of-the-rally burning of the Israeli and American flags. I walked through the red dirt soccer field to where small boys dressed in camouflage with pint-size plastic machine guns and teenage boys dressed as suicide bombers covered head to toe in white sheets and fake belts of explosives, waited on the sidelines.

I knelt down on the ground, eye-to-eye with a small boy about three years old, a Hamas headband wrapped around his forehead. A young teenager suddenly approached, untied his fake suicide belt and tied it around the waist of the little boy. I didn’t say a word, waiting to see what would happen. He secured it around the little boy’s waist as he lifted his arms and smiled shyly. Then the boys straightened up, pulled their hoods over their faces and fell into a chilling tableau. The boys clearly

didn’t understand the significance of their gestures, but they had already absorbed the message of the roles they were expected to embrace.

The little Palestinian boy was about the same size and age as my nephew, Harrison, who was in love with the firemen in New York City before he could talk. In my wallet I carried a photo of Harrison dressed as a fireman on his second birthday, smiling widely.

I had hoped people would view this boy from Ain el-Helweh as I had seen him, a tiny tragic figure.

Within a few days the photo was being published worldwide by my agency, Getty Images. I had worked on a \$225 day rate and received no other royalties for the publication of this photo, yet I felt incredibly compensated by seeing it in print and hearing that it had been discussed on morning radio shows in New York City. But in March, an unwitting salesperson at Getty Images made an unfortunate mistake by selling the photo for an advertisement published by the American Jewish Committee on the opinion page of the Sunday New York Times



Ain el-Helweh, Lebanon: Palestinian children dressed as suicide bombers put fake explosives on a small child after marching in commemoration of the 14th anniversary of the Palestinian militant group, Hamas, in Ain el-Helweh, the largest Palestinian refugee camp in Lebanon, on December 9, 2001. The camp is home to more than 40,000 Palestinian refugees and is surrounded by Lebanese Army checkpoints. *Photo by Courtney Kealy.*



Nabatieh, South Lebanon: Ashoura, the annual religious holiday in which Shiite Muslims sacrifice their blood to commemorate the death of Hussein, the grandson of the Prophet Mohammed, who died in battle in 680 AD in Kerbala, now modern day Iraq. The battle marks the schism between Sunnis and Shiites. The practice was banned in Iran in 1994; members of Hezbollah in Lebanon also denounce it, although it still occurs annually in other countries, such as Afghanistan and Pakistan. *Photo by Courtney Kealy.*

with the headline “Some are born hating, others are taught how to hate.”

I feel that this child is not emblematic of what needs to be fought against but rather serves as a symbol of a people whose desperation needs to be addressed. The ad only causes more rifts and hatred by using the image of this small child. To portray a three-year-old as a symbol of hate and evil buried the humanitarian intent of the photo.

I worried that the mistaken use of this photo would lead to problems for me in Lebanon. It is offensive to me that a spokesman for the American Jewish Committee expressed concern about my safety in an article addressing the misuse of my photograph. While it would be nice to see this as an expression of genuine concern, unfortunately I see it as serving a more insidious political agenda: I regard it as trying to reinforce an image of the Arab world as populated only with extremists and teeming with terrorists.

Breaking news footage on September 11 had already done a lot of damage in this respect. Before anyone knew the scale of events that would unfold, some local stringers rushed into Ain el-

Helweh for reaction photos. A few Palestinians danced and cheered for the cameras. After this initial display the streets were quiet and darkness fell a few hours later. Time and Newsweek published these pictures as indicative of widespread jubilation among Palestinians at the September 11 tragedy and U.S. TV news stations ran images like these in continuous replays.

However, there was never any genuine street reaction to photograph in the Palestinian camps in Lebanon or elsewhere that day. When my brother called to reassure me that my family in Manhattan was alright, he asked, clearly shocked, “Why is everyone celebrating over there?” I explained the news footage portrayed a few small crowds as a collective whole: There had been a small crowd early in the day in a Palestinian camp in Lebanon, a small group of kids handing out candy in East Jerusalem, and a large demonstration in Nablus, a West Bank town. This irresponsible use of the same footage over and over in a rush to offer something from the Middle East and Arab world demonized the Palestinians.

I am very aware that most Americans

cannot distinguish between Arabs of different nationalities, religion and loyalties in this region. I do cover breaking news, which often involves militant extremist groups, and so I document their speeches, parades and anniversaries, whether it be the Shiite group Hezbollah, the Palestinian Sunni group Hamas, or others. The images do carry a particular weight, but to many uninformed viewers they represent the whole as opposed to the fringe groups that they are.

In my work I concentrate on small segments of society. When photojournalists focus on aspects of European and North American culture, most viewers of the images understand that the photo essay or long-term body of work represents specific problems, social and political, and the consequences of these difficulties. The groups whose images I capture represent certain political, social and cultural issues in this region, but in no way do they reflect the 2000 years of diverse civilizations that have formed today’s complex “Arab world.”

In spite of the mistaken sale of my photo of that little boy from Ain el-Helweh, I feel I can trust my agency completely, and this is crucial. In this day of digital, light-speed photojournalism, I must move images from my camera through e-mail to editors instantly with a detached objectivity. And there is no time for mistakes. This can be a difficult balance to strike, emotionally and physically wearing, but it is vital to maintaining the integrity of these images. ■

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# Arriving at Judgments in Selecting Photos

At *The Oregonian*, key questions help to frame decisions about images of Mideast violence.

By Randy L. Rasmussen

An explosion at a Jerusalem market, triggered by a suicide bomber, leaves the street littered with debris and body parts. Among the wounded, a rescuer assists a man whose clothes are shredded and charred from the blast. In Ramallah, a Palestinian soldier sprints across a street and, in public view, is shot by an Israeli sniper.

On *The Oregonian*'s front page, we run a photo of this market victim, picked up by *The Associated Press*, as the main picture. It shows little blood or gore, but it's a powerful image, graphic in its depiction of the trauma and terror. From the West Bank, two AP photographers record a sequence of the Palestinian's death as it happens, and

we decide to publish a single image taken at the moment the man takes a fatal hit. This photograph runs black and white and toward the bottom of a page, inside the paper. It's a haunting photo but not particularly graphic or as unsettling as it would have been had we run the entire shooting sequence in color on the front page.



Front page, left, of *The Oregonian* on Saturday, March 30, 2002, and Page A4, right, of the same day's paper showing our Mideast coverage, including the photo of a Palestinian gunman killed by an Israeli sniper. [See page 68 box.] —R.R.

News reporting on the conflict between Israelis and Palestinian draws reader comment like few other topics. Add to that the fact that images of violence set phones ringing immediately and know that the response to our front-page image was rapid and vigorous. (We rarely hear from readers about photographs that appear on inside pages.) About the market victim photo, we received comments such as: "I can't handle it." "It is more than I need to see." Another caller complains: "I'm tired of seeing blood and guts."

I've heard many comments about photographs that we've published during this resurgence of violence in the Middle East. And I have developed a pretty good sense of what aspects of our work tend to draw the most reader reaction. They include:

- **Where the photo is played.** Photos played on the front page, in full color, receive the most attention and generally the most reaction. Inside photos seldom evoke the same kind of commentary.
- **How it is played.** Again, the most prominent pictures on the page get the most reaction. Color is also a factor.
- **Depiction of violence.** Peak action, depicting violence and captured in a still photograph, gets the most reader comment, followed very closely by scenes showing dead bodies.
- **Evidence of violence.** Body bags, pools of blood, or other graphic remains often are viewed as traumatic.
- **Intrusion into scenes perceived as private.** This could be anything from reaction at a suicide bombing to a grieving family member at a funeral, scenes where strong and candid emotions are laid bare.
- **Perception that one side is favored over the other in coverage.** The Oregonian's public editor, Dan Hortsch, who often first receives reader phone calls, likens the Middle East conflict to the 2000 Gore-Bush election, in which each side strongly believed its candidate was being slighted in the coverage.

## Portrait of a Death



*The Oregonian considered a sequence of three photos showing a Palestinian gunman being shot dead by an Israeli sniper in the West Bank city of Ramallah on Friday, March 29, 2002.*

*We debated using this entire sequence and further debated the context of its use on a day when Israeli troops attacked Yasser Arafat's compound and a suicide bomber, an 18-year-old woman, killed herself and two others and injured 25 at a public market.*

*All of these factors led us to put the second picture alone on an inside page [see page 67], when on another day it might have played much more prominently. It is a haunting, unsettling image recording the moment of death from a proximity seldom seen. Its power is amplified when viewed in the context of photos taken just before and after. —R.R.*

*Photos courtesy of The Associated Press. Top two photos by Nasser Nasser; bottom photo by Jerome Delay.*

Each of these factors contributes to difficult decisions for editors who must decide how to document a news story that is often best portrayed by pictures of violence, even though they know these images will evoke strong emotions.

At *The Oregonian*, where I work as a photo editor, we rely on questioning and discussion when confronted with pictures that contain bodies or gore or might be viewed as intrusive. Our general directive is to not run these photographs. However, each picture must be talked about in the context of its news value and its merits understood. These discussions take place first among those in the photo department, then move outward to include the senior editor for visuals, our design director, and the managing editor for news.

What follows are some of the ques-

tions we try to answer to determine if we should publish particular photographs and how we might use them:

- Are these images storytelling, documentary photojournalism? We want spontaneous photography that reveals the news quickly and truthfully.
- Are the photographs well executed? We look for well-composed photos that reflect sophisticated use of lenses, angle and lighting.
- Are they powerful and dramatic without being gratuitous in their depiction of violence?
- How do they relate specifically to the news of the day or define the event in a way that gives greater understanding to the long-running story?
- What are the possible consequences

of running the photos? What reactions might they provoke? And what will be the good that can come from publishing them?

- What is the day's competition? Other news events might push a strong photo downpage or inside, as sometimes we make difficult decisions on where to place a photograph. (The photograph of the man killed by the sniper was taken on the same day that Israeli troops razed Arafat's compound, and a suicide bomber—only the second woman to do this—killed herself and two others. That day, story and photo competition was quite stiff.)

These questions define what I call an invisible “bar,” one that dictates whether a photo will make the front page, an inside page, or be rejected.



Front page (left) of *The Oregonian* on Saturday, April 13, 2002, showing our Mideast coverage of the aftermath of a suicide bombing.

This is a dramatic photo showing the horror and destruction of a suicide bombing without specifically showing the dead or the gore of the scene. In it, a paramedic tends to a wounded person at the scene of a suicide bombing at a Jerusalem market Friday, April 12, 2002. Pushing the picture into a prominent A1 position was not only the power of the image but also a convergence of Mideast news: It happened on the day that U.S. Secretary of State Colin Powell arrived in Israel and one day before he was to meet with Palestinian leader Yasser Arafat. —R.R.

Photo courtesy of Zoom 77/The Associated Press.

Often, even after all of these questions have been raised and discussion has led us to think hard about many considerations, readers will still react negatively to our decision. But knowing this reaction might come should not dissuade us from publishing images that we think offer readers a vital newsworthy perspective on this long-running conflict.

The newspaper has a long history of not running photos of the bodies of dead people. John Harvey, a senior editor who heads the national/international news team and a veteran of 40 years at the newspaper, remembers that one publisher, seeing a photograph of Marilyn Monroe's draped body in an early edition of the paper, had the picture pulled from later editions. The Oregonian did, however, run the haunting photo by George Wedding of a dead child's body in the back of a pickup truck after the eruption of Mount St. Helens. "I handled 500 calls the next day," Harvey remembers.

During my earlier years at the newspaper, decisions about whether to publish pictures of violence often felt as though they were made randomly. Even the factors that went into the decision-making did not seem well understood by the staff. That changed with the arrival of Sandy Rowe as editor of The Oregonian in 1993. Rowe created a systematic structure in the newsroom that changed the way editors looked at story play and picture selection. Rowe orchestrated the creation of an open meeting room called the "Well," a space specifically designed to encourage discussions about what the newspaper is doing and how it has done. Each day's papers are posted on walls that can be opened, and etched-steel panels remind the staff of the newspaper's mission statement.

Each weekday morning, editors gather in the Well. Here the next day's stories are discussed, but editors and others also offer reaction to the morning's edition. If a particular picture or story has evoked reaction, it might result in spirited conversations. Occasionally we show photographs that were not published and talk about whether that was the "right" decision.



*This is an example of a photo from the Mideast conflict that we considered and rejected for publication. It shows Palestinians gathering at the morgue in Gaza City to identify friends and relatives killed after an incursion by Israeli troops into Jabalya and the northern Gaza Strip, Tuesday, March 12, 2002. As The Associated Press warned in its caption, the picture has graphic content. It depicts death in a way that we did not feel was necessary to publish. We couldn't find the news justification necessary to outweigh the negative reader reaction we would certainly get. —R.R.*

*Photo courtesy of Charles Dharapak/The Associated Press.*

As Rowe puts it: "We try to walk around our decisions and view them through different prisms. We want to hear different views and be challenged."

An understood partner in this decision process is the reader. Since Rowe came to the newspaper, we have opened ourselves up to the reader. Now on the first page of every section a phone number is published for the editor responsible for that section. Stories end with e-mail and phone information so readers can reach the writer and, often, the photographer. We have created the position of a public editor, a direct liaison between the public and the newspaper.

The Mideast conflict, Rowe observes, involves events of unquestioned significance and events over which people vigorously disagree. Readers whose sympathies fall to one side or the other see things quite differently. The Oregonian often becomes the focus for their reactions, as we report and dis-

play photos they perceive as unfair or too emotionally disturbing.

In selecting pictures from the Middle East, we are sensitive to issue of fairness and our overall goal is to achieve an accurate historical perspective. In this process, editors try to emphasize news over emotion, to edify rather than enrage. At the same time, Rowe reminds us that with the ongoing violence, we need to be careful not to sanitize the situation at the risk of not showing reality. Rowe cautions editors to remember: "Our job is to add light, not heat." ■

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# Expanding the Lens on Coverage of the Middle East

By judging a newspaper's visual coverage over a long period of time, bias becomes less apparent.

By Dick Rogers

The Palestinian child stares emptily from the foot of a blood-stained staircase, a half-eaten sandwich in his left hand, his right hand resting on a step leading to his house. Hours before, the boy's father and grandfather had been shot to death amid yet another spasm of Middle East violence.

To the San Francisco Chronicle editors who had to decide which photograph would occupy the middle of the front page the next day, this was a searing image that conveyed emotion and the complexities of a conflict without end.

Many readers saw something else: proof of the paper's anti-Israel bias.

They called and wrote angrily, demanding to know why the paper persists in showing sympathetic images of Palestinian boys and girls while depicting only Israeli tanks and bulldozers. Where are the photographs showing the anguish of young Israelis as their friends and relatives are wantonly killed by suicide bombers? Where is the balance?

The questions, which come in varying form from competing sides of the Mideast controversy, defy easy answers, in part because newspapers rarely take the time to step back and take a longer view of the impact of their coverage. Editors focus on the immediate decisions. What's the best picture for tomorrow's cover? Which six stories do we put on the front page? What's our lead story?

Did this particular photo evoke sympathy for Palestinians, or at least for the Palestinian boy? No doubt. More importantly, did the decision to put the picture on Page One betray a pattern of bias on the paper's part?

In my role as the Chronicle's ombudsman, I needed to respond to these questions and concerns. But rather than decide for myself, I invited five readers to examine our Mideast photo coverage during a three-month period, from December 23, 2001 until March 15, 2002. Each reader looked at copies of the same 79 photos and judged whether the images were sympathetic toward Palestinians or Israel or neutral. The package of photos included captions, the page and section in which the pictures ran, photo credits, and publication dates.

The readers were selected by Heidi Swillinger, a copyeditor who developed our "Two Cents" program, a database of roughly 1,100 readers who agreed to offer comment or expertise



*Caption:* A Palestinian boy sits on a staircase stained with blood at a house in the Jabalya refugee camp March 12, 2002. Family members said that the boy's father, Waled Izz el-Din, and grandfather, Abdel Rahman, were killed by gunfire as the violence, which has claimed the lives of at least 37 Palestinians and Israelis in the region over the past 24 hours, continued unabated.

*Photo Credit:* Reuters

*Publication Date:* 3/13/2002

*Each member of the readers' panel was also told the page and section in which this photo was published in color. The panel saw the photo in black and white.*

In their responses, four readers considered this photo to be pro-Palestinian, one thought it neutral. *Photo courtesy of Ahmed Jadallah/Reuters.*

on a wide range of subjects, usually involving reactions to breaking news. The only criteria were that our volunteers could spare several hours and that they were not activists in Mideast affairs.

Before the judging, we asked them to tell us a little about themselves and their views of the Mideast situation:

1. A 49-year-old architect and San Francisco resident. He was “both sympathetic and critical of both sides in this conflict.” He added that Palestinians have been “treated brutally by Israel and that they have been provoked into equally brutal reactions.”
2. A 66-year-old Berkeley resident and retired registered nurse. “I feel that anti-Semitism is like the Hydra,” she

said. “The more of its heads are cut off, the more grow back.” She said she believes Arab states have “refused to provide aid to Palestinians to foment anti-Israeli sentiment.”

3. A 79-year old retired man, living in Redwood City. He doubted that the Mideast situation would be resolved in our lifetimes. “I have always felt that Israel was given a parcel of land that did not originally belong to them,” he said. “I’m now inclined to agree with the Saudi proposal of reverting to the 1967 land division.”
4. A 45-year-old community service volunteer from San Francisco. She, too, said she believed the situation defied resolution. While Israel must take some responsibility, she said, “it is hard for me to find complete sympathy (empathy) for the Pales-

tinians. How do you accept suicide bombers?” she asked. “How do you accept bombings on High Holy Days? How do you reconcile Barak’s peace plan being utterly refused by Arafat?”

5. A 50-year-old San Francisco insurance consultant. He concluded that factions on both sides in the Middle East prevent an everlasting peace, and he viewed the motives of both sides skeptically. “I believe Israel would like an all-out war to settle the issue for the most part before the Arabs get a nuclear weapon,” he said. “I believe the Palestinians want an all-out war to foster unity among all non-Jewish-supported countries.”

Each member of the panel separated the photos into three categories: sympathetic to Palestinians, sympathetic to Israel, and neutral.

Here is what they saw:

Reader	Pro-Palestinian	Neutral	Pro-Israel
#1	21	10	48
#2	32	22	25
#3	35	15	29
#4	24	47	8
#5	18	45	16

After they’d made these judgments, we asked the panel members for their impressions.

The San Francisco architect, who felt that Palestinians had been provoked into brutality because of brutal treatment by Israel, found that similar photographs could be interpreted very differently, partly because of the way the conflict has been framed in the media. “Israelis with guns are soldiers defending their people,” he said, “while Palestinians with guns are terrorists.” He added that “very few Palestinian men [were] photographed sympathetically.”

The retired nurse, who described herself as “firmly pro-Zionist,” said, “after seeing the pictures I feel your coverage is actually fairly balanced. The pictures I considered pro-Palestinian seemed to pull far more emotional response than the pro-Israeli ones, but that’s largely an artifact of the fact that



*Caption:* A priest prays while children light candles at the Grotto, believed to be the birthplace of Jesus Christ, in the West Bank town of Bethlehem, Sunday, December 23, 2001. The Mideast fighting has dealt a crushing blow to Bethlehem, where the 30,000 Palestinian residents are roughly half-Muslim and half-Christian. The town, just south of Jerusalem, is heavily dependent on Christian tourists from around the world.

*Photo Credit:* AP Photo/Karel Prinsloo

*Publication Date:* 12/24/2002

*Each member of the readers’ panel was also told the page and section in which this black-and-white photo was published.*

In their responses, all five readers thought this image was neutral. *Photo courtesy of Karel Prinsloo/The Associated Press.*

the Israelis have more equipment and infrastructure, and ... are more able to supervise and protect their children [from photographers].”

The retired Redwood city resident who advocates a pullback to the 1967 borders said, “it appears that the majority of these pictures are sympathetic toward the Palestinians in a sense—although a number of Palestinian bomb attacks are depicted, it seems that in these pictures the Israelis have created the most deaths.”

The San Francisco community service volunteer was “totally surprised by this ‘test.’ At the beginning I felt the S.F. Chronicle was biased toward the Palestinians. Then, as I went through more and more, I wrote ‘neutral’ more than I thought I would. Did I get desen-

sitized? It feels that way, quite honestly. My final thought is a bit of a contrast—while I certainly indicated ‘neutral’ more than the other two categories, I also came away with a feeling that the Chronicle leans toward a sympathetic view of the Palestinians. Interesting how a group of photos can alter your perspective versus viewing a single photo.”

Context means a lot, this reader told us. “I found that I read the captions more closely today than when I read the paper at home,” he said. “The wording of the captions influenced me in determining whether there was a bias. Had I just seen the photos without captions, I would have found less bias.”

From five readers, we received five different reactions, but when looked at

together, the responses yield an interesting result—their findings were almost equally distributed.

	Pro-Palestinian	Neutral	Pro-Israel
5 Readers	130	139	126

There’s nothing scientific in what we did and nothing that would hold up in court—or even in a debate with an avidly pro-Palestinian or pro-Israel reader. But the experiment had value to the newspaper. For one thing, we stepped back and took the time to look at one aspect of our work as it appeared over time. It reminded photo editors and senior editors that day-to-day news decisions have lasting impacts on how readers view the paper. And it prompted at least one photo editor to think more deeply about her choices as she waded through hundreds of Mideast photos each day.

“We always look for photos that are compelling and elicit an emotional response,” said Elizabeth Mangelsdorf, acting director of photography. “But the readers’ response to our Mideast photo coverage has reminded us that we have to look hard at why and how we run photos. We need to show both sides of a conflict. But individual events can appear more sympathetic to one side or the other in the coverage of a long-term conflict. Because of this, it’s important that, over time, we seek balance in the photos we choose.”

The experiment showed something else: If the Chronicle was trying to espouse a particular viewpoint through photo selections, it wasn’t doing a very good job. ■



*Caption:* Palestinian gunmen march during the funeral procession of Palestinian police officers Omar Wahdan, 20, and Hussein Zbidi, 35, who were shot dead by Israeli forces while participating in a gunfight Monday, in the West Bank town of Ramallah Tuesday, January 22, 2002.

*Photo Credit:* AP

*Publication Date:* 1/23/2002

*Each member of the readers’ panel was also told the page and section in which this black-and-white photo was published.*

In their responses, reactions were mixed. One reader thought this photo was pro-Palestinian; two readers thought it was pro-Israel, and two readers thought it was neutral.

*Photo courtesy of Zoom77/The Associated Press.*

*Dick Rogers is the San Francisco Chronicle’s readers’ representative and a 28-year newspaper veteran. Since his department was created last October, he has fielded comment from more than 4,000 readers on issues ranging from the quality of the paper’s comics page to the effectiveness of prostate cancer screening, the debate over allowing unleashed dogs in urban parks, and coverage of the Middle East.*

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# Images Lead to Varying Perceptions

‘In photographs in which we, as journalists, saw danger, some readers saw deception.’

By Debbie Kornmiller

Seeing photos through readers’ eyes reveals images and responses that journalists sometimes overlook.

In photographs in which we, as journalists, saw danger, some readers saw deception. To an image depicting young Palestinian protesters running from fire, we heard reactions such as “Aren’t they too young to organize?” Where we saw truth, readers suspected a setup. When we published a picture of a colorful protest, readers wondered about the manipulation involved in getting this message out. When we saw sorrow, readers saw joy. Is the mother of a suicide bomber grieving? Or is she joyous that her son is now a martyr?

As this gulf in perceptions became apparent—through a handful of letters and calls that I received each week—I set out to evaluate the Arizona Daily Star’s Mideast photographic coverage. As the newspaper’s reader advocate, I would present my findings to readers and then create a forum so that the Star’s decision-makers could hear directly from readers. To fully open my eyes to the bias that some of our readers were seeing, I looked at more than 160 Associated Press photos.

Of the 900,000 people who live in metropolitan Tucson, about three percent are Jewish, and just under one percent is Muslim. The Star sells an average of 101,000 papers each day and 171,000 on Sundays. There were no organized advertising boycotts about our Mideast coverage, nor orchestrated circulation cancellations, as there have been in other communities. And for the most part, the complaints I received were courteous, friendly and constructive.

These reader complaints were enough to convince the paper’s top editors that it was time for a “gut-check” to look for ways that we could



Israelis hold signs with pictures of Palestinian leader Yasser Arafat and Osama bin Laden with a written legend that reads “the twins” as they wave Israeli flags during a rally in Jerusalem Monday, October 22, 2001. Thousands of Israelis filled the central square of Jerusalem demanding tough action against the Palestinians. *Photo courtesy of Elizabeth Dalziel/The Associated Press.*

improve our coverage. Every newspaper can cover an issue better—whether by devoting more space, diversifying news sources, or presenting the news more effectively. To do so, however, requires a willingness to recognize what isn’t working. In 2001, the Star examined its gun coverage as part of the Associated Press Managing Editors’ National Credibility Roundtables Project, designed to bring news organizations and readers together to talk about credibility issues. Managing Editor Bobbie Jo Buel promised readers that the Star would examine its Mideast coverage next.

In 2001, we used wire photos from The Associated Press to convey to Star readers the war’s realities. We depend on these photographers to depict what

is happening and to describe it in caption form. In my assessment of the photos of the Mideast that ran in the Star in 2001, I judged them on specific criteria. For example, did the photograph show the news of the day? And did it show Israelis or Palestinians in a positive, neutral or negative light?

Over the course of the year, the Star’s choice of photographs showed Israelis and Palestinians in a positive or neutral light at about the same rate, about 40 percent of the time. Of the 57 photos that showed either side in a negative light, 37, or 23 percent, showed Israelis in a negative light, and 20, or 13 percent, showed Palestinians in a negative light.

From this analysis we selected 15 images to form the springboard for

interviews with the eight readers—suggested to us by others in the community—who agreed to take part in a two-hour roundtable discussion. I sent each participant the same packet of images and, before we met as a group, I heard impressions from each in an individual 90-minute meeting.

One of the photos I included was one from October 2001 that showed Israeli protesters holding signs with pictures of Palestinian leader Yasser Arafat and Osama bin Laden, captioned in English “the twins.” [See photo on page 74.] This photograph ran in color on the front page. A reader had called asking, “If it were a Palestinian protest depicting Sharon as a twin with bin Laden, would that have been an 8” x 6” color picture on the front page?” Soon after, Newsweek reported that the Israeli government had spearheaded a move to ingrain this Arafat-bin Laden comparison. Another was a December 16 photo of Palestinian children, identified as protesters, running for cover as Israeli troops fire their weapons during a Gaza clash. However, there was no sign of a demonstration in the photo.

The week before the roundtable, I showed the same examples to the Star’s decision-makers—photo and news editors, Page One editors, and Editor and Publisher Jane Amari—and explained why each was included and what readers had said about them.

During the roundtable in April, my colleagues were asked to talk as little as possible. They were there to listen, not to voice their views. Readers talked about the impact of images of protest



Subhiah al-Ghoul, left, surrounded by pictures of her son Muhammed al-Ghoul, 22, is comforted by her daughter as she cries at her home at the al-Faraa refugee camp near the West Bank city of Nablus on Tuesday, June 18, 2002. The Islamic militant group Hamas claimed responsibility for the suicide bombing in Jerusalem, saying Muhammed al-Ghoul carried out the attack, detonating nail-studded explosives on a Jerusalem city bus crowded with high school students and office workers, killing himself and 19 passengers in the deadliest suicide attack in the hard-hit city in six years. *Photo courtesy of Nasser Ishtayeh/The Associated Press.*

and of the massive destruction they saw when they looked at these photos. Over and over, readers said, “Show us the human side of the conflict.” As the discussion ended, the photo director asked that the Mideast photos we were considering that day be assembled so the readers could view the next day’s options. They seemed overwhelmed by the number of images we had to sort

through. After viewing about a dozen images, they remarked upon how hard it must be to make our choices each night.

The Star’s promise from the start was to examine its coverage and listen to readers. Any change that might be instituted would be conveyed to them personally in writing and to the public in the Sunday reader advocate column.

Based on readers’ suggestions, the Star:

- Instituted trials of Christian Science Monitor and Reuters news services to broaden the possibilities for our news and visual coverage.
- Promised to publish photos that add a human dimension to the day’s events.
- Promised that every photo considered will be viewed by at least two sets of eyes and the different approaches to the day’s news discussed.

More than a dozen people not involved in the roundtable sent notes of appreciation or called to thank the Star for its efforts.

The roundtable heightened efforts to ensure fairness and accuracy and created a road map for us to use.

Judgment based on that road map still can result in second-guessing. However, in the three months after the roundtable, the Star has received complaints only once about its photo selection. On June 19, more than 20 readers called to voice their outrage and dismay over a front page photo of Subhiah al-Ghoul grieving over her son, a suicide bomber who killed 19 people,

including children, and wounded 55 others the previous morning in Jerusalem. A second photo of similar size was adjacent and showed a grieving Prime Minister Ariel Sharon with the bombed bus in the background.

Readers called the photo selection unbalanced and said that it looked as if the Star was glorifying the bomber's actions. In their words: "That woman is

only sad for her loss; she's happy inside that all those kids died." From another: "When I saw Wednesday's front page, I thought you were saying 'Screw the Jews; Hurrah for the murderers.'" A lone caller grasped that the two photos were chosen to show two sides grieving.

Teri Hayt, assistant managing editor for photography, design and graphics,

oversees photo selection. In my June 23 column, she explained our decision in publishing these photographs: "There were several images of grieving relatives on both sides of the issue; most of the photos of the scene were too graphic to publish.

"In the end, I felt that we needed to show the grief and despair this war has created on both sides. Thus the side-by-side display of the mother whose son blew himself up and Sharon viewing the carnage visited upon his people again. [See photographs on this and previous page, with original captions.]

"Was this the right call? I thought so at the time. I knew regardless of how we displayed these images there would be strong reaction from both sides. Honestly, it doesn't matter what images run, someone will be offended.

"They say hindsight is 20/20 so that morning after looking at our front I opened my copy of The New York Times and saw that they had a photo of the remnants of the bus. The image did not have any bodies visible, nothing really compelling about the image, but it did show the damage. And I thought that if I had to make the call over again I would have gone with a single photo of Sharon standing over the body bags with the bus in the background. That was the news of the day, another large loss of life the result of another suicide bomber. The war continues.

"We are not going to solve this conflict. I believe that we are being much more sensitive to both sides of the issue, but the fact remains that each side has suffered. Our job is to report this war and that means photos that are hard to look at. War is offensive to look at. I would hope that our readers trust we are making thoughtful decisions, not just putting the first photo we come across in the paper. I worry that we are being so sensitive to both sides that we are not covering the news story of the day." ■



Israeli Prime Minister Ariel Sharon pauses near a bombed bus as he visits the site of a suicide bombing in Jerusalem Tuesday, June 18, 2002. A Palestinian man detonated nail-studded explosives on a Jerusalem city bus crowded with high school students and office workers Tuesday, killing himself and 19 passengers in the deadliest suicide attack in the hard-hit city in six years. Fifty-five people were injured. *Photo courtesy of Avi Ohayoun/Israeli Government Press/The Associated Press.*

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# Deciding on an Emotion-Laden Photograph For Page One

When an image reflects ‘a crucial moment in a course of events,’ editors make the decision to publish it.

By Michael Larkin

**A**t The Boston Globe, we never run photos of dead people without some discussion of the impact they are likely to have on our readers. This is particularly true of those appearing on Page One, where they are more likely to be seen by many members of a household, including children. And, of course, color adds to a photograph’s impact. This is a well-established editorial practice, which has evolved over years of readers responding to what we deliver in the morning: They’ve told us that they don’t want to be surprised by seeing such images during breakfast. They’ve said how disturbed their young children are when they see such pictures. And many readers complain that we are trying to take sides in some dispute by portraying a particular side as killers.

Yet, as editors, we know that certain images—because of their import and composition—belong in the newspaper, either on Page One or an inside page, because they reflect a crucial moment in a course of events. The picture of the screaming girl running from a napalm attack in Vietnam and the one of

the firefighter carrying a dead baby in Oklahoma City come immediately to mind. And there are numerous others; the annual Pulitzer Prize-winning news photos comprise virtually an album of human tragedy.

This photograph—of an infant being carried in Gaza—is not only visu-

ally striking but also illustrates to our readers that something significant happened. In this case, Israeli forces had targeted a Hamas leader and killed him by sending a rocket into a residential area. This represented either a major shift in tactics or a serious lapse in military intelligence. And the result was that nine children died, a tragic consequence the Israelis have literally taken pains to avoid in the past.

Our decision to publish this photograph in color on Page One received little reader response. The picture is not gory, but the politics around it are troubling. Even within Israel, the attack prompted debate about whether it was the right thing to do. In our minds, this photograph clearly represented the deep emotions arising from this violent struggle in the Middle East and, for that reason, we decided to use it as the main art with the day’s lead news story. ■

*Michael Larkin is deputy managing editor/news operations at The Boston Globe.*



The body of an infant killed in the July 23, 2002 Israeli attack being held aloft during a procession in Gaza. *Photo courtesy of Reuters.*

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# Covering the Intifada: A Hazardous Beat

Photographers and journalists come under gunfire while reporting on the conflict.

By Joel Campagna

**O**n July 12, 35-year-old Palestinian freelance photographer Imad Abu Zahra died in a hospital a day after he was wounded by machine-gun fire in the West Bank town of Jenin. Abu Zahra and another Palestinian photographer were taking shots of an Israeli armored personnel carrier that had crashed into an electricity pole on Faisal Street, when a nearby Israel Defense Forces (IDF) tank gunner opened fire. A high-caliber round struck him in the thigh, causing severe blood loss that eventually killed him.

Abu Zahra was the third journalist and second photographer killed covering the Palestinian Intifada, which began in September 2000. Dozens more have been wounded by live gunfire and rubber bullets or bullied by hostile troops and gunmen while working the frontlines of an increasingly volatile conflict.

"Just about everyone now has an armored car and wears a bulletproof vest," said one veteran U.S. newspaper reporter, who covered the first Intifada and asked that his name not be used. "In my opinion, if you're not in an armored car you shouldn't be there in the first place."

For those reporting it from the ground in the West Bank and Gaza Strip, the current Intifada is a different and more perilous conflict than its namesake predecessor (1987-1993). Both Israelis and Palestinians are armed, and the violence has moved away from localized protests to a low-intensity conflict replete with gunfire exchanges, bombings and large-scale military operations. The situation, where the rules of engagement can change daily, poses increasing risks for those seeking proximity to the action—cameramen, camera crews, photographers and stringers in particular.

"You can take all kinds of precautions, but if you roam even a little bit you can get in all kinds of trouble here," said another Jerusalem-based journalist working with a Western news agency, speaking about the West Bank. "Palestinians can fire on your armored car or you can get hit by [Israeli] tank fire. We've experienced many types of cases."

## Journalists Under Fire

While both sides have harassed, restricted and endangered journalists during the past 22 months, the greatest risk to those in the field has come from IDF gunfire. Photographers, cameramen and camera crews have most frequently been in the line of fire. Between September 2000 and June 2001, the New York-based Committee to Protect Journalists (CPJ) documented 14 cases in which journalists were wounded by live rounds or rubber-coated steel bullets fired by Israeli troops (in two other cases, the source of the fire was unclear, though suspected to be from Israeli troops). Eleven of those 14 incidents involved photojournalists injured covering the initial explosion of protests that took place during the first two months of the conflict. The actual number of journalist casualties during that time frame appeared to be far greater; the Paris-based press freedom organization Reporters Sans Frontières reported more than 40 such cases during roughly the same time.

While crossfire accounts for some of those casualties, circumstantial evidence suggests that in some cases Israeli forces may have deliberately targeted journalists or at least acted recklessly. Sometimes, journalists were shot in the legs, head, or even hands as

they held cameras. In one case, a bullet hit a journalist's camera lens. In many cases, reporters hit by gunfire were far removed from clashes and easily recognizable as journalists because of their conspicuous camera equipment or flak jackets marked "Press." The IDF and government officials vehemently deny any suggestion that their troops have intentionally fired at journalists.

Injuries to journalists during this Intifada have tended to correspond with the intensity of conflict on the ground. Prior to March 2002, the greatest concentration of shootings, for example, took place in the initial months when protests were many and press interest was high. By late March 2002, when Israel launched its large-scale military operation in the West Bank in response to a string of Palestinian suicide bombings in Israel, an increasing number of journalists in the field faced an even more chaotic and unpredictable work environment. Journalists were increasingly working amidst the conflict and not only photojournalists were at risk.

## Journalists and 'Closed Military Areas'

During the initial days of Operation Defensive Shield, the IDF declared nearly all of the West Bank's main cities "closed military areas" and therefore off limits to the press. Journalists who attempted to cover the story did so with great difficulty and were at risk of getting caught in the crossfire.

"I got into Ramallah," said The Toronto Star's Sandro Contenta, a Jerusalem-based correspondent for the last three-and-a-half years. "The question is, how do you do your job in a place that's a closed military area, particularly when there's shooting going

on? Not all of us had armored cars. I didn't. So we made convoys of cars. We were flashing our lights and honking our horns. It was very dangerous. At times you had to negotiate yourself through tanks."

Some, like France 2's veteran correspondent Charles Enderlin, maintain that barring the press access further jeopardizes the safety of reporters, forcing them to take more dangerous, alternate routes across orchards or dirt paths. "It is endangering lives of journalists," he said. "Colleagues are trying to get into places by foot. They go in without armored cars, flak jackets, and escorts."

An already tense situation was exacerbated by the IDF, which adopted a hard line against journalists attempting to defy the "closed military zones." Throughout the six-week incursion, CPJ documented numerous instances in which troops fired on or in the direction of journalists clearly marked as press. Others were detained, threatened, or had their press credentials and film confiscated. In a case that drew widespread international media coverage, IDF troops hurled stun grenades and fired rubber bullets at reporters and camera crews waiting outside the besieged Ramallah compound of Palestinian leader Yasser Arafat. Journalists said they had never witnessed such harsh treatment from the IDF, which many attributed to a growing hostility against the press that stemmed from a perception that Israel was getting unfair treatment in the media.

"It's clear that the army was, to put it mildly, gratuitously shooting at journalists during the March/April invasion," said the Star's Contenta. "There is no doubt in my mind. Most journalists were clearly identified as press. I think the IDF has a lot to answer for and why they didn't give clear instructions to soldiers not to shoot at journalists."

In at least one case in mid-March, Palestinian gunmen fired on an Associated Press armored car in Ramallah. And in three others incidents during Operation Defensive Shield in which journalists were hurt by bullets, the source of gunfire was unclear. How-

ever, in two of them the journalists believed Israeli forces fired since they took place in areas under the army's control.

One of the most troubling incidents occurred on April 1, when NBC News correspondent Dana Lewis and his two-person camera crew came under IDF fire in Ramallah at dusk while driving in an armored car that was clearly identified as a press vehicle. After an initial burst of gunfire hit the car, a lone IDF soldier opened fire with a second burst from a range of about 50 to 100 feet. The journalists then stopped the car, turned on an interior light to make themselves visible, and placed their hands on the windshield. After 15 to 20 seconds, the soldier fired a third burst, hitting the windshield. The NBC crew escaped by driving away in reverse.

For many correspondents, Operation Defensive Shield demonstrated the extent to which field reporting had changed since September 2000, when the main challenge was often navigating army checkpoints, negotiating with soldiers for passage, and avoiding fire-fights. "Here, the risks in the beginning were getting hit by a stray bullet at a demonstration. The other was being mistaken as a Jew and shot by [Palestinian] gunmen," noted Tim Palmer, a Jerusalem correspondent for Australia's ABC News television. "This year that changed."

## Risks Photojournalists and Others Take

The IDF's behavior during Operation Defensive Shield aside, some journalists acknowledge that it is often their own actions that determine the level of risk they face. In a news story the magnitude of the Israeli-Palestinian conflict, competition often pushes reporters to their limits and can sometimes lead to dangerous situations.

"The people at most risk are the still photographers," says Palmer. "They're under pressure to operate at risk for their livelihood, more so than others who don't have to take risks. They carry what can be mistaken for a small arm and are under pressure to get the best shot."

Neil MacDonald, the Jerusalem-based Middle East correspondent for Canada's CBC-TV, is critical of many journalists who he says unnecessarily put themselves in danger. "Here you can assert a lot of control over your environment," he said, while expressing his shock at a recent incident where he saw a Belgian photographer saunter down a street amid a firefight wearing only a white T-shirt and no flak jacket. "There are some people who exert idiotic control. I've seen all types of situations. Some of it's idiocy, panic or bravado. Some is sheer stupidity."

Several Western print correspondents privately confess that they would not have taken the risk that Italian freelance photographer Raffaele Ciriello did when he was tragically killed by Israeli tank fire in Ramallah in March. Ciriello, on assignment for the daily *Corriere della Sera*, had stepped from a building off an alleyway into the street to film an Israeli tank that had entered the street about 150 to 200 yards away when he was hit by several rounds from the tank's gunner. There was at least one Palestinian gunman in his vicinity at the time of the shooting, and Ciriello and a colleague had been trailing several gunmen before the shooting.

"That same day I had debated for a whole day about whether to move from one building to the next in Ramallah," one print reporter recalled of the tenuous situation on the ground in the city that day.

While acknowledging cases of journalists fired upon by IDF and the other inherent dangers of the conflict, some journalists try to put shooting incidents in perspective. "Neither side here shoots at journalists with reckless abandon," said a news agency journalist. "Neither side is recklessly barbarian in this regard. I'm sure Yugoslavia and Afghanistan were more dangerous." In those places you had people "actually seeking to kill you. Life there had become cheap," he remarked.

Still, journalists take no comfort when they come under fire, especially when they take precautions. "If I get closer to a firefight, then I know I'm putting my life in danger," said Sandro

Contenta, speaking of cases in which the army opened fire at journalists. "I don't expect anything from the IDF, but don't shoot at me." For some it is a command-and-control issue with the army failing to rein in such behavior of troops.

For Imad Abu Zahra, he was in a risky situation, but his colleagues say there was no excuse for anyone to open fire on him. Abu Zahra's colleague Said Dahleh said that at the time of the incident both journalists were alone in the street, which had emptied

shortly after the tanks entered the area. Both men were holding cameras, and Dahleh wore a flak jacket clearly marked "Press."

An army spokesperson said that soldiers opened fire after a mob attacked the armored personnel carrier (APC) with Molotov cocktails and rocks, and people in the crowd fired on the tanks. Jenin residents said that people attacked the tanks only after the two journalists were shot and that they pelted the tanks only with pieces of fruit and not with rocks and Molotov

cocktails. Photos of the stranded APC taken by Dahleh before the shooting show no signs of clashes or hostile actions near the APC. ■

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## The Daniel Pearl Video

A journalist explains why its horrific images should be treated as news.

By Dan Kennedy

**T** rue martyrs—unlike the twisted souls who fly jets into buildings or blow themselves up at pizzarias—are inevitably reluctant. Whether it's Abraham Lincoln or Martin Luther King, Jr., Jesus or Gandhi, the anonymous Jews of Nazi-occupied Europe or the anonymous Muslims of Kosovo and Bosnia, people want to live their lives, not become symbols.

So I have little doubt what Daniel Pearl would have thought of the Boston Phoenix's decision to provide a link on its Web site to the propaganda video of his execution and to publish a photo of his severed head being held aloft. He would have been horrified that his last, terrible moments were made so public.

As his father, Judea Pearl, recounted in an eloquent op-ed piece for The New York Times, his son had sent him an e-mail from Pakistan two months before his abduction saying, "It looks pretty dicey from here—at least your papers don't run front-page photos of the corpses of journalists." Judea Pearl then wrote: "To preserve the dignity of our champions, we should remove all terrorist-produced murder scenes from our Web sites and agree to suppress such scenes in the future."

I respectfully disagree. Daniel Pearl didn't seek martyrdom, but martyrdom found him. The three-and-a-half-minute video shows us the true face of evil, an evil that manifested itself unambiguously last September 11.

Over and over, Pearl is forced to talk about his Jewish heritage while the screen is splashed with scenes of Palestinian suffering. He also talks about the alleged sins of the United States in supporting Israel. He seems relaxed, as though he expects to be released in return for his play-acting. Then, after a quick fadeout, we see Pearl's apparently dead body lying on a floor as someone hacks off his head with a large knife. Finally, a hand holds up Pearl's head, and the anti-Israel propaganda continues to roll.

We turn away from such evil at our peril. As Washington Post columnist Richard Cohen wrote in response to Judea Pearl's essay, "You will sense the presence of the enemy—an unseen but keenly felt evil. You will appreciate the nature of this war and the enormous cultural gap that leads to the production of a video that sickens us and yet thrills others."

I had an inadvertent hand in all this. I learned the video was on the Web in

late May, when I read a news article about FBI attempts to force a Web site to remove it. It took me fewer than five minutes of searching to find it. Horrified by what I'd seen, I e-mailed the link to a few colleagues, including my former boss, Peter Kadzis, the editor of the Phoenix. He, in turn, passed it along to the publisher, Stephen Mindich—who decided, along with Kadzis, to put the link on the Phoenix's Web site. "This is the single most gruesome, horrible, despicable, and horrifying thing I've ever seen," Mindich wrote in an online note headlined "Thoughts on Political Pornography," which accompanied the link. A week later, the Phoenix upped the ante by publishing two small black-and-white photos from the video on its editorial page—one of Pearl talking, the other of his severed head.

My first reaction was that Mindich and Kadzis had made the wrong decision. Yet I slowly changed my mind and wrote about it in a long essay for the Phoenix. I concluded that the reason for publishing the photographs—to witness the evil with which we must contend—outweighed the reasons for not publishing.

Perhaps the most nonsensical argu-

ment I encountered was that the Phoenix's actions had caused pain to Daniel Pearl's family. For example, the Poynter Institute's Bob Steele wrote in an online commentary, "Any journalistic purpose in publishing the photos of his death is considerably outweighed by the emotional harm to Pearl's widow and family. At the least, publishing these photos is insensitive and disrespectful. It may be cruel." Yet there are few businesses less sensitive to family considerations than the media. News is often about bad things happening to good people, and families frequently object to the way loved ones are portrayed. Just ask any photographer who's been assigned to cover the funeral of a teenager who died while drinking behind the wheel. Steele—and he was hardly alone—argued for a consideration that we journalists routinely deny to others, and I suspect it was because Pearl was a fellow journalist.

Nor was there anything unusually grotesque about the images when seen in the context of other horrifying news photos, some of them Pulitzer Prize-winners. From the Holocaust to the

Vietnam War to the body of a dead American soldier being dragged through the streets of Mogadishu, news photographers have shown us death and destruction in the rawest form imaginable. The fact that the Daniel Pearl video was produced by terrorists rather than journalists is a mere detail. After all, it depicts what happened, which is the most elemental definition of news.

Keep in mind, too, the video was already available, on a Web site that publishes gross-out photos of accidents, autopsies and the like for the viewing pleasure of its perverse audience. The Phoenix did not so much make the video available as it put it in its proper context.

Nearly 60 years ago a Dutch-Jewish dwarf named Alexander Katan was murdered at the Nazi concentration camp of Mauthausen, in Austria, so that a camp physician could display his skeleton. Not much is known about Katan—in part, according to United States Holocaust Memorial Museum historian Patricia Heberer, because his family has wanted as little attention

drawn to him and his fate as possible, even going so far as to request that a photo of him stripped naked be removed from Web sites and exhibition halls. A European Web site shows photos of Katan in prison garb and of his skeleton; but family sensitivities prevent us from fully experiencing this unimaginable crime.

I don't blame the Katans. But there are times when the importance of bearing witness to evil overrides personal considerations. Alexander Katan belongs to the ages. He belongs to us, if we're capable of understanding what he's trying to tell us.

So does Daniel Pearl. ■

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## The Minefield of Language in Middle East Coverage

Journalists rarely have the time or space to navigate through the war of words.

By Beverly Wall

In an April 2002 interview with Alicia Mundy in Editor & Publisher, Thomas L. Friedman, a columnist with The New York Times, described himself as "disoriented" and "speechless" in terms of how to write about the current situation in the Middle East. "Friedman agreed," according to Mundy, "that the language and nomenclature right now is a minefield, just waiting for errant editors and deadline-deadened reporters."

The emotional and potentially explosive nature of language, to use the minefield metaphor, is an ancient challenge for all writers, and the problems

of choosing words carefully are certainly nothing new for journalists. But the language dilemma is perhaps exacerbated in the current coverage of the Middle East by the polarized intensity of emotion and the extended complexity of the situation. Added to these factors are the new dynamics of global media, in which journalists' words are immediately juxtaposed with dramatic images and an array of "pundits" willing to offer instantaneous spins on events and their coverage.

In Middle East coverage, especially loaded words and problematic phrases are fairly easy to identify. But it can be

extremely difficult to figure out how and when to use them or to avoid them. Are certain areas "occupied" or "in dispute?" Should specific actions be described as "acts of terrorism" or "acts of resistance?" What qualifies as a "protest" or "retaliation," an "incursion" or "invasion?" What constitutes a "massacre?" Who should be labeled a "terrorist" and who a "freedom fighter?" Who are "gunmen," and how are they similar to or different from terrorists or freedom fighters? Who are "separatists" or "rebels?" Are certain people best described as "suicide bombers" or "homicide bombers?"

Such word choices have been extensively debated in the media. Earlier this year, the public focused on the issue of how to refer to Palestinians who use their own bodies as weapons of murder. Should they be called “suicide bombers”—the description the media had used for years—or changed to “homicide bombers?” Fox News and the White House decided to switch to using “homicide bombers.” Fox executives reportedly believed that to use the word suicide “somehow glorifies the person committing the act.”

In a press briefing President Bush’s spokesman, Ari Fleisher, explained the White House shift to using “homicide bomber” this way: “The reason I started to use that term is because it’s a more accurate description. These are not suicide bombings. These are not people who just kill themselves. These are people who deliberately go to murder others, with no regard to the values of their own life. These are murderers. The President has said that in the Rose Garden, and I think that it’s just a more accurate description of what these people are doing. It’s not suicide; it’s murder.” Bush heightened this distinction when he said that the bombers were “not martyrs” but “murderers.”

There was not, however, a rush to conversion by other news organiza-

tions. At CNN, for example, spokeswoman Christa Robinson contended that the term “homicide bomber” indicates only that “you have killed other people—like putting a bomb in a trash can which kills people—but it doesn’t reflect that you also killed yourself. We feel that ‘suicide bomber’ is much more descriptive and accurate.” Supporters on each side of such word choices have emphasized that their concern is for accuracy and clear description. But media critics and talk-show pundits have been quick to charge bias either way: The use of “suicide bomber” is said to indicate a pro-Palestinian sympathy; “homicide bomber” is said to show a slant towards Israel.

While an individual speaker or writer might not be consciously or deliberately intending to use slanted language, the “accuracy” of such phrases is embedded in their rhetorical context. In their role as interpreters, listeners and readers instinctively ask the classic questions of rhetoric: Who is saying what to whom? On what occasion? In what manner? For what purpose? And with what attitude?

As constructs of the English language, “suicide bomber” and “homicide bomber” are awkward since they each involve Latin-derived nouns used as adjectives and an ambiguous short-

hand that captures only part of a complex reality. If we put the two terms together, and give extended attention to the details of specific cases, then we might at least approach some sense of a full and fair treatment of the story. For example, a reporter might begin by referring simply to “bombers” and clarify in the details that they took their own lives in the process of killing others. The shorthand is lost, but something of greater value might be gained.

Because journalists seldom have enough time or space for this kind of treatment, this vision sadly remains only an ideal. It should serve, however, as a constant reminder of how journalists must strive harder to navigate the minefield of language. ■

*Beverly Wall is an associate professor and director of the Allan K. Smith Center for Writing and Rhetoric at Trinity College in Hartford, Connecticut. She is founder of the Intercollegiate E-Democracy Project and has been a commentator on C-SPAN’s “Washington Journal,” Reuters, BBC Radio London, and National Public Radio’s “The Connection.”*

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## Do Words and Pictures From the Middle East Matter?

A journalist from the region argues that U.S. policy is not affected by the way news is reported.

By Rami G. Khouri

**A**s an Arab and an American who has worked for U.S. and Middle Eastern media in the Middle East for most of my 33-year career, I feel that there is a clear pro-Israeli bias in the American mass media as a whole, with some exceptions. But I also believe that this media bias has no particular

impact on either U.S. foreign policy or conditions in the Middle East.

On both professional and moral grounds, I’d like the bias to be corrected. More accurate and comprehensive coverage by journalists helps to promote more constructive and satisfying relations between the peoples of

the United States and the Middle East. But better, more balanced coverage of Middle East events would have no impact on political trends and policy decisions, since I believe that the forces that define this policy are not directly related to or affected by the media.

I find the pro-Israeli bias in U.S.

media reflected in several ways, though it is the overall biased context that defines most news reporting and commentary that I will discuss. During the past two years, this context begins with the following presumption: Security in Israel should be the primary goal of any peacemaking process. Thus, all forms of legitimate (or illegitimate) Palestinian resistance to occupation must cease before progress can be made on achieving a permanent peace accord between Israelis and Palestinians. As a consequence of how this story is framed, we witness bizarre episodes in the story's coverage, such as an otherwise competent CNN chief foreign correspondent interviewing the Palestinian leader in his Ramallah office, which is surrounded and being shelled by Israeli tanks, and the correspondent asks Yasser Arafat if he is willing and able to stop the violence against Israel.

A more apt context would be the mutual and simultaneous goal of security for both Israel and the Palestinians and recognized statehood for Palestine. In coverage of current events, this would require seeing the Israeli occupation and attacks against Palestinians, and Palestinian attacks against Israelis, as two dimensions of a single conflict.

Yet, because of the current policy perspective, presumption of Palestinian culpability and Israeli innocence permeates and defines most of the U.S. coverage. What this means is that Israeli violence is either ignored or depicted broadly as legitimate because it is a means of self-defense. At the same time, Palestinian violence against Israel is depicted as illegitimate because it is seen as a root cause of a conflict that reduces the chances for a negotiated peace. Of course, there are exceptions to this general practice, with some in the U.S. media offering a balanced view of events. Some American journalists even report news, at times, in a manner that appears more sympathetic

to the Palestinians than the Israelis.

Interestingly, the broad pro-Israeli tilt of the U.S. media is found virtually nowhere else in the world. This suggests that U.S. press coverage of the Middle East is the anomaly in a world that otherwise takes a more balanced view of the rights and the misdeeds of both Israelis and Palestinians.

The reasons for this pro-Israeli tilt in the U.S. media are multiple, complex and debatable, and cannot be treated in the limited space I have for this discussion. Instead, I'd like to explain why I feel that the U.S. media's broad pro-Israeli bias has little impact on U.S.

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**... better, more balanced coverage of Middle East events would have no impact on political trends and policy decisions, since I believe that the forces that define this policy are not directly related to or affected by the media.**

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policy or conditions in the Middle East. The main reason is that American voters' perceptions of events in the Middle East do not determine how they vote in congressional or presidential elections. The exception is some Jewish Americans who do vote on this issue when they feel that Israel is threatened. However, at such a time, virtually all candidates routinely express strong support for Israel. Otherwise, even Jewish Americans tend to vote primarily on the basis of domestic issues and ideology, not on the basis of U.S. policy in the Middle East.

Suppose, for the sake of argument, that the American mass media were broadly pro-Palestinian in their reporting, analysis and comments, and that a majority of Americans felt more sympathetic to Palestinians than to Israelis. What would be the consequence? None, I suggest, because Americans' widespread sympathies for Palestinians would not translate into voting for candidates who share such views, and thus would not result in changed American government policies.

Americans who feel strongly about Middle Eastern issues do so because of some personal connection, whether it is religious, ethnic, professional or ideological. Their views will not be swayed, either, by media coverage; their firmly held views are formed by factors much stronger than media imagery. Others might be swayed by such media coverage; they will become sympathetic to Palestinians when they see images of their children shot by Israeli soldiers and sympathetic to Israelis when they see images of civilians killed by terror bombings.

By and large, such sentiments are politically irrelevant. The perceptions and sympathies of this large segment of Americans are almost totally detached from the forces of policymaking in Washington, D.C. This is not

dissimilar from opposition to child labor in Asia, for example, when sympathies don't get translated into significant political action (voting, donating to parties or candidates, or lobbying), and thus have no impact on U.S. foreign policy. This disjunction between perceptions formed by media coverage and action in the political arena makes media bias an important professional issue, but not a political one. ■

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# Nieman Notes

Compiled by Lois Fiore

## Celebrating a Journalist's Life

Richard Harwood's family donates his books to the Kovach Library.

By Madeleine Blais

At the final dinner for the Nieman class of 2002, a ceremony was held to honor the memory of Richard Harwood, Nieman Fellow class of 1956, whose family donated his library to Lippmann House after his death more than a year ago. The 223 books that make up the Harwood collection will be incorporated into the Bill Kovach Library.

The evening featured guest speakers who worked with Harwood over the years: Michael Getler, Washington Post ombudsman; David Maraniss, Washington Post national news reporter, and me. We shared with the outgoing class of Nieman Fellows stories that, we hoped, described the man who had such a lasting and profound effect on our lives as journalists.

I first met Harwood, as we always called him, in the mid-70's when he ran *The (Trenton) Times*, a sleepy newspaper in an even sleepier state capital. The paper had just been purchased by The Washington Post Company in a brash act of post-Watergate colonialism for the express purpose of taking on *The New York Times* in its own backyard. This was not going to be easy. There was a famous sign on a local bridge: "What Trenton makes, the world takes." We soon got to joking that the city motto should be "Dare to be complacent."

The man sent by the Post to shake things up was a broad-shouldered ex-Marine, who smoked, cussed and drank. He also thought deeply and read broadly. These two habits of mind resulted in a disconcerting depth which

we considered simply more evidence of his ornery nature. Just when you thought you had him pegged, he threw a curve ball, and the gruff, grizzled editor out of central casting would start quoting Toynbee or Gibbon.

Harwood's office had a plant in one corner that no one ever watered, at least not formally. Instead, he and his visitors took to dumping the dregs from their incessant cups of coffee into the soil and, miraculously, this combination of neglect and outright plant abuse produced a sturdy green growth that could not have been more robust.

During my job interview, I told Harwood about a story I had done in which someone had given me such a great quote that I remembered thinking to myself, even as I jotted it down, "Keep talking, kid, you're a five dollar raise."

Harwood's reaction: "If you really believe in five dollar raises, we might be able to afford you." And he continued, "What we're looking for here are some hard-charging dicks. I just hope we don't have to settle for too many hard charging..." An outburst of gentlemanly restraint conspired to leave the sentence uncompleted.

To us baby reporters Harwood had been born intimidating. We had no idea about the "challenges" (to use the kind of pussy-footing, phony euphemism he would have surely deplored) he faced during his early years in Nebraska: His one sibling, a sister, died as a teenager; his mother committed suicide; his preacher father took to drink and farmed his son out with relatives in

another state.

In his life, Harwood became a soldier, a husband, and a newsman. He was saved first by the Marines, then sustained by the love of a good woman, Bea, and their four children, Helen, John (Nieman Fellow, class of 1990), Richard and David. He started out as a newsman in Nashville, worked for the *Louisville Times*, and eventually joined *The Washington Post*, where he worked for many years, including as ombudsman. One of the speakers at the Nieman dinner, Michael Getler, claimed that Harwood's genius as a critic of the press was that he never told his readers what to think so much as what to think about.

Harwood embraced one other formal institution in his later years, the classroom, which came as no surprise to those of us who knew him in Trenton. As much as he served as our editor, he was also like those really great teachers who are larger than life, terrifying and nurturing in equal parts.

I could go on and on about the lessons I learned as a reporter in Trenton. But the bottom line is that Harwood did a lot of us a big favor when we needed one: He believed in us before we believed in ourselves.

I, among a host of others, will be forever grateful. ■

*Madeleine Blais, Nieman Fellow 1986, is a journalism professor at the University of Massachusetts and author of three books.*

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*Between May 21 and June 3, a delegation of 2002 Nieman Fellows and staff led by Bob Giles traveled to Thailand and Cambodia. With in-country arrangements made by Kavi Chongkittavorn (NF 2002), the group engaged in discussions with government officials, journalists and Nieman Fellows in both countries, and made visits to several historic sites, such as Cambodia's eight-centuries-old temple city, Angkor Wat. Especially difficult and disturbing was a visit to a former schoolhouse in Phnom Penh that had been used by Pol Pot's regime for holding, interrogating and executing prisoners (see photo below). Here is a small sample of photos from the trip.*



## —1950—

**William German** retired as editor emeritus of the San Francisco Chronicle in May. German joined the Chronicle as a copy boy in 1940 and went on to work as a reporter and copy editor, as copy desk chief, and in various senior management positions. He took over as editor in 1993 and began writing a column on the media when he became editor emeritus in 2000. In an article marking German's exit from the paper, Chronicle staff writer Carl Nolte noted that, by the time he retired, German "had held every single editorial job on the paper except full-time staff photographer."

### Dwight Sargent's Favorite Eleven Misspellings

Dwight Sargent, NF '51, had a varied and impressive career: He was editorial page editor of The New York Herald-Tribune and The Boston Herald American, president of the University of Missouri's Freedom of Information Foundation, and Nieman Curator from 1964 to 1973. Less well known, perhaps, is that Sargent also assembled a list of 11 words journalists typically misspell. The list did develop a degree of notoriety, however: When Sargent died in April, it was mentioned in an obituary and also at his memorial service. Here, courtesy of his daughter Janet, is the list Sargent created and carried with him:

vilify  
rarefy  
harass  
embarrass  
recommmendation  
accommodation  
inoculate  
innocuous  
supersede  
imbroglio  
desiccate ■

## —1955—

**Selig S. Harrison's** sixth book on Asian affairs, "Korean Endgame: A Strategy for Reunification and U.S. Disengagement," was published by the Princeton University Press in May. Former President Jimmy Carter called it "the best analysis I have seen of the difficult policy choices facing the United States in Korea."

Harrison has visited North Korea seven times and met the late Kim Il Sung twice. "Korean Endgame" combines his personal experiences in Korea—as Washington Post bureau chief in Northeast Asia and as a senior associate of the Carnegie Endowment for International Peace for 22 years—with policy-focused scholarly analysis.

Harrison is a senior scholar of the Woodrow Wilson International Center for Scholars and director of the Asia Program at the Center for International Policy in Washington. His op-ed articles appear in The Washington Post, The New York Times, the International Herald Tribune, and the Los Angeles Times. He contributes frequently to Le Monde Diplomatique, Hankyoreh Shinmun of Seoul, and other foreign publications.

## —1960—

**John F. "Jack" Burby** died of cancer at his home in Avila Beach, California, near San Luis Obispo, on July 6. He was 77.

Burby, who served in the South Pacific as an Army pilot during World War II, began his journalism career in Hawaii as a reporter for United Press. Following his Nieman Fellowship, Burby spent several years as press secretary to California Governor Edmund G. (Pat) Brown; he also worked for the Department of Transportation and wrote a book titled "The Great American Motion Sickness; or, Why You Can't Get There From Here." After stints as an editor at the National Journal and as president of Potomac Policy Inc., a federal policy consulting firm, Burby joined the Los Angeles Times as an editorial writer in 1978. He was the

Times' deputy editorial page editor through much of the 1980's, and returned to editorial writing full time at the paper in 1989. Burby worked briefly as an editorial writer for The New York Times in the early 1990's before retiring.

One of Burby's sons, David, is working to establish an award or fellowship in his father's name. "The John F. Burby Award for Ethical Excellence in Journalism is its current form," he says. "Ethics in journalism is something my father had great concerns about. He loved his profession. He was very ethical, the most ethical person I knew."

Burby's wife, Lois Luke, died in 1994. He is survived by his longtime companion, Joyce Palaia, and his children, Karen Norman, Meg Burby, David Burby and Timothy Burby, and three grandchildren.

Contributions in Burby's name can be made to the following organizations: the redwood conservation organization Sempervirens Fund, P.O. Drawer BE, Los Altos, Calif. 94023; the Hospice Partners of the Central Coast, 277 South St., Suite R, San Luis Obispo, Calif. 93401, and Friends of the River, 915 20th St., Sacramento, Calif. 95814.

## —1963—

**Dan Berger** writes, "I retired as editorial writer and author of the terse comments, 'Bergerisms,' just before my 35th anniversary at The Sun, staying put in Baltimore and enjoying life."

Berger's e-mail address is: danberger21210@msn.com.

## —1970—

**Larry L. King** is writing his 15th book, "In Search of Willie Morris," a biography of his late editor at Harper's magazine from 1964-71. It was Morris who suggested that King apply for a Nieman Fellowship and who aggressively promoted his candidacy. King also is the author of seven produced stage plays, including "The Best Little Whorehouse in Texas" and "The Night Hank Williams Died."

—1971—

**Michael J. Kirkhorn** died on October 10, 2001 at his home in La Crosse, Wisconsin. He was 64. Kirkhorn was a journalist and editor at the Gundersen-Lutheran Medical Journal, a publication of the La Crosse-based Gundersen-Lutheran Medical Foundation. During his career, he worked as a feature writer at the Milwaukee Journal and Chicago Tribune and taught at New York University, the University of Kentucky, and Gonzaga University, where he was head of the communication arts department. In 1995, Kirkhorn married Lee-Ellen Copstead in Spokane, Washington.

Kirkhorn's death notice closed with these words: "Michael was a beloved husband to Lee-Ellen. He was a gentle and spirited father to his daughter, Amelia, and sons Erik and Nick. To his sister, Mary, he was a dynamic presence. To his niece, Erin, he was inspirational and creative.... He was a great friend to many.... Throughout his long career, Michael's writing was characterized by grace, sensitivity and passion for the special needs of those least able to speak for themselves."

—1984—

**Nina Bernstein** will spend the fall at the American Academy in Berlin. Bernstein, who writes for The New York Times, won one of the academy's Holtzbrinck Fellowships in Journalism to work on her project, "Women and Children First: Social Welfare in a Time of Globalization."

**Jane Daugherty**, who started working at the Palm Beach (Florida) Post in May as deputy news editor, was promoted to news editor in August. In her new position, Daugherty oversees a staff of 32 news and copy editors who edit and design the four editions of the Post, a Cox newspaper. She replaces Daryl Kannberg, who is now assistant managing editor of The (Cleveland) Plain Dealer.

Palm Beach Post managing editor John Bartosek said in his announcement, "We are thrilled to have a jour-

## Georges Fellowship Applications are Invited For 2003 Award

The Christopher J. Georges Fellowship program, administered by the Nieman Foundation, is inviting applications for the 2003 award. A \$10,000 fellowship will be awarded to a young journalist for an independent reporting project on an issue of enduring social value that documents the human impact of public policy. Deadline for entries is November 1, 2002.

Applications must include a written proposal, a biographical essay, and a selection of published work.

Chris Georges, an honors graduate of Harvard College and a Wall Street Journal reporter, died in 1998 at age 33. He worked in the Journal's Washington bureau covering politics, economics and bud-

get issues. Family, friends and colleagues established the fellowship to memorialize his commitment to in-depth reporting on issues of enduring social value and stories that document the human impact of public policy.

The 2002 winner of the Christopher J. Georges Fellowship is Annsy Shin, a senior writer on the Washington City Paper. She is reporting on the impact of the release of prisoners now finishing their mandatory sentences.

For information about the fellowship, contact the Nieman Foundation, One Francis Avenue, Cambridge, Massachusetts 02138 or visit the Nieman Web site at [www.nieman.harvard.edu](http://www.nieman.harvard.edu). ■

—1985—

**Lucinda Fleeson** is the new curator of the Hubert Humphrey Fellows journalism program at the University of Maryland, College Park. Fleeson takes over for **William J. Eaton**, NF '63, who led the program for eight years.

Each fall, 13 or 14 international journalists and public affairs specialists come to College Park for professional development and graduate-level coursework. Since its inception in 1993, the program has welcomed 117 Humphrey Fellows from 73 countries. As curator of the program, which is administered by the university's Philip Merrill College of Journalism, Fleeson will conduct a weekly seminar on press issues in a democratic society.

—1987—

**Marites Vitug** is the editor in chief of Newsbreak, a Philippine current affairs fortnightly that is just over a year old. The magazine's emphasis on in-

nalist of Jane's experience and talent to replace Daryl. Her award-winning career, with major stints in at The Miami Herald and the Detroit Free Press and News, brings a perspective and depth to the news editor's job that will be a major asset to the Post."

Daugherty is a three-time winner of the Robert F. Kennedy Memorial Journalism Award for coverage of the disadvantaged. She has two children, a 21-year-old son and 15-year-old daughter, and lives in Lake Worth, Florida.

**Alice Kao** reports that, after a stint in Taiwanese politics, she's pondering a return to journalism.

"After the Nieman year, I went back to my previous newspaper and worked another 10 years," Kao writes. "By chance, I then went into elective politics and served two terms as the MP of different political parties until failing to be reelected last December. I am now totally vacant. Going back to journalism is the next and final destination for me, I believe."

vestigative reporting and in-depth analysis was rewarded in the 2002 Jaime V. Ongpin Awards for Excellence in Journalism, when Miriam Grace Go's story on corruption in Makati City, the Philippines' premier financial district, won first prize in the investigative reporting category.

"I'm enjoying my work, and it's been a vast learning experience for me: mixing/blending the demands of commerce and tough editorial standards," Vitug writes. "...The magazine's staff is mostly female—although this is not deliberate. It so happens that the two associate editors, the four (out of five) staff writers, and the editor (me) are all women. It's a great team and I couldn't swing this without our cohesive group."

Nieman Fellows who would like to have an item appear in Nieman Notes—a job change, the publication of a book, an unusual adventure—please e-mail the information to Lois Fiore at [lfiore@harvard.edu](mailto:lfiore@harvard.edu).

—1988—

**Dale Maharidge** writes: "Serendipity is a reporter's best friend, I remember Bill Dietrich saying during our Nieman year, but I never figured it would play into our lives. One of my duties at Stanford University (a posi-

## 2002 Nieman Conference on Narrative Journalism

From November 8-10, reporters, editors, photographers, producers and authors will gather in Cambridge.

On Veterans Day weekend, journalists will gather in Cambridge to learn about the craft of narrative journalism. At this upcoming Nieman Conference on Narrative Journalism, Nieman Fellows Gerald Boyd ('81), Madeleine Blais ('86), Rick Bragg ('93) and Peter Turnley ('01) will join Errol Morris, Jon Franklin, Anne Fadiman, Malcolm Gladwell, The Kitchen Sisters, E.O. Wilson, Katherine Boo, Lisa Pollak, and many other accomplished writers and speakers as they share their experiences and insights about journalistic storytelling, reporting for narrative, editing, ethics and career-building.

During the conference, panels and individual speakers will address a variety of topics. They'll consider how to move narrative journalism beyond the mawkish and sensational so it can be used to arouse and sustain audience curi-

osity about the complex issues of our time. They'll discuss ways of forging effective partnerships among reporters, editors and producers. And they'll strategize with participants to figure out ways to marshal resources for substantial works such as The New York Times' series about racial relations in America and William Langewiesche's three-part serial in The Atlantic Monthly, "American Ground: Unbuilding the World Trade Center."

We hope you will join us at the Hyatt Regency Cambridge. It's always an invigorating weekend, as the many articles, tapes and videos, inspired by our conference speakers and sent to us after the conference attest.

For more information, please visit our Web site at [www.nieman.harvard.edu/narrative](http://www.nieman.harvard.edu/narrative). ■

tion I recently left) was admissions for our graduate journalism program. One of our applicants was Heidi Dietrich, the daughter of Bill and Holly, who was age eight during our Nieman year. I recused myself, but other committee members (including Bill Woo, NF '67), agreed she was an extremely promising and talented young journalist. So I had the pleasure of being Heidi's professor this past year, though in addition to the delights of serendipity, I suddenly felt very old. At graduation, Bill and Holly and I had a mini-reunion. Bill recently rejoined The Seattle Times as a Sunday Magazine writer, and is prolifically writing books. I'm returning to Columbia University as a visiting professor early next year and am writing a book about racial hate and 'McCarthyism' in post 9/11 America."

—1991—

**Nanise Fifita** brings us up to date on her work at Tonga Broadcasting Commission, where she is the editor for Radio & Television Tonga News: "My duties involve overseeing all daily news packages for radio and TV, providing editorial advice, and ensuring that all stories are within the proper journalism standards," Fifita writes. "I am also heavily involved in news gathering, interviewing, writing, scripting and presentation. I also produce news-oriented radio and TV programs.

"Since we have a small team of about 10 reporters for both radio and TV news, we tend to cover general news. However, I am very much involved in covering issues concerning health, environment, politics and finance. I am also a member of a pool of Pacific Islands journalists who participate in 'Training the Trainers' programs, coordinated by the Pacific Islands News Association [PINA]. Under those programs, I have been involved in conducting training for reporters in Tonga, Vanuatu and the Solomon Islands on how to report and cover sensitive issues such as HIV/AIDS and STD's."

In July, Fifita received a Pacific Ocean Sciences Fellowship from the SeaWeb organization, in conjunction with PINA,

to study the destruction of marine and terrestrial environments in the Pacific Ocean.

—1992—

**Francisco Santos**, the former editor of the Bogotá daily *El Tiempo*, was elected vice president of Colombia and took office in August. During the campaign, *El Tiempo*—which is owned by Santos’s family—withheld its endorsement due to his presence in the race.

Since the election, Santos has regularly articulated the priorities of the government of President Alvaro Uribe for U.S. audiences. He has stressed the need for quick results in controlling Colombia’s lengthy civil war, appealed for increased assistance from Washington, and warned of a probable increase in terrorist activity in the Uribe administration’s first year.

After Uribe was criticized for his understated response to inauguration-day attacks by the Revolutionary Armed Forces of Colombia, or FARC, Santos defended the president’s response. In a *Houston Chronicle* article, Santos

was quoted as saying that allowing the attacks to halt the inauguration “only would have amplified what the guerrillas did.” He continued, “We’re not ignoring it. We know it was a horrendous act.... But we would rather not talk about it and show results.”

Santos was driven to Spain by FARC threats two years ago and, in 1990, was kidnapped by associates of Pablo Escobar.

—1994—

**Greg Brock** has been promoted to Washington news editor of *The New York Times*. Brock, who had been the foreign day editor in the New York office, has returned to Washington, where he spent nine years with *The Washington Post*, during which time he was a Nieman Fellow. The *Times* recently awarded Brock a Publisher’s Award for his work on the foreign desk, citing him: “For being, every day, the vital link between the foreign desk and its far-flung correspondents. As the desk’s day editor, Greg dispenses assignments and guidance around the

world, starting to work closely with the correspondents soon after dawn. He shapes the daily report with verve, wit and superb organizational skills.”

Among his new duties in Washington, Brock oversees the diplomatic and foreign-related coverage and remains a key link to the foreign desk in New York. After joining the *Times* in 1995, he became deputy political editor on the national desk during the 1996 presidential and congressional elections. Brock also worked in the Washington bureau as the weekend editor for a few months in 1997.

—1996—

**Tom Ashbrook’s** radio program, “Special Coverage,” was selected by *The Associated Press* as the top news/talk program in the Boston market for 2001. Ashbrook hosts the program, which was created by WBUR in Boston, after the September 11 attacks. The program’s format eventually expanded, and “Special Coverage” was renamed “On Point” in February. ■

## David Riesman: He Told Us to Question All the ‘Common Wisdom’

By Lindsay Miller

David Riesman died this year on May 10. He had a great impact on my Nieman year and probably that of many other fellows as well.

As he had for many Nieman classes, he led the first seminar of our year. It was September 1987, still hot outside. We sat for the first time in that circle of wooden black armchairs. I still hadn’t sorted out my classmates’ names. But I knew David Riesman was a famous professor of sociology and the author of “The Lonely Crowd.” And I think all of us felt we were part of a very privileged small crowd.

Then he started to speak. He

said he wanted to talk about single-sex education and why he thought it was the best choice for some people—especially black high school boys and women in general. I felt a chill go around the circle. These were not politically correct views, certainly not in 1987. What he was saying was contrary to common wisdom. We knew that. Where was this guy going? Nobody said much.

Then, as I remember, Will Sutton spoke up. He said he’d gone to an all-black high school in New Orleans, and it had been a good thing for him. I said there’d been some

advantages to my all-women classes at Wellesley. Then everyone jumped in, and we were off and running for a year’s worth of lively conversations.

At the end of the hour, Professor Riesman said the best thing we could do with our Nieman year would be to question all the “common wisdom” we’d brought to Harvard with us. By then, he didn’t have to say it. He had showed us. ■

*Lindsay Miller is a producer for “The Connection” on National Public Radio. Her e-mail address is [lmiller@theconnection.org](mailto:lmiller@theconnection.org).*

## Additional Nieman Fellow Named to Class of 2003

*Former Canadian publisher, Russell Mills, will plan for a new journalism institute.*

**Russell Mills**, the former publisher of The Ottawa Citizen, has been added to this year's Nieman class. Mills, who worked for the Citizen for 31 years and served as its publisher for 16, was fired in June, after the Citizen published a story reporting that Prime Minister Jean Chrétien had repeatedly lied to Parliament and an editorial calling for Chrétien's resignation. The day before he was fired, Mills received an honorary degree from Ottawa's Carleton University in recognition of his outstanding service to journalism.

Mills plans to spend his Nieman year developing ideas for a university-based journalism institute in Canada and studying the changing nature of democratic systems of government and the news media's

role in creating the conditions for innovative public policy and healthy societies. "I am extremely excited about the opportunity to spend a year at Harvard and draw upon its rich resources to develop a plan that will be of ongoing benefit to journalism and the functioning of government in Canada," he said.

The Ottawa Citizen is owned by CanWest Global Communications Corporation, a company that owns multiple Canadian print and broadcast outlets and whose owners are staunch supporters of Chrétien and the Liberal Party. CanWest executives said Mills was fired for failing to seek corporate approval of the story and editorial, and many observers took Mills's ouster as a troubling sign of corporate influence

encroaching on press freedom. In the ensuing uproar, reporters at the Citizen withheld their bylines, Ottawa city council members condemned the firing, and some members of Parliament called for an investigation into the relationship between CanWest and the Chrétien administration.

According to Nieman Curator Bob Giles, bringing Mills to Harvard will contribute to the development of a new program that could have benefits on both sides of the border. Giles praised Mills as "a journalist of uncommon experience and vision whose contributions to independent journalism in Canada and whose deep interest in international journalistic issues will add an important dimension to the Nieman class this year." ■

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## Knight Foundation Initiative Supports Latin American Nieman Fellows

The John S. and James L. Knight Foundation has announced a four-year initiative to support and improve press freedoms and professional journalism training in Latin America. The \$3.58 million initiative includes a grant of \$420,000 to the Nieman Foundation that will support two Latin American Nieman Fellowships for each of the next three years.

Journalist Ellen Hume, in a report for The Knight Foundation, notes that there is a need for professional training in Latin American journalism to encourage and ensure the place of a free press in the democracies of the region. The

Latin America initiative proposed in response to this need revolves around the creation of the Knight Center for Journalism in the Americas at the University of Texas at Austin and supports regional, Internet-based traveling and specialized training as well as the two Nieman Fellowships. **Rosental Alves**, a 1988 Nieman Fellow, was appointed director of the new center.

This year, the Nieman supported by the grant are **Dina Fernández** and **Ana (Alex) Leglise**. Fernández, of Guatemala City, is Sunday magazine editor/columnist for Prensa Libre and in-

tends to explore the role of the press in emerging democracies and free-market economies. Leglise, of Mexico City, is technology reporter for Detras de la Noticia and is interested in examining how advances in technology influence trends in economic and social institutions.

"The Nieman experience has enabled individual journalists to make a significant contribution to building a tradition of an independent press in many Latin American countries," said Curator Bob Giles. "...The Knight grant assures that this important part of our program will continue." ■

# Nieman Curator James C. Thomson, Jr., 1931-2002

*James Thomson, Curator of the Nieman Foundation from 1972-1984, died on August 11 of cardiac arrest after a brief illness. He was 70. What follows are words contributed by Niemans who knew him well and would like others to know about his work as Curator and its impact on their lives and on the Nieman program. At the end of their reflections is information about how to share your remembrances with the Nieman community through our Web site.*

## From Jane Daugherty

He was frequently erudite, occasionally outrageous, and always eager to throw open Harvard's sometimes heavy doors to "his Niemans."

James Thomson, Nieman Foundation Curator from 1972-84, was an enigma. More scholar than journalist, more China-hand than newsroom insider, he was an early and articulate opponent of the Vietnam War who advised both Presidents Kennedy and Johnson.

Besides his late wife, Diana, who both enthralled and confounded him, his first love and great appreciation was of China. His early advocacy of reestablishing ties with the People's Republic of China predated the shift in U.S. policy by more than a decade.

Despite numerous academic publications, perhaps his single most influential piece of writing was published in 1968 in *The Atlantic Monthly*, "How Could Vietnam Happen?" It won the Overseas Press Club Award and influenced a generation of reporters and policy analysts.

When Jim returned to Harvard four years later, he began 12 years of curatorship that gradually brought more women and minorities into what had been the most prestigious good-old-boys' club in American journalism—and he did it not without detractors.



Jim's last class of Niemans, of which I was a member, was the first female-majority among the U.S. Niemans—among our dozen we counted seven women, the first Native American Nieman, and two African Americans. And not a weak sister (or brother) among us.

I'll always remember Jim, with his wry smile and twinkling eyes, as an honorable man in often-dishonorable times. He was willing to be a courtly maverick, an advocate, even a polite annoyance when necessary, whether it came to criticizing U.S. policy or to getting "his Niemans" access to the classes and professors who could enlarge or enrich our Harvard experiences.

At Jim's going-away reception in 1984, I overheard our class somewhat disparagingly called "Jim's last hurrah." If we were, it was an honor, Mr. Thomson.

*Jane Daugherty, a 1984 Nieman Fellow, is news editor of The Palm Beach (Florida) Post.*

## From David Lamb

Jim Thomson had a twinkle of mischief in his eye. It was as though he knew something the rest of us didn't. He'd give you that nod and half-smile and puff on his cigar. But I was never quite sure what he was thinking. What was he holding back? What I do know, though, is that beneath that reserve was a man of warmth, intellect and wry humor. He was a man I trusted, admired, respected, liked immensely. If I were giving a dinner party, he is the man I'd seat next to the guest of honor.

I had the good fortune to be a Nieman Fellow when Jim's tenure as Curator was already well established. My wife was given the same wonderful opportunities at Harvard as was I. Jim gets credit for that. We had our own "home" at One Francis Avenue. Jim gets credit for that, too. We were treated as adults, not cub reporters whose time needed to be micro-managed by some misplaced managing editor. Again, thanks, Jim.

In 1980-81, we referred to ourselves

as “the Greatest Nieman Class Ever.” If I may be bold enough to speak for my class, I’d like to say, “We owe you one, Jim. You were the Greatest Nieman Curator Ever.” We’ll miss the hell out of you. We thank you for giving us so much—not the least of which was one of the best years of our professional lives—and for fulfilling the only thing you asked in return: You made us more thoughtful journalists.

*David Lamb, a 1981 Nieman Fellow, is a reporter for the Los Angeles Times.*

### From Alex Jones

At the time I applied for a Nieman fellowship, I was editor of a newspaper in a rural county in Tennessee with a circulation of 15,000.

Jim Thomson didn’t care that my professional origins were not blue chip. Under his gentle prodding, the selection committee put me on the list and my life changed forever. As with most things, he followed his own counsel, which was almost certain not to reflect the orthodoxy of the moment.

Jim’s delight in sailing against the wind was evident in his sardonic humor and his determination to tell his colleagues in the Kennedy and Johnson administrations that they were way wrong on Vietnam and China.

When the Nieman Foundation was placed in his hands, he used that same clear and humane vision to make the Nieman experience—which then mostly excluded women, minorities, foreigners, spouses, and even broadcasters—into a model of inclusion. This was a radical change, but I came to believe that the prospect of disapproval only made something more appealing to Jim.

The tone Jim set was one of generous respectfulness.

I sometimes thought that he approached each year’s Nieman class like a particularly desirable group of weekend houseguests, who should be treated with affection and whose quirks and whims should, if possible, be humored. I recall feeling that he had created the most civilized environment

I had ever experienced, with high seriousness and robust fun intermingled with a joyous delight in learning.

With his cigars and bemused asides, Jim seemed to take pleasure in being with us, knowing us, and following us in the years after our time at Lippmann House.

His generosity of spirit had to keep company with a streak of stubborn contrariness that could be self-destructive. But this bloody-mindedness was also his glory.

When his wife, Diana, died 18 months ago, it was the end of a profound love affair. They were welded to each other, and Jim had nursed her patiently and devotedly for much of the past decade. Without her companionship, he seemed to lose some of his sense of purpose.

In the past year, he declined—in part because of his own behavior. And while it was frustrating to those of us who loved him and were trying to save him from his own excesses, it was also oddly inspiring to see him defy us all and do as he pleased.

He was determined to live what remained of his life in his own way, and was obstreperously, wonderfully independent to the end.

*Alex Jones, a 1982 Nieman Fellow, is director of The Joan Sorenstein Center on the Press, Politics and Public Policy at Harvard University.*

### From Ned Cline

Jim Thomson may not have been the inventor of equality and diversity among journalists, but he deserves the title of New England distributor. He was a trailblazer for journalists like me.

Nieman Fellowships have long been considered among the most prestigious honors in the field, deservedly so. But until Thomson joined the team, vast majority of the awards had been made to white males with long pedigrees from large newspapers. Thomson changed that. He did it because it was overdue and was the right thing to do.

That’s just the way he was. He wanted everyone, regardless of gender, race or social status, to have an equal chance.

I shall be forever grateful for what he did. Without him, odds are I would never have made the short list or been chosen. My class of 12 American journalists set new Nieman records for diversity: four women, an African American, and several white guys like me from small newspapers.

My background was growing up in a small Southern village, holder of a degree from a small town college and experiences only on newspapers with little-known names. Thomson wanted this kind of diversity to supplement the big city newspaper folks because he felt it would make all of us better. I think he was right.

Journalism and the Nieman fellowship program are better because of Jim Thomson. I don’t think I ever told him how much he meant to me. I wish I had.

*Ned Cline, a 1974 Nieman Fellow, is a former managing editor of the Greensboro (N.C.) News & Record and is author of two biographies on North Carolina philanthropists. ■*

A memorial service was held at Harvard’s Memorial Church on September 12th, followed by a reception at Lippmann House. That same day, Boston University honored Thomson with a symposium.

The Thomson family invites memorial gifts to be sent to the Nieman Foundation in support of international Nieman Fellowships. Checks should be made out to the Nieman Foundation International Fellowships Fund and sent to Lippmann House, One Francis Avenue, Cambridge, Mass. 02138.

Niemans are invited to send a remembrance of Jim Thomson for inclusion on the Web page:

E-mail to [niemanweb@harvard.edu](mailto:niemanweb@harvard.edu).

Niemans may read remembrances at [www.nieman.harvard.edu](http://www.nieman.harvard.edu). Log in to the “Alumni Network” and choose “Remembering Jim Thomson.”