

Journalistic Coverage of Environmental Health Issues in the Age of the Internet and Newer Media

Remarks by Jerome Aumente

*Distinguished Professor Emeritus and Special Counselor the Dean,
School of Communication and Information,
Rutgers, the State University of New Jersey, USA*

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CONTACT INFORMATION:

Jerome Aumente, Distinguished Professor Emeritus,
Long Mountain, 617 Seven Oaks Drive, Bentonville, Virginia 22610 USA
phone: 540-635-6395
e-mail: amente@rutgers.edu
jeromeaumente@att.net

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By Jerome Aumente

The media landscape is undergoing dramatic changes because of the explosive growth of the Internet and newer media technologies globally. This transformation—compare it to the impact of a giant asteroid shattering and upending traditional media—has important implications for journalists and those providing environmental and health information to the general public. The scene is crowded with both new opportunities and troublesome problems that must be addressed.

My concerns here will deal with better ways journalists can report environmental health issues from air and water pollution to misuse of agricultural chemicals and pesticides that threaten the planet's well being. By more effectively using the newer media and the Internet, news and information reaching the general public can be greatly enhanced in many areas of health, medical and environmental journalism.

These new media resources added to the communication tool box can help both the journalists and those who provide environmental health information to the public through government and nongovernmental organizations, corporations, environmental health advocacy groups or the universities. The newer media also widen the opportunities for journalists and members of the scientific and environmental health sectors to cooperate and collaborate—or at a minimum, better understand each other's differences.

In our workshop discussions and in follow-up exchanges and correspondence we ought to address the following:

- How can we preserve (or replace) the best in quality print and broadcast media's traditional investigative, enterprise and watchdog journalism in environmental health reporting that is seriously threatened by the sharp economic decline of our

best newspapers, magazines, television and radio stations struggling with steep budget cuts, massive staff layoffs or even bankruptcy?

- What new skills are needed by both journalists and those providing health and environmental information so that the true potential of multimedia platforms in the Internet and newer digital media era are fully exploited?
- What are the ethical concerns that arise in a digital environment in which news goes global instantly on the Internet from thousands of sources, many credible and many others questionable, amateurish or prepared without professional standards or sufficient editing and oversight? How can misinformation be corrected more rapidly through fact-checking websites, for example.

THE INTERNET EXPLOSION

Over a billion people worldwide now have access to the Internet. The spread of broadband and wireless communication has given both unprecedented mobility and a torrential waterfall of data where before, by comparison, a garden hose trickled out news and information. Billions of cell phones are in operation, fueled by the recent major growth of “smart phones”, in effect pocket computers, that give instant access to news and information, voice, text, video, sound, photos and sophisticated communication. Add to this the billions of desktop and laptop computers in homes and offices, making computers a digital appliance as commonplace as the kitchen toaster.

The entire way people access and receive news and information is being transformed. Multimedia, digital platforms provide many dimensions—text, video, sound, photos and graphics—all bundled together in bright colors and efficiently distributed by the Internet or downloaded to storage devices such as flash drives, CDs, DVDs, MP3 players or delivered in Podcasts.

What should be of special interest to those of us concerned with more effective journalistic coverage of environmental and health journalism is the dramatic shift from

centrally controlled news media configurations in which the traditional print and broadcast news media were the controlling, omniscient gate-keepers to a decentralized communication architecture in the hands of millions on the Internet.

People have become instant publishers on the Internet with Weblogs, Blogs, or more finely crafted websites and instant messaging. A whole host of new social networking formats have arisen from “My Space” and “Facebook” to “You Tube” or “Twitter”. E-mail and text messaging are becoming the preferred method of communication over slower postal mail (much to the consternation of postal systems such as the US Postal Office which is losing billions of dollars in revenue and planning layoffs of over 30,000 employees).

The growth of “citizen journalism” is rapidly gaining ground where individuals and special interest groups are electronically publishing their work on the Internet. Some foundations such as the Knight Foundation are supporting dozens of local experiments in “people reporting”, especially as traditional news media find themselves in serious economic difficulty and cut back their operations.

The enhanced photographic and video recording capacities of many cell phones has given the world millions of new journalistic eyes and ears and the ability to instantly record and transmit to global audiences by phone and Internet scenes of great importance—public protests and street demonstrations that totalitarian governments would prefer to hide, or human rights abuses that might otherwise escape notice. The ability to record environmental health violations, as well as environmental successes, deserves much more attention in this growing world of the Internet and citizen journalism.

The younger generations raised in a computer screen environment and increasingly rejecting traditional print and broadcast media are a prime target for environmental health specialists who wish to engage in a dialogue. The newer media and the Internet encourage dialogue and conversation, promoting an interactive communication structure in which the recipients of news select their information from a vast ocean of data, doing

so in their own time frame, and commenting upon it themselves. News as lecture is being replaced by news as conversation with “many to many” configurations replacing the “one to many” design of the traditional (or legacy) mass media.

THE RISE AND FALL OF MASS MEDIA FORMATS

In the United States, traditional print news media including newspapers and magazines are in steep decline. Circulation is down drastically, advertising is in double digit losses and such mainstays as classified advertising which once accounted for up to a third of newspaper revenues have evaporated. Online national and regional websites have eaten away at the classified revenues with real estate sales, auto sales, employment services, and personal ads all migrating to the web.

The disastrous global economic downturn has added to the perfect storm of economic losses to the print field—striking at the very time the technological changes brought about by the Internet were manifested in newspapers cutting back staffs (as many as 30,000 US editorial staff losing their jobs in the last quarter of 2008 and the first quarter of 2009). The three major national news networks in the United States have seen their audience share decline from 90 percent in the heady, first decades of television to less than 40 percent today, with a steady decline still underway. Newspapers find younger people increasingly turning away as potential readers.

All of this erosion of the mainstream media is particularly troubling to those concerned with bringing quality news, enterprise and investigative reporting to the field of environmental health and medical reporting. Where will the experienced environmental reporters and editors come from? How will investigative reporting and watchdog journalism survive in the face of extraordinary budget cuts?

TRANSITIONS TO THE DIGITAL REPORTING WORLD

The transition to newer media and the Internet is extremely painful to those who have devoted their lives to non-digital formats, but in the longer run the new opportunities are great. “The New York Times” has about one million purchasers of its daily paper product

but over 20 million readers online around the world. NBC has countered its loss of traditional viewers of its national nightly news by aggressively developing a mix of new digital pathways—MSNBC for its online service and cable television; CNBC for its financial online and cable channel, and video-streaming on the Internet of many of NBC’s re-broadcasted programs.

The Internet has also greatly turbo-charged the traditional investigative reporting of the print media. A good example was cited in the Summer 2009 issue of “Nieman Report” by Blake Morrison and Brad Heath who described their special series in “USA Today”, the largest daily newspaper in America with a circulation of two million.

In 2008, they published “ The Smokestack Effect: Toxic Air and America’s Schools”.

Using data from the U.S. Environmental Protection Agency (EPA) on toxic release inventory, their investigative articles, using the Internet, gave readers customized, personalized articles about problems in their neighborhoods. They worked with researchers from the University of Massachusetts to create micro data for EPA Computer Simulation to create risk screening environmental indicators. Their air dispersion model compared the dangers of one chemical to another in any square kilometer of the United States.

The reporters simultaneously gathered data on 128,000 public, private and parochial schools, noting that children are ten times more susceptible than adults to the danger of toxic chemicals. They identified a school in Ohio which had been closed because its location a block from a plastics plant gave it toxic air levels 50 times higher than acceptable safe levels. Using this as a base line, they discovered 435 schools in the USA with toxic levels higher than the school closed in Ohio.

The 435 schools were included in an online database that let readers look up any school in the country on the Internet. The database drew 1.7 million page views in nine months, letting parents, school and municipal officials know if their school was endangered.

In addition, the reporters partnered with Johns Hopkins University's Bloomberg School of Public Health and the University of Maryland to monitor air quality outside 100 schools. Reporters and editors were trained to use pumps and air filters and scientists developed the protocol for analyzing samples and interpret results. The results showed two thirds of the 100 schools had dangerous chemical air levels. Hundreds of local news media organizations, print and broadcast, did local reports of the "USA Today" findings with the added local school danger information. One advocacy group tracked 8,000 letters to Congress because of the stories. School districts nationwide called in regulators to examine the air quality dangers. In 2009, the EPA launched a multimillion dollar initiative to monitor air quality outside 62 schools in 22 states and cited the "USA Today" newspaper and online database series as the incentive for acting. (The newspaper series can be accessed on the Internet at: <http://content.usatoday.com/news/nation/environment/smokestack/index> and the project database at: www.smokestack.usatoday.com).

NEW ALTERNATIVES TO INVESTIGATIVE JOURNALISM

There is serious concern that with the economic weakening of the established quality newspapers, magazine and broadcasting the expensive, drawn out investigative reporting of environmental health issues will shrink or even disappear. New models are being experimented with as foundations become involved. One good example is "Pro Publica" (www.ProPublica.org) founded by Paul Steiger, the respected former managing editor of "The Wall Street Journal" who received \$10 million from philanthropists to create the investigative reporting organization.

Teams of investigative reporters and editors undertake in-depth reporting projects and publish their results on the Internet, and also in print or broadcast news media they partner with. A good example of their work in environmental health concerns is contained in a report by Abraham Lustgarten in the Summer 2009 issue of "Nieman Reports" (www.niemanreports.org) entitled " Reporting Time and Resources Reveal a Hidden Source of Pollution". Lustgarten describes his environmental reporting effort:

Finding his former magazine job did not allow sufficient time for investigative reporting, he joined Pro Publica and his work included an investigation of chemical contamination in public drinking water supplies. He had time to develop background in reading water quality analyses, laws and federal standards. He met with various water, health and toxicological officials. A tip from a US Geological Survey hydrologist led him to examine drilling for natural gas and “hydraulic fracturing” with chemicals pumped directly into the ground, possibly endangering the ground water supply.

The process was not regulated by the federal government and EPA could not examine how large amounts of water, sand and chemicals are shot into freshly drilled wells to crack the geological deposits and send natural gas flowing from thousands of feet below, a process used in 9 of 10 wells in the US. New York state regulators could not answer the reporter’s questions of which chemicals are used, what waste is produced, how it is disposed of, and does the process endanger the water supply. Drilling contractors refuse to reveal the chemicals used, so scientists cannot measure their safety. Gas drilling was exempt from the federal clean water and safe drinking water acts. The oil and gas industry claimed the chemicals were used in small amounts, diluted by water and contained in air tight rock formations, and in one million wells drilled there was no contamination. Environmentalists claimed the chemicals were highly toxic and the drilling and waste disposal should be regulated.

The reporter asked why the water act exemption was sought if the chemicals were harmless. Why couldn’t the names of the chemicals be given to scientists for testing? Why did the oil and gas industry get exemptions not given to mining, the auto or agricultural industries? Was it true that “hydraulic fracturing” had never harmed water supplies? He checked spill records and found them not kept carefully in 32 states, but warnings were buried deep in EPA studies. He found better records in Colorado and New Mexico and traveled to the Rockies to talk with ranchers and land owners near drilled gas wells.

He discovered significant incidents in which wells were poisoned, animals died, or people were hospitalized after drinking fluids or breathing chemicals related to the gas drilling transport and disposal of chemical wastes. Federal officials tipped him off to serious contamination of aquifers in Wyoming. He could not prove direct A to B contamination because of the drilling. But he did establish the urgent need for better public policy, testing and oversight as part of the national energy policy. His reporting appeared on the Pro Publica website and was published in “Business Week” magazine and the “Denver Post” newspaper. His reporting can be found as “Buried Secrets: Is Natural Gas Drilling Endangering U.S. Water Supplies?” at: www.ProPublica.org/feature/buried-secrets-is-natural-gas-drilling-endangering-us-water-supplies-113.

THE DIGITAL/INTERNET POTENTIAL IN ENVIRONMENTAL REPORTING

The Digital/Internet world presents environmental health and medical reporters with important tools and new approaches in their work:

- They can conduct interviews globally and trade information and leads with journalistic counterparts worldwide. They can “crowd-source” e-mails to thousands of people to gather up leads and comments.
- With additional training they can do more sophisticated searches, using search engines that give a broad macro-look at entire fields and identify significant relationships more rapidly.
- Journalists from developing countries can tap into digital libraries on a global scale and make up for deficiencies in their national library holdings. Everyone, from both advanced and developing countries can benefit from the vast databases that now exist with better search engines at hand.
- News organizations are becoming more sophisticated in mining social networks for clues on potential stories and trends, or encouraging possible story sources to

contact them. Photos and video of events that might ordinarily be missed by the mainstream media are entering into the public sphere.

- Special websites that allow “whistle blowers” to anonymously post leads and documents can open doors to important story ideas that once were impossible to find.
- Journalists in the environmental health and medical fields can network with like minded journalists through association websites such as the Society of Environmental Journalists (www.sej.org) or Association of Health Care Journalists (www.healthjournalism.org).
- Investigative journalists can be helped by organizations such as Investigative Reporters and Editors (IRE) (www.ire.org) and if they run into trouble turn to the Committee to Protect Journalists (www.cpj.org). A useful compendium of journalism organizations and sources can be found at www.reporter.org compiled by IRE. The Global Investigative Journalism Network: www.globalinvestigativejournalism.org is also worth exploring.
- Environmental journalists ought to consider linking up with universities in journalism and communication studies, in public health, or in economic, public policy and political science departments to engage students and faculty in joint projects. At Boston University the New England Center for Investigative Reporting funded by the Knight Foundation engages students, faculty and professional journalists in investigative projects. Environmental health and medical projects seem ripe for such efforts worldwide via the Internet.
- As shown earlier with the “USA Today” stories, print and broadcast media can use the Internet to greatly expand the databases and information they provide their readers and audiences, drawing them into interactive engagement and providing

personalized micro-news and information on their neighborhoods along with the bigger picture.

- Environmental health and medical reporting can benefit from the multimedia platform in which complex scientific information can be broken down into digestible segments, with video and voice interviews in human terms engaging the audience, and with hyperlinks to more detailed reports, data and graphics. The audience can communicate their thoughts back and sometimes give leads for important follow-up stories.

ETHICAL CONCERNS IN THE NEWER DIGITAL WORLD

The environmental health journalist has dazzling delivery speeds in the newer digital world of the Internet, but the ethical concerns are that much greater. The natural check points in reporting, writing and presenting stories in newspapers or magazines allowed for more layers of careful review—with the reporter, the editor and the copy editor reflectively checking and double checking work for accuracy and clarity. With the Internet, these backstops may increasingly disappear. Newspapers are cutting back on copy editors or even disbanding newsrooms for economic reasons. “Mojos” or mobile reporters, operating at the scene, at home or in their autos may compose and send a text story instantly over the Internet along with photos and video.

It is important for online journalists to be rigorously trained and embrace ethical standards that value caution in what may instantly go out to a global audience. With environmental health reporting, incorrect or sensationally worded facts might trigger panic during a health crisis such as the N1H1 swine flu pandemic, or in the aftermath of a devastating hurricane or tsunami when entire populations are stressed. Massive crowds may incorrectly flee from perceived dangers, make panicky decisions on evacuation, or riot over access to scarce water, food supplies and medicine. In a matter of hours needless death and destruction may result from sensational, inaccurate press reports.

Misinformation is always a problem, but is compounded with the ease of the Internet as a megaphone for anyone, regardless of lack of training or standards, sending out incorrect information, rumor and innuendo into the blogosphere. One advantage with the Internet is the ability to quickly send out corrections. The challenge is to see that there is enough peer and professional pressure to make the corrections in a timely fashion.

In the current debate within the United States for a major overhaul of health insurance, misinformation has been a serious problem with deliberate distortions, often fueled by extremist ideology over the role of government vs. the private sector involvement. Organizations such as the Annenberg Public Policy Center at the University of Pennsylvania offer an antidote to the poisonous misinformation through its service: www.Factcheck.org. In a clear, concise format it sets forth competing claims, dissects and analyzes assertions, and sets the record straight. It also includes complete sources on which it based its conclusions so that you can connect to the hyperlinks for the full picture. We have here a model for the Internet self-correcting errors of reporting. The Wikipedia approach in which many people reviewing, commenting, refining and correcting an item on an open website is another slower but possible approach.

Another ethical concern in this Internet era is the invasion of privacy that can occur when medical records and other personal data are too easily gathered in the aggregate with computer-based approaches. Environmental health and medical journalists can gather thousands, even millions, of reports and files, and sometimes the individual, his or her family and children may be vulnerable to privacy invasion. Policy must be decided at a news organization that addresses how to use CAR (Computer-Assisted Reporting) as a tool, not a weapon intruding on privacy.

Ethical codes and standards must be reviewed periodically at a news organization in order just to keep up with the changing conditions brought about by advances in the technology. For instance, the ease with which anyone can snap a cell phone photo or record video and then instantly put it out on the Internet should put new limits on just how vivid or intrusive images of suffering and death should be used by news

organizations (which increasingly encourage people to send in photos and video from the scene). A hypothetical: the scene of an industrial accident in which highly toxic chemicals are released and poison children at a nearby school might be just one example of many needing restraint rather than instant distribution of photos and videos.

We all live downstream when it comes to news and information flowing toward us from the Internet and we are vulnerable to sources that muddy or poison this water. We need brand names we can trust when it comes to supplying news and information. This means knowing that the source of the news comes from reporters and editors who honor professional standards, and are subject to rebuke and punishment for violating these standards. The sources of the information must be impartial, not from medical and health research communities beholden to pharmaceutical companies for research grants or special “perks”. The reporters and editors must be free of any bias or monetary stake in the information. They should be able to spot “junk science” and explain why it is incorrect. Owners of the news media must stay out of news-making decisions, especially if they have competing financial interests or powerful friends they might wish to ingratiate or curry monetary favors from.

The use of ombudsman and ombudswoman, or public editors, at respected publications such as “The New York Times” or “The Washington Post” represent the people’s interests—encouraging correspondence from readers, investigating the reporting and correcting, prominently and promptly, any errors. The same model could be used for news and information across the entire news media and Internet spectrum.

There is greater attention today to “media literacy”—the idea that everyone in our society should be literate in how the news and entertainment media function, and how informed users can identify good from bad information. Media literacy programs can begin in the lower grades of the school through high school and college. With all of the cross-fire and varied positions on global warming, acceptable levels of air and water pollutions, risks and benefits when the environment is manipulated for industrial or agricultural gain, an

informed, knowledgeable citizenry consuming news and information from the Internet and traditional media is needed desperately.

The scrutiny of good and bad information is greatly helped by publications and websites that provide solid media criticism. In the United States, you might look at “Nieman Reports of Harvard University” (www.niemanreports.org) and the related websites of the Nieman Foundation; Columbia Journalism Review (www.cjr.org) and related sites at Columbia University Graduate School of Journalism; “American Journalism Review” at the University of Maryland School of Journalism (www.ajr.org), and “Quill” Magazine of the Society of Professional Journalists, (www.spj.org). The Poynter Institute (www.poynter.org), The Committee of Concerned Journalists and the media studies reports found at the Pew Center for the Press and the People are other good sources worth searching on the Internet.

Internationally, many press and media organizations provide useful and often compelling information on press performance and safety. Look for instance at the Reporters Without Borders (for Press Freedom) website (www.rsf.org) and its September 2009 report: “The Dangers for Journalists Who Expose Environmental Issues.”

IMPROVING ENVIRONMENTAL HEALTH JOURNALISM THROUGH COOPERATION WITH THE SCIENCE AND HEALTH COMMUNITY

In this increasingly complex world of environmental health and medical journalism, it is the obligation of both traditional news media and the emerging newer media formats of the Internet to provide news and information that is timely, clear, accurate, carefully researched, critically analyzed, free of technical jargon, presented in compelling human terms and accessible to the general population. Emphasize “ news you can use.”

The news media must preserve their role of providing objective, unbiased reports that contribute to public understanding and wiser public policy. They must continue their role as watchdog, ferreting out wrongdoing, while also adhering to the best ethical standards and self-policing of themselves. With this said, there are many ways to bridge the gap

with the scientific and environmental health communities in a spirit of cooperation with the news and information professions.

We saw earlier, the fine articles that resulted from investigative reporters at “USA Today” cooperating with specialists from the universities in the environmental protection and public health sectors to expose dangerously toxic levels of air pollution that endangered school children.

Here are some thoughts on ways to improve contact and understanding between the environmental health journalists and the scientific and public health communities:

- Meetings and symposia that bring together journalists and environmental health experts in a harmonious, non-threatening atmosphere to explore specific concerns and identify mutual problems that must be solved.
- Solidifying such contacts with follow-up programs and exchanges via the Internet and web conferencing. Strive for concrete results.
- Major investigative or enterprise reporting projects that are planned from the outset to include environmental health experts who not only provide background and guidance, but also cooperate in the preparation of articles, commentary or the design of multimedia presentations through the Internet.
- University curriculum development that encourages dual majors in journalism and communications studies with concentration in the health, medical, biological and environmental sciences. Internships and joint theses that value and encourage such crossovers.
- Opportunities for environmental health journalists to observe government, nongovernmental and research operations, and for environmental health specialists to spend time at news media organizations.

- Reach out to young people in the high schools and universities and show them the opportunities available for future professionals who have multimedia journalism skills and a solid grounding in the environmental health sciences. Develop special scholarship and summer study opportunities.
- Pay attention to the emerging cadres of “citizen journalists” and invite in selected candidates for the above initiatives. Open the gates to the newer communication patterns developing around us and innovate.
- Develop environmental health documentation projects for young people, as early as grammar and high school, to use the multimedia tools and the Internet to report on local and regional issues of environmental health. Bring in senior journalists, environmental scientists and college students as mentors.
- In all this, show the public policy and political steps needed to implement sound environmental health actions through better media reporting.
- Utilize the Internet and newer media formats to develop advanced forms of continuing education accessible to environmental health journalists, and programs for those who provide news and information to the news media from the governmental, corporate and nongovernmental sector.

Society is at a major crossroad as it confronts newer media and Internet formats that affect every aspect of how news and information are delivered, and how people access it and incorporate into their lives. Environmental health journalism should be one priority—with tremendous implications for how we will formulate public policy and also make individual decisions affecting ourselves, our loved ones and friends.

Jerome Aumente is Distinguished Professor Emeritus and Special Counselor to the Dean, School of Communication and Information (SC&I), Rutgers, the State University of New Jersey, USA. He was founding chair of the Department of Journalism and Media Studies, and founding director of the Journalism Resources Institute (JRI) which provided programs for 14,000 journalists during his tenure. Both units are in the School of Communication and Information which he also helped design. He has been overseas nearly 200 times since 1989, establishing a Media Center in Warsaw and assisting in creation of a School of Journalism at Jagiellonian University in Krakow; co-directing a program to assist University of Sarajevo, and acting as program evaluator for a journalism initiative with Moscow State University and University of Missouri. Most recently, he has conducted eight programs for journalists from the Middle East, both in the US and in Lebanon and Saudi Arabia. He has conducted journalism programs in Bosnia-Herzegovina, Serbia, Croatia, Macedonia, Montenegro and Kosovo. He gave periodic lectures at eight universities in Spain and was a visiting professor at UCAM in Murcia. His academic work also took him to Central and Latin America, and the Caribbean. Most recently, he has done programs in the Baltics (Lithuania), in Thailand and will be in Hawaii at the East-West Center as a visiting scholar. He has coauthored or written four books, most recently, "From Ink on Paper to the Internet" which won the 2008 Society of Professional Journalists' national award for journalism research. He was a journalist for ten years before joining Rutgers in 1969.

*He can be reached at e-mail: aumente@rutgers.edu or jeromeaumente@att.net.
Telephone: 540-635-6395 in Virginia, USA.*