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CONFLICTS BETWEEN COMMERCIAL AND SCIENTIFIC INTERESTS IN PHARMACEUTICAL ADVERTISING FOR MEDICAL JOURNALS

Alexander C. Tsai

Abstract

In 1992, researchers from the University of California-Los Angeles published a study on the scientific merit and validity of pharmaceutical advertisements in medical journals. Their results led them to conclude, provocatively, that many pharmaceutical advertisements contained deficiencies in areas in which the U.S. Food and Drug Administration had established explicit standards of quality. This article provides a detailed account of third-party reactions to the study following its publication in the *Annals of Internal Medicine*, as well as the implications for those involved, including the authors, editors, and publisher. The increasingly diverging interests between medical journal editors and publishers are also discussed and highlighted by two recent cases of editors' departures from prominent general-interest medical journals.

INTRODUCTION

In 1992 Michael Wilkes, a Robert Wood Johnson Clinical Scholar at the University of California-Los Angeles, along with his colleagues Bruce Doblin and Martin Shapiro, published a study on the quality, accuracy, and usefulness of pharmaceutical advertisements in medical journals.(1) Robert and Suzanne Fletcher, as Co-Editors of the *Annals of Internal Medicine*, accepted the paper for publication. The Fletchers invited a commentary from David Kessler, Commissioner of the U.S. Food and Drug Administration, in which he highlighted the study's implications for health care quality and safety. "Misleading advertisements can result in significant adverse consequences," he wrote, including increased health care costs and "needless injury or even death." (2) After the paper was published nearly everyone, it seems, got into hot water: the authors, the editors, and even the publisher.

'A HOT POTATO'

For many years, opinionated readers had been writing letters of complaint about the quality of pharmaceutical advertisements circulated in U.S.-based medical journals(3-7) as well as those in journals beyond the U.S. Food and Drug Administration's (FDA) reach.(8-14) By the late 1980s and early 1990s, pharmaceutical companies' marketing strategies were coming under increasing scrutiny. Federal regulatory scrutiny intensified under Richard P. Kusserow, who had served as Inspector General of the U.S. Department of Health and Human Services since 1981.(15) In August 1991 the Office of the Inspector General (OIG)

CORRESPONDENCE TO: A C Tsai, Medical Student, Dual Degree Program in Medicine and Health Services Research, Department of Epidemiology and Biostatistics, Case Western Reserve University School of Medicine, 10900 Euclid Avenue, Cleveland, Ohio 44106-4945, USA; act2@cwru.edu.

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released a report, based on a small sample of interviews, describing pharmaceutical companies' marketing strategies and physicians' perspectives on these efforts.(16) Shortly thereafter, from September 25 to November 29, 1991 the OIG conducted a national survey of nearly 1,000 Medicare-billing physicians to determine the prevalence of such promotional activities and to inquire about the value of items distributed by pharmaceutical companies. (17) As part of these monitoring efforts the OIG, under the direction of Regional Inspector General Mark R. Yessian in the Boston Regional Office, hired Michael Wilkes of the University of California-Los Angeles (UCLA) to study the scientific merit and validity of prescription drug advertisements in medical journals for an eight-month period beginning in August 1990.(18)

Wilkes was then a Robert Wood Johnson Clinical Scholar at UCLA, and he began planning his research investigation with a fellow Clinical Scholar, Bruce Doblin, and his supervisor, Martin Shapiro. At the time, U.S. pharmaceutical companies were spending some \$442 million to place their advertisements in medical journals,(19) presumably in order to influence physicians' prescribing behavior.(20-26) To study these advertisements, the UCLA researchers planned to obtain a sample of advertisements from the pages of specialty and general medical journals and subject them to a systematic form of "peer review," in order to assess the advertisements' quality, accuracy, and usefulness. They enlisted the aid of reviewers covering a broad range of expertise by asking the editors of three journals and the directors of seven university medical center drug information programs to recommend a number of experienced physicians and clinical pharmacists trained in specific fields.

The results of the study were provocative: a sizeable proportion of the advertisements were found to lack appropriate balance, to be misleading about efficacy, or to have little or no educational value. "Because our findings of deficiencies in the advertisements were so extensive," Shapiro recalls, "we went through the data with a fine-toothed comb. We re-examined all of the surveys and re-analyzed the data many times, so that we could be sure that what we had found was correct."

After the study was completed, Wilkes and his colleagues began the process of trying to publish their results in a peer-reviewed medical journal. Their manuscript was rejected at the *Journal of the American Medical Association (JAMA)* and then the *New England Journal of Medicine*. On the third try, they sent the manuscript to the *Annals of Internal Medicine*, owned by the American College of Physicians (ACP), where Robert and Suzanne Fletcher had assumed the editorship in July 1990.(27) They and the associate editors thought the study addressed an important question with sound methods and so accepted the manuscript for publication after some suggested revisions. The Fletchers wrote an editorial to accompany the Wilkes et al. article and solicited an additional commentary from David Kessler, the FDA Commissioner.

The Fletchers were not unaware of the controversy that the UCLA study might generate. The findings from this undertaking were potentially threatening to what had previously been described as a "marriage of convenience"(28) between medical journals and the pharmaceutical industry. However, when the paper was discussed at the weekly editors' conference, as the Fletchers recall, "There was really no mention of any political consequences. The editors were completely uninterested in any potential business aspects of the decision." Adds Robert Fletcher, "We knew the paper would be a hot potato but didn't think it was the journal's business to shy away from important issues if we thought it was well done." On May 8, 1992 the Fletchers wrote to Kessler thanking him for his commentary and also provided him with an advance copy of their own editorial so that he and his staff would "be prepared in case the popular media decides to give the issue some attention."(29)

‘LIKELY TO MAKE SOME OF US UNCOMFORTABLE’

The UCLA study, “Pharmaceutical Advertisements in Leading Medical Journals: Experts’ Assessments,” was published in the June 1, 1992 issue of the *Annals*.⁽¹⁾ In the same issue, Kessler commented on the study and highlighted the full implications of this research for health care quality and safety. “Misleading advertisements can result in significant adverse consequences,” he wrote, including increased health care costs and “needless injury or even death.”⁽²⁾ A notable omission was a contrasting viewpoint from the pharmaceutical industry. The Fletchers wrote in their accompanying editorial (perhaps too adumbratively), “The results of the study by Wilkes and colleagues are likely to make some of us uncomfortable. They imply criticism of the pharmaceutical industry, the FDA, and journal editors, who together are responsible for the quality of advertisements.”⁽³⁰⁾

There were two phases of response to the paper’s publication (“kind of like the early and late phases of an inflammatory response,” quips Robert Fletcher). The first phase of response occurred at the time of the publication. Responding to the media “was bedlam,” Wilkes recalls, and he and Shapiro took turns answering telephone requests for interviews. Leading newspapers covered the UCLA study, generating a substantial amount of negative publicity for the pharmaceutical industry.⁽³¹⁻³⁵⁾ The Pharmaceutical Manufacturers Association (PMA; now the Pharmaceutical Research and Manufacturers of America, PhRMA) responded in a statement: “It is unfair to review 109 unidentified advertisements and claim that (most) of them potentially do not comply with FDA standards, thus impugning the reputation of an entire industry.”⁽³²⁾

The Fletchers also fielded their share of telephone calls, not only from outside reporters but also from within the ACP. Suzanne Fletcher admits, “We had not given the Board of Regents any advance knowledge about the UCLA study. They were receiving calls from reporters who had received embargoed press releases, and after the article was published, they were receiving calls from industry. Some of the regents were, understandably, upset at being caught so completely off guard about an article published in their own journal.” At the time, there existed no standing policy for the editors to notify the ACP staff leadership of potentially controversial forthcoming articles. Yet the ACP, as the *Annals’* publisher, itself endured heavy criticism for publishing the UCLA study with two editorials and, more importantly, for not soliciting a commentary from the pharmaceutical industry. John Ball, who as the ACP Executive Vice President held the chief staff officer position in the organization, met with PMA representatives shortly after the paper was published. They were to discuss unrelated matters such as ACP educational initiatives and general trends in medicine and health care, but, as Ball wryly notes, “Of course the Wilkes article became the new first item on the agenda. Unprepared as we were, we got raked over the coals.”

Working closely with the FDA to develop its findings and conclusions, the OIG had released its own report based on the same data, “Prescription Drug Advertisements in Medical Journals.”⁽³⁶⁾ The OIG also suggested that the FDA could obtain congressional approval for strengthened authority to enforce advertising regulations. In response to the OIG report, on July 21, 1992 thirteen U.S. Senators co-signed a letter to Kessler to “urge that the FDA act quickly and decisively to ensure that prescription drug advertisements in medical and pharmaceutical journals meet the regulatory standards for quality and integrity as established by the agency.”⁽³⁷⁾ The letter continued, “If the study’s findings can be generalized and applied to the other pharmaceutical promotion ads, the impact on the public health could be significant.”

The second phase of response occurred two months later, when pharmaceutical advertising landed back in the public eye.⁽³⁸⁻⁴²⁾ The UCLA researchers had been prohibited from

identifying the aberrant advertisements as a condition of their funding from the federal government,(31) but government records relating to their study were accessible to anyone pursuant to the U.S. Freedom of Information Act (FOIA).(43) Shortly after the UCLA study was published Joshua Sharfstein, a student at Harvard Medical School, and Sidney Wolfe of Public Citizen's Health Research Group, a nonprofit research-based health activist organization, filed a FOIA request to obtain the completed survey forms used in the UCLA study. These forms did not identify the reviewers (as their identities had been masked by encrypted identifiers) but did identify the advertisements under review and the comments that reviewers had written regarding the quality of these advertisements. For example, one anonymous reviewer wrote of Wyeth-Ayerst's Phenergan® (promethazine hydrochloride): "One of the worst ads I've ever seen. It promotes the use of a dangerous medicine for trivial indications."(44)

In a sharply worded letter to U.S. Senator Edward Kennedy (D-Massachusetts), Sharfstein and Wolfe identified by name each of the offending advertisements and concluded that the original study's results were accurate in "impugning the reputation of an entire industry," contrary to earlier complaints voiced by the PMA.(32) Of all the companies involved, SmithKline Beecham received their "gold medal for poor advertising" -- all 12 of its 12 reviewed advertisements were judged to be deficient.(44) The Public Citizen researchers warned, "This is not a case of just one or two small companies crossing the line -- this is potentially dangerous misinformation on an extremely wide scale."(44) In an interview with the *Los Angeles Times*, Shapiro maintained that the study's main conclusions could be appreciated without naming individual advertisements or manufacturers, and Wilkes urged "extreme caution in making any generalizations about an individual drug company, an individual journal, or an individual class of drugs based on this data."(39) The Fletchers concurred, "We wouldn't have published the company-specific data because the small-sample scientific inference on individual advertisements and companies would have been extremely weak."

'THEY SHOULD HAVE GIVEN US SPACE'

Reflecting on the controversy generated by the UCLA study, George Lundberg, current editor of *Medscape General Medicine* and past editor of *JAMA*, commented, "An editor of a high profile medical journal maintains trust relationships with a wide range of publics whose viewpoints are often diametrically opposed to each other. One way for the journal editor to retain trust and maintain these relationships is to provide balanced commentary from disparate sources." When the UCLA study was published, the Fletchers invited an editorial from the FDA but did not extend a similar invitation to the pharmaceutical industry. Choosing to publish a study that was highly critical of the industry, along with two editorials that generally supported the study's conclusions, was an editorial decision viewed by some observers as being less than objective. Jeffrey Trehwitt, spokesperson for PhRMA, points out, "We certainly didn't dispute that the *Annals* had the freedom to publish an article critical of pharmaceutical advertising in medical journals. However, for the sake of balance they should have given us space to respond. We would have appreciated the opportunity to provide readers with the industry's perspective."

The Fletchers "fast-tracked" editorial correspondence from John Beary, PMA Senior Vice President for Science and Technology; Jack Angel, Executive Director of the Coalition for Healthcare Communications ("dedicated to assure [sic] the free exchange of scientific information without undue government and institutional interference"(45)); and Milton Liebman, President of the Association of Medical Publications, Inc. ("dedicated to helping publishers better serve readers and advertisers"(46)). Their letters were published in the *Annals* four months later, in the October 1, 1992 issue.(47-49) A contention common to all

three letters was that the study's reviewers had no regulatory experience. Beary pointed out that the FDA's own data demonstrated a low rate of violations (139 "notice of violation" letters out of 1800 reviews), adding, "Obviously, Wilkes' reviewers were not using the FDA's criteria. The FDA's numbers contradict Wilkes' thesis that regulatory deficiencies are the rule rather than the exception." (47) Another contention common to all three letters was the study's premise that advertisements should meet the same standards as refereed journal articles, a point that the Fletchers had raised in their editorial. Wilkes and his colleagues refuted each of these points, and responded to other criticisms, in their reply. (50)

'EXTREME ANTI-INDUSTRY BIAS'

Wilkes was invited to discuss his research at a meeting entitled, "Scientific Exchange, Promotion, and Regulation: The Battle for the Mind," held at the McGraw-Hill Conference Center in New York City on October 21, 1992. (51) Given that the meeting was sponsored by the Coalition for Healthcare Communications, Wilkes found the prospect of presenting his paper to a potentially unreceptive audience unappealing and quite intimidating. At first Wilkes declined to participate but later relented on the advice of Shapiro, who also served as his faculty advisor in the Clinical Scholars Program. Shapiro accompanied him to the afternoon session, which Wilkes characterizes as "the second most horrible public event I've ever attended." The two-and-a-half hour session, attended by approximately 200-250 people, was moderated by William Castagnoli, Vice Chairman of Medicus Intercon, and also featured three discussants: Paul Rubin, Professor of Economics at Emory University; Jacob Jacoby, Merchants Council Professor of Consumer Behavior at the Stern School of Business, New York University; and David Schmittlein, Professor of Marketing at the Wharton School, University of Pennsylvania. Jack Angel, Executive Director of the sponsoring organization, says, "There were many in publishing and advertising who felt not only that the UCLA study had an extreme anti-industry bias but also that it was lacking in research fundamentals. Frankly, the audience asked several questions that might even have supported Wilkes' views. But their responses simply were not adequate, and, not surprisingly, the panel of communications research experts agreed that the study was flawed."

Jacoby's assessment of the UCLA study's methodological flaws, entitled "Misleading Research on the Subject of Misleading Advertising," cited numerous deficiencies: the authors, as medical researchers, were unqualified to conduct behavioral science research; the study design was not double-blinded; the participating reviewers were not representative of the universe of potential readers; and the study's findings of misleading advertising relied on the reviewers' "opinions, judgments and impressions" rather than on a direct assessment of real-world reading conditions and consumer understanding. He submitted the paper to *JAMA*, but it was not accepted for publication. One reviewer indicated that many of the criticisms "are unfair or irrelevant and may detract from the debate about the process Dr. Wilkes used and the study's conclusions." (52) Similarly, another reviewer suggested that Jacoby "tone down the inflammatory nature of his response" and also noted that "nit picking on relatively minor points only detracts from the overall argument." (52) Jacoby's paper was eventually published in the *Food and Drug Law Journal* in 1994. (53) Rubin's assessment of the UCLA study, also published in the same issue of the *Food and Drug Law Journal*, included arguments similar to those voiced in the editorial correspondence. (54) He also cited specific instances in which the study's statistical complexity generated confusion in reporting on its results.

Theodore Dunn, Technical Consulting Director for the Advertising Research Foundation ("profitable marketing through effective research" (55)), undertook a critical evaluation of the UCLA study in response to a request from the Association of National Advertisers, Inc.

(“dedicated to helping its members -- marketers and advertisers -- build their businesses by building their brands”(56)) and the American Association of Advertising Agencies, the advertising industry’s trade association. More important than the study’s 13 prominent methodological faults, concluded Dunn in his February 18, 1993 report, was that “it leaves the impression, not at all addressed by the study, that practicing physicians will be led by pharmaceutical advertising to incorrectly prescribe.”(57) Finally, J. Howard Beales and William MacLeod received funding support from Pfizer, Inc. to reanalyze the original data (which they obtained through a FOIA request) and published their results in the *Food and Drug Law Journal* in 1995.(58)

‘A HORRIBLE TIME IN MY LIFE’

Wilkes anticipated some degree of negative reaction to the study’s results but was unprepared, however, for the vituperative nature of the response. During the weeks following the publication, he received numerous telephone calls, letters, and faxes from angry individuals who felt his work had unfairly targeted the pharmaceutical and advertising industries and exposed them to an unjustified and overblown negative public reaction. The Coalition for Healthcare Communications meeting in October had been similarly contentious.

As a journalist, researcher, and physician, Wilkes had been trained to approach debate and disagreement in a scholarly and disinterested fashion and was unfamiliar with these terms of engagement. He considers this period “a horrible time in my life. I was just finishing my fellowship and starting my career as a health services researcher. The industry’s reaction was ugly, occupied a great deal of my time, and diverted my attention from research and other matters.”

‘WE WERE NO LONGER THE DARLINGS’

The Fletchers, unlike the rest of the editorial staff, each wore two hats: they served as co-Editors and as Senior Vice Presidents for Publishing. As such, they were responsible for not only editorial content but also decisions on the business side. After the UCLA study was published, they were unclear as to whether there would be any adverse reactions with budgetary consequences: “We expected there might be problems in the short term. But we also felt that, eventually, there would be improvements and that this would not hurt the *Annals* in the long term.” Suzanne Fletcher adds, “The early phase response showed every evidence of coming and going. At first, the ACP’s advertising folks were coming to us and saying, ‘This is really going to hurt the *Annals*.’ After a few weeks, things began to quiet down. The criticism seemed to escalate again after the Public Citizen report.”

There was a marked downturn in advertising revenues as several large pharmaceutical companies pulled their advertising from the *Annals*.(27) The downturn did not appear to be related to trends in pricing or readership. At the start of 1992 the base annual rate for a black-and-white full-page advertisement was \$4,340.(59) By 1995 the rate had declined, on an inflation-adjusted basis, to \$4,190.(60) Average circulation had increased from 94,663 to 95,262.(59;60) Some observers inferred that the *Annals* was being financially chastised for its complicity in publishing the UCLA study.(27;61) Indeed, the timing of the change in advertising volume suggested a possible causal link to the publication, reminiscent of carrot-and-stick strategies employed by automobile manufacturers(62) and tobacco companies.(63-67) In a later *Canadian Medical Association Journal* editorial, Shapiro wrote, “Although it could never be proved that a drop in advertising was a deliberate attempt to punish the journal, this was widely believed to be the case.”(61) Secular trends made it difficult for observers to draw causal inferences, as an erosion of pharmaceutical advertising support was widespread among medical journals at the time and not limited solely to the

Annals.(68-71) However, statistical analysis buttressed the retaliation hypothesis: the *Annals* experienced a steeper decline in advertising volume after June 1992 compared to several of its peers.(72) The advertising downturn cost the ACP approximately \$1 million to \$1.5 million.(73)

The Fletchers found their jobs increasingly difficult: “After the Wilkes thing happened, it would be safe to say that we were no longer the darlings of the ACP. One needs to build up a certain amount of goodwill in order to work effectively within an organization, and we used up a great deal of it. So it was tougher to get our points across.” In December 1993 the Fletchers resigned the editorship to accept appointments at Harvard Medical School.(27) In an interview with the *New York Times*, Suzanne Fletcher identified the lost advertising revenue as one factor in her decision to resign.(73)

Of note, editorial independence was never challenged. The ACP Board of Regents explicitly reaffirmed the editors’ freedom to publish whatever was judged appropriate for the *Annals*. (27) Suzanne Fletcher concurs: “There is a ‘journalistic wish’ to remake the story of our leaving the *Annals* into a story about editorial freedom. But in the interest of truth telling, that really was never the case.” However, Robert Fletcher muses, “The editorial freedom issue is typically framed in terms of a question like, ‘Did somebody tell you not to publish something?’ A slightly different question might be something more like, ‘Did somebody create an environment that made you think twice about publishing something?’ Perhaps a more pertinent issue is not blatant interference by owners but the more subtle pressures that can be brought to bear within an organization -- especially if the editors are not buffered from the day-to-day supervision by officers with separate political and economic agendas.” The issue of lost pharmaceutical advertising revenue only complicated things further. “The pharmaceutical industry showed us that the advertising dollar could be a two-edged sword, a carrot *or* a stick.” Robert Fletcher concludes, “If you ever wondered whether they play hardball, that was a pretty good demonstration that they do.”

AFTERWORD

‘AN ENORMOUS NEW MARKET FORCE’

Medical journals have increasingly become major sources of revenue (“cash cows”(73)) for medical societies. Medical journals and their parent societies rely to a substantial degree on advertising sales for financial support.(28;73-80) Generally speaking, while the missions of journals and medical societies have not changed, financial trends have shaped the ways in which they are managed. Suzanne Fletcher remarked in an interview with the *New York Times*, “The journals’ success has created an enormous new market force that is beginning to dominate the way medical societies are run. Those societies were kind of frumpy and esoteric, and they are no longer that way. They are big businesses, and editors who traditionally worked with small staffs and had time to read a lot now go to meetings about new ventures.”(73)

Most journals do not disclose detailed financial statements, but some estimates suggest that advertising revenues account for a sizeable proportion of total revenues for some medical societies.(78;79) Recognizing potential conflicts in the relationships between medical societies and their journals, Edmund Pellegrino and Arnold Relman suggested a set of guidelines that would help medical societies strengthen their professional and ethical foundations.(81) Medical journal editors have written about some of the ways in which advertising can be carried out responsibly,(30;76;77;82;83) given the hard financial reality that journals must either accept advertisements or raise subscription fees.(28;75) Wilkes certainly acknowledges this reality. The *Western Journal of Medicine*, for which he has served as editor since 1998, refused pharmaceutical advertisements as a matter of policy.

(84) However, the *Western Journal* recently published its last scheduled issue, and its survival is currently under negotiation.(85;86)

The recent high-profile departures of editors from two major medical journals highlight the diverging interests of journal editors and publishers. In January 1999 George Lundberg was fired, after 17 distinguished years of service, from the editorship of *JAMA*. The AMA Executive Vice President claimed that he had “lost confidence and trust” in Lundberg’s ability to maintain the integrity of *JAMA*,⁽⁸⁷⁾ but the “sacking”^(88;89) was widely perceived to be the result of Lundberg’s advancing for publication ahead of schedule an article with charged political implications.⁽⁹⁰⁻⁹²⁾ Editorial freedom was at issue; in a later interview with *Newsday*, commenting on the pressures he endured during his 17 years at *JAMA*, Lundberg said, “I don’t think a day went by in considering what to publish that I and my editorial staff didn’t have to worry about offending AMA members, AMA politicians, and the AMA Washington office by what we published.”⁽⁹³⁾ After Lundberg’s dismissal, the AMA established a seven-member Journal Oversight Committee to protect the editor from the staff leadership and to allay concerns about *JAMA*’s continued editorial independence.^(94;95) The Fletchers agree that this arrangement is the “best possible solution to the kinds of problems that might arise between editors and owners.”

Six months later, in July 1999 the owners of the *New England Journal*, the Massachusetts Medical Society, did not renew Jerome Kassirer’s contract for the editorship. A statement released by both parties cited “honest differences of opinion” over “administrative and publishing issues,”⁽⁹⁶⁾ but the most important differences had to do with Kassirer’s refusal to exploit the *New England Journal*’s name and logo for commercially lucrative spin-off publications (“The New England Journal of Rejects,” as one editor put it⁽⁹⁷⁾) for which he had no responsibility.⁽⁹⁸⁾ In contrast to Lundberg’s firing, Kassirer’s unwilling resignation had little to do with editorial independence.⁽⁹⁹⁻¹⁰¹⁾

Compared to the Fletchers’ decision to leave the *Annals*, the issues underlying Lundberg’s dismissal and Kassirer’s unwilling resignation were dissimilar. However, these cases suggest that tensions between medical journal editors and publishers will continue to surface periodically. The lessons learned from past conflicts can help to inform policies or guidelines to safeguard against future conflicts. On June 19, 2000 the World Association of Medical Editors (WAME) issued a policy statement on editorial independence.⁽¹⁰²⁾ One of the guidelines reads, “Editorial decisions should be based mainly on the validity of the work and its importance to readers, not the commercial success of the journal. Editors should be free to express critical but responsible views about all aspects of medicine without fear of retribution, even if these views might conflict with the commercial goals of the publisher.”

‘THE PUBLISHER ALSO HAS CERTAIN INTERESTS’

After the Fletchers departed the *Annals*, Edward Huth served briefly as interim editor.⁽²⁷⁾ Frank Davidoff was named editor in January 1995 and assumed his post two months later.⁽¹⁰³⁾ By this time the ACP had reexamined the charge for the editorship and reorganized the ACP to keep the editorial and publishing duties separate.⁽²⁷⁾ Publishing activities were centralized under Kathleen Case, the newly appointed Vice President for Publishing. “Actually,” she notes, “the Fletchers had previously proposed a separate Vice President-level position to centralize the publishing activities, which included functions not directly related to the *Annals*. So the organizational restructuring was in part a natural evolution.” Davidoff agrees with the wisdom of this move. “Publishers are basically businesspersons. They make business decisions. Editors make editorial decisions. As editors, the Fletchers did an unimpeachable job. But I suspect they weren’t particularly business-oriented people -- I’m not, and most editors aren’t,” he admits.

A few editorial changes were made as well. As interim editor, Huth launched a new section, *In the Balance*.⁽¹⁰⁴⁾ The purpose of this new initiative was to engage readers on important clinical subjects and to allow for a greater representation of dissenting views than was provided through the usual channels of commentaries, review articles, and editorial correspondence. Davidoff continued this tradition by seeking opposing perspectives on controversial issues. For example, when the ACP published a controversial guideline on cholesterol screening in 1996,⁽¹⁰⁵⁾ space was provided for a contrasting commentary⁽¹⁰⁶⁾ while Davidoff wrote an editorial to balance the two.⁽¹⁰⁷⁾ Davidoff also continued to provide the ACP staff leadership with copies of the title sheet for forthcoming issues -- a practice the Fletchers had initiated shortly after the UCLA study was published. "There is no question," says John Ball, "that editors should have complete freedom to publish material that meets the standards of the journal. But since there is a publisher, it would be reasonable for the editors to realize that the publisher also has certain interests -- and that editorial decisions may affect those interests."

The implications of these changes are perhaps best illustrated by a recent example. In the June 5, 2001 issue of the *Annals*, Davidoff wrote an editorial on the high cost of pharmaceutical drugs.⁽¹⁰⁸⁾ Before the editorial was published, some of the ACP's advertising staff were concerned that it would be another lopsided attack on the pharmaceutical industry. Robin Bartlett, the current Director of Marketing and Advertising Sales for the ACP, says, "We had put in a lot of effort to bring the advertising revenues back up, and what had happened with the Wilkes paper 10 years earlier definitely figured prominently in our concerns." However, these concerns were later dispelled when Davidoff invited a commentary from PhRMA to "explain the industry's approach to drug pricing"; PhRMA responded by commissioning a piece from the American Enterprise Institute.⁽¹⁰⁹⁾

'NOTHING HAS REALLY CHANGED'

Many journals do not screen advertisements for quality. In a study published in the *Journal of General Internal Medicine* in 1995, Wilkes and Richard Kravitz surveyed North American journal editors regarding their advertising policies and practices.⁽¹¹⁰⁾ Of the journals that sold pharmaceutical advertisements, two-fifths of the editors reported having a great deal of control, while one-fifth reported having no control, over advertising content. About one-third of the editors had staff who regularly screened pharmaceutical advertisements for accuracy and truthfulness. Thus, the potential for perfidy is great. During the decade since the UCLA paper was published, observers have continued to cite deficiencies in pharmaceutical advertisements targeted at readers based in the U.S.⁽¹¹¹⁻¹¹⁵⁾ and in other countries.⁽¹¹⁶⁻¹²⁵⁾ A more recent study documented a 36% rate of numeric distortion in the graphs of a sample of 484 pharmaceutical advertisements.⁽¹²⁶⁾ "I haven't seen anything in the journals that would make me suppose things are any different now compared to 10 years ago. Nothing has really changed," affirms Wilkes.

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Biography

BIOGRAPHICAL SKETCH Alexander C. Tsai is a M.D.-Ph.D. candidate in health services research at Case Western Reserve University School of Medicine in Cleveland, Ohio USA.

REFERENCES

1. Wilkes MS, Doblin BH, Shapiro MF. Pharmaceutical advertisements in leading medical journals: experts' assessments. *Ann. Intern. Med.* 1992; 116:912–919. [PubMed: 1580449]
2. Kessler DA. Addressing the problem of misleading advertising. *Ann. Intern. Med.* 1992; 116:950–951. [PubMed: 1580454]
3. Kunin CM. Blunder drug for pneumonia. *N. Engl. J. Med.* 1977; 297:113–114. [PubMed: 865571]
4. Tannock IF. Responsibility in advertising: an oncologist's view. *N. Engl. J. Med.* 1979; 301:1004. [PubMed: 492218]
5. Potter HP Jr. Costs of drug advertising. *N. Engl. J. Med.* 1988; 319:798. [PubMed: 3412408]
6. Schiff G. Persantine advertisement: artistic license or misleading implication? *JAMA.* 1990; 263:658–659. [PubMed: 2296117]
7. Goldstein JH. Of mugs and marketing. *JAMA.* 1991; 265:2391–2392. [PubMed: 2016837]
8. Prescott L. Misleading drug advertising. *Br. Med J.* 1975; 1:572.
9. Stimson GV. Information contained in drug advertisements. *Br. Med J.* 1975; 4:508–509. [PubMed: 1192148]
10. Collier JG, New L. Illegibility of drug advertisements. *Lancet.* 1984; 1:341–342. [PubMed: 6141406]
11. Collier JG, Pilkington TRE. Human insulin: a misleading advertisement? *Br. Med J.* 1984; 289:191. [PubMed: 6430408]
12. Collier JG. Misleading advertisements: sanctions and corrections. *Lancet.* 1984; 2:1097–1098. [PubMed: 6150167]
13. Collier JG, Herxheimer A. Roussel convicted of misleading promotion. *Lancet.* 1987; 1:113–114. [PubMed: 2879172]
14. Herxheimer A, Collier JG. Promotion by the British pharmaceutical industry, 1983-8: a critical analysis of self regulation. *BMJ.* 1990; 300:307–311. [PubMed: 2106963]
15. Nowolinski, G. [Accessed September 27, 2002] A brief history of the HHS Office of the Inspector General. Office of Evaluation and Inspections Web site. June. 2001 Available at: <http://oig.hhs.gov/reading/history/ighistory.pdf>
16. U.S.Department of Health and Human Services. Promotion of prescription drugs through payments and gifts. Office of the Inspector General; August. 1991 Report No.OEI-01-90-00480Available at: <http://oig.hhs.gov/oei/reports/oei-01-90-00480.pdf>
17. U.S.Department of Health and Human Services. Prescription drug promotion involving payments and gifts: Physicians' perspectives. Office of the Inspector General; July. 1992 Report No.OEI-01-90-00481Available at: <http://oig.hhs.gov/oei/reports/oei-01-90-00481.pdf>
18. Scope of work agreement between Michael Wilkes and Office of the Inspector General. U.S. Department of Health and Human Services; 1990.
19. [Accessed August 8, 2002] 1994 Medical/surgical ad spending review. Medical Marketing and Media. March. 1995 Available at: <http://www.cpsnet.com/reprints/1995/03/adspent.html>
20. Avorn J, Chen M, Hartley R. Scientific versus commercial sources of influence on the prescribing behavior of physicians. *Am. J. Med.* 1982; 73:4–8. [PubMed: 7091173]
21. Wolfe SM. Drug advertisements that go straight to the hippocampus. *Lancet North Am. Ed.* 1996; 348:632.
22. Wang TJ, Ausiello JC, Stafford RS. Trends in antihypertensive drug advertising, 1985-1996. *Circulation.* 1999; 20:2055–2057. [PubMed: 10209012]
23. McDonnell PJ. Let the buyer (and reader) beware!: Targeted advertising in medical journals. *Arch. Ophthalmol.* 1999; 117:1077. [PubMed: 10448753]

24. Neslin, S. [Accessed August 8, 2002] ROI analysis of pharmaceutical promotion (RAPP): an independent study. RAPP Study. May 22. 2001 Available at: <http://www.rappstudy.org>
25. Liebman, M. [Accessed August 14, 2002] Listen up, publishers say--journal advertising sells! Medical Marketing and Media. March. 2000 Available at: <http://www.cpsnet.com/reprints/2000/03/MedJournals.pdf>
26. Liebman, M. [Accessed August 8, 2002] The right media mix is the key to maximizing ROI. Medical Marketing and Media. May. 2001 Available at: <http://www.cpsnet.com/reprints/2001/05/AMPRsearch.pdf>
27. Huth EJ, Case K. Annals of Internal Medicine at age 75: reflections on the past 25 years. Ann. Intern. Med. 2002; 137:34–45. [PubMed: 12093243]
28. Moser RH. Advertising and our journal. Ann. Intern. Med. 1977; 87:114–115. [PubMed: 327885]
29. Fletcher, RH.; Fletcher, SW. Letter from Robert H. Fletcher and Suzanne W. Fletcher, Editors, Annals of Internal Medicine, to David A. Kessler, Commissioner. U.S. Food and Drug Administration; May 8. 1992
30. Fletcher RH, Fletcher SW. Pharmaceutical advertisements in medical journals. Ann. Intern. Med. 1992; 116:951–952. [PubMed: 1580455]
31. Wolinsky H. Medical journals full of misleading ads, study finds. Chicago Sun-Times. June 1.1992 :3.
32. Scott J. Many drug ads are misleading, study finds. Los Angeles Times. June 1.1992 :A1.
33. Altman LK. Study says drug ads in medical journals frequently mislead. New York Times. June 1.1992 :A1.
34. Study questions many drug ads; 10 medical journals screened. St.Louis Post-Dispatch. June 1.1992 :A1.
35. Rich S. Medical journal ads called misleading; drug claims often undocumented, safety data omitted, study says. Washington Post. June 1.1992 :A1.
36. U.S.Department of Health and Human Services. Prescription drug advertisements in medical journals. Office of the Inspector General; June. 1992 Report No. OEI-01-90-00482
37. Kennedy, EM., et al. Letter co-signed by 13 U.S. Senators to David A. Kessler, Commissioner. U.S. Food and Drug Administration; July 21. 1992
38. Rudavsky S. 'Misleading' ads, drugs identified; 66 products named by consumer group. Washington Post. July 31.1992 :A21.
39. Steinbrook R. Doctors dangerously misled by drug ads, consumer group says. Los Angeles Times. July 31.1992 :A3.
40. List of offending drug ads may spark FDA crackdown. Wall Street Journal. July 31.1992 :B5.
41. Associated Press. U.S. urged to require checking of drug ads. New York Times. July 31.1992 :A14.
42. SmithKline misleads in ads, group says. Journal of Commerce. August 3.1992 :A7.
43. Pub. L. No. 89-487, 80 Stat. 250 (1966), as amended 5 U.S.C. § 552 (1988),
44. Sharfstein JM, Wolfe SM. Letter from Joshua M. Sharfstein, Researcher, Public Citizen's Health Research Group and Sidney M. Wolfe, Director, Public Citizen's Health Research Group, to U.S. Senator Edward Kennedy. July 30.1992 HRG Publication #1273.
45. [Accessed August 8, 2002] Coalition for Healthcare Communications Web site. Available at: <http://www.cohealthcom.org>
46. [Accessed August 8, 2002] Association of Medical Publications, Inc. Web site. Available at: <http://www.amponline.org/AMP/AMP.html>
47. Beary JF III. Pharmaceutical ads in journals. Ann. Intern. Med. 1992; 117:616–619. [PubMed: 1524338]
48. Angel JF. Pharmaceutical ads in journals. Ann. Intern. Med. 1992; 117:616–617. [PubMed: 1524339]
49. Liebman M. Pharmaceutical ads in journals. Ann. Intern. Med. 1992; 117:617–619. [PubMed: 1524341]
50. Wilkes MS, Doblin BH, Shapiro MF. Pharmaceutical ads in journals [reply]. Ann. Intern. Med. 1992; 117:618–619.

51. Coalition for Healthcare Communications. Scientific exchange, promotion, and regulation: the battle for the mind [meeting agenda, day 2]. October 21. 1992
52. Reviewers' Comments for JAMA Editorial Office. March 17. 1993 Manuscript Number SC2432
53. Jacoby J. Misleading research on the subject of misleading advertising: The Wilkes et al. investigation of pharmaceutical advertising in leading medical journals. Food and Drug Law Journal. 1994; 49:21–36.
54. Rubin PH. Are pharmaceutical ads deceptive? Food and Drug Law Journal. 1994; 49:7–20.
55. [Accessed August 8, 2002] Advertising Research Foundation Web site. Available at: <http://www.arfsite.org/Webpages/PrimaryPages/mission.htm>
56. [Accessed August 8, 2002] Association of National Advertisers, Inc. Web site. Available at: <http://www.ana.net/about/mission/mission.htm>
57. Dunn TF. Review of Wilkes, M.S. Doblin, B.H. Shapiro, M.F. Pharmaceutical advertisements in leading medical journals: experts' assessments. Advertising Research Foundation Report. February 18.1993
58. Beales JH, MacLeod WC. Assessments of pharmaceutical advertisements: A critical analysis of the criticism. Food and Drug Law Journal. 1995; 50:415–449. [PubMed: 10343010]
59. American College of Physicians. Annals of Internal Medicine 1992 Media File. American College of Physicians; Philadelphia: 1992.
60. American College of Physicians. Annals of Internal Medicine 1995 Readership Data. American College of Physicians; Philadelphia: 1995.
61. Shapiro MF. Regulating pharmaceutical advertising: what will work? CMAJ. 1997; 156:359–361. [PubMed: 9033416]
62. Levin DP. When car makers retaliate against critical magazines. New York Times. June 26.1992 :D9.
63. Whelan EM, et al. Analysis of coverage of tobacco hazards in women's magazines. J. Public Health Policy. 1981; 2:28–35. [PubMed: 7298829]
64. Warner KE. Cigarette advertising and media coverage of smoking and health. N. Engl. J. Med. 1985; 312:384–388. [PubMed: 3969095]
65. Warner KE, Goldenhar LM, McLaughlin CG. Cigarette advertising and magazine coverage of the hazards of smoking. A statistical analysis. N. Engl. J. Med. 1992; 326:305–309. [PubMed: 1728734]
66. Scott J. Study links ads, coverage of smoking hazards. Los Angeles Times. June 30.1992 :A27.
67. Carmody D. Coverage of smoking linked to tobacco ads. New York Times. June 30.1992 :D22.
68. [Accessed August 8, 2002] 1994 specialty journal and non-journal media advertising review. Medical Marketing and Media. April. 1995 Available at: <http://www.cpsnet.com/reprints/1995/04/adrev.html>
69. Hueston WJ, Mainous AG III. A comparison of the numbers of pharmaceutical advertising pages in family medicine research journals and journals in other medical disciplines. Acad. Med. 1997; 72:804–806. [PubMed: 9311325]
70. Weeks WB, Wallace AE, Kimberly BC. The changing face of pharmaceutical advertising. A look at medical journals reveals a new era in advertising. Mark. Health Serv. 2001; 21:27–30. [PubMed: 11525138]
71. Nelson CP, Bloom DA. Sales and science: changing patterns of pharmaceutical and medical device advertising in peer reviewed urology publications, 1975-2000. J. Urol. 2001; 166:2317–2320. [PubMed: 11696770]
72. Landefeld CS, et al. A 4-year study of the volume of drug advertisements in leading medical journals. J. Gen. Intern. Med. 1995; 10:S111.
73. Altman LK. Inside medical journals, a rising quest for profits. New York Times. August 24.1999 :F1.
74. Foshay PM. JAMA 100 years ago: Medical ethics and medical journals. JAMA. 2000; 283:2080. [PubMed: 10802818]
75. Relman AS. Who reviews the ads? [editor's reply]. N. Engl. J. Med. 1980; 302:296.

76. Rennie D. Editors and advertisements. What responsibility do editors have for the advertisements in their journals? JAMA. 1991; 265:2394–2396. [PubMed: 2016838]
77. Gartner LM. The “fourth part” of Pediatrics: 50 years of display advertising. Pediatrics. 1998; 102:177–185. [PubMed: 9729154]
78. Altman LK. Woman is named editor of A.M.A. journal. New York Times. October 9.1999 :A14.
79. Glassman PA, Hunter-Hayes J, Nakamura T. Pharmaceutical advertising revenue and physician organizations: how much is too much? West J. Med. 1999; 171:234–238. [PubMed: 10578674]
80. Lexchin J. Don’t bite the hand that feeds you. West J. Med. 1999; 171:238–239. [PubMed: 10578675]
81. Pellegrino ED, Relman AS. Professional medical associations: ethical and practical guidelines. JAMA. 1999; 282:984–986. [PubMed: 10485685]
82. Persantine advertisement: artistic license or misleading implication? [editor’s reply]. JAMA. 1990; 263:659. [PubMed: 2296118]
83. Kassirer JP. Pharmaceutical advertising in the Journal [editor’s reply]. N. Engl. J. Med. 1992; 327:1689.
84. Wilkes MS. Conflict, what conflict? West J. Med. 2000; 172:6–8. [PubMed: 10695430]
85. Smith R, Woolf SH. The BMJ through American eyes. BMJ. 2002; 325:404.
86. Wilkes MS. The future of wjm. West J. Med. 2002; 176:221.
87. Goldsmith MF. George D. Lundberg ousted as JAMA editor. JAMA. 1999; 281:403. [PubMed: 9952184]
88. Horton R. The sacking of JAMA. Journal of the American Medical Association. Lancet. 1999; 353:252–253. [PubMed: 9929012]
89. Smith R. The firing of brother George. The AMA has damaged itself by sacking JAMA’s editor. BMJ. 1999; 318:210. [PubMed: 9915712]
90. Kassirer JP. Should medical journals try to influence political debates? N. Engl. J. Med. 1999; 340:466–467. [PubMed: 9971872]
91. Kassirer JP. Editorial independence. N. Engl. J. Med. 1999; 340:1671–1672. [PubMed: 10341280]
92. Hoey J, et al. Science, sex and semantics: the firing of George Lundberg. CMAJ. 1999; 160:507–508. [PubMed: 10081467]
93. Associated Press. Ex-editor cites JAMA coercion. Newsday. February 18.1999 :A37.
94. Rosenberg RN, Anderson ER Jr. Editorial governance of the Journal of the American Medical Association: a report. JAMA. 1999; 281:2239–2242. [PubMed: 10376578]
95. Davies HT, Rennie D. Independence, governance, and trust: redefining the relationship between JAMA and the AMA. JAMA. 1999; 281:2344–2346. [PubMed: 10386562]
96. Massachusetts Medical Society. [Accessed August 8, 2002] News release concerning the New England Journal of Medicine. MMS Press Release. July 25. 1999 Available at: http://www2.mms.org/pages/072599st_NEJM_Kassirer.asp
97. Kno RA. Fired medical journal editor refused spinoff idea; disagreement over money-making plan led to his downfall. Boston Globe. July 27.1999 :A3.
98. Angell M. The Journal and its owner--resolving the crisis. N. Engl. J. Med. 1999; 341:752. [PubMed: 10471463]
99. Rennie D. Editors and owners--stretching reputation too far. JAMA. 1999; 282:783–784. [PubMed: 10463717]
100. Hoey J. When journals are branded, editors get burnt: the ousting of Jerome Kassirer from the New England Journal of Medicine. CMAJ. 1999; 161:529–530. [PubMed: 10497610]
101. Horton R. An unwilling exit from the NEJM. New England Journal of Medicine. Lancet. 1999; 354:358. [PubMed: 10437862]
102. World Association of Medical Editors. [Accessed September 4, 2002] WAME Policy Statement on Editorial Independence. June 19. 2000 Available at: <http://www.wame.org/wamestmt.htm#independence>
103. Murray J. Frank Davidoff named editor of Annals. Ann. Intern. Med. 1995; 122:67.

104. Huth EJ. "In the balance": weighing the evidence. *Ann. Intern. Med.* 1994; 120:889. [PubMed: 8154649]
105. Garber AM, Browner WS, Hulley SB. Cholesterol screening in asymptomatic adults, revisited. Part 2. *Ann. Intern. Med.* 1996; 124:518–531. [PubMed: 8602715]
106. LaRosa JC. Cholesterol agonistics. *Ann. Intern. Med.* 1996; 124:505–508. [PubMed: 8602710]
107. Davidoff F. Evangelists and snails redux: the case of cholesterol screening. *Ann. Intern. Med.* 1996; 124:513–514. [PubMed: 8602713]
108. Davidoff F. The heartbreak of drug pricing. *Ann. Intern. Med.* 2001; 134:1068–1071. [PubMed: 11388821]
109. Calfee JE. Pharmaceutical price controls and patient welfare. *Ann. Intern. Med.* 2001; 134:1060–1064. [PubMed: 11388819]
110. Wilkes MS, Kravitz RL. Policies, practices, and attitudes of North American medical journal editors. *J. Gen. Intern. Med.* 1995; 10:443–450. [PubMed: 7472701]
111. Ahmad SR, Wolfe SM. Advertising in Pediatrics. *Pediatrics.* 1995; 95:617–618. [PubMed: 7700772]
112. Jefferson BK. Cal Ripken, Jr., and Prinivil. *N. Engl. J. Med.* 1998; 339:2024–2025. [PubMed: 9882206]
113. Gutknecht DR. Evidence-based advertising? A survey of four major journals. *J. Am. Board Fam. Pract.* 2001; 14:197–200. [PubMed: 11355052]
114. Cooper RJ, et al. Graphics in pharmaceutical advertisements: are they truthful, are they adequately detailed? *Ann. Emerg. Med.* 2002; 40:338–339.
115. Neumann PJ, et al. Economic messages in prescription drug advertisements in medical journals. *Med Care.* 2002; 40:840–845. [PubMed: 12218774]
116. Herxheimer A, Lundborg CS, Westerholm B. Advertisements for medicines in leading medical journals in 18 countries: a 12-month survey of information content and standards. *Int. J. Health Serv.* 1993; 23:161–172. [PubMed: 8425785]
117. Vitry A, Mansfield P. Promotion of Coversyl by Servier. *Lancet.* 1996; 347:1411. [PubMed: 8637366]
118. Gray S. Advertisements for donepezil (Aricept) in the BMJ. Advertisement suggests an unrealistic improvement in mental status. *BMJ.* 1997; 314:1555. [PubMed: 9183222]
119. Vitry A, Mansfield P. Drug advertisements in medical journals. *Lancet.* 1997; 350:1477–1478. [PubMed: 9371190]
120. Mindell J, Kemp T. Evidence based advertising? Only two fifths of advertisements cited published, peer reviewed references. *BMJ.* 1997; 315:1622. [PubMed: 9437300]
121. Smart S, Williams C. Evidence based advertising? Half of drug advertisements in BMJ over six months cited no supporting evidence. *BMJ.* 1997; 315:1622–1623. [PubMed: 9437302]
122. Greenhalgh T. Advertisements for donepezil. More convincing evidence of efficacy needs to be cited. *BMJ.* 1997; 315:1623. [PubMed: 9437303]
123. Stein K, Milne R, Best L. Advertisements for donepezil. BMJ should require advertisements to detail actual state of evidence. *BMJ.* 1997; 315:1623–1624. [PubMed: 9437304]
124. Vlassov V, et al. Do drug advertisements in Russian medical journals provide essential information for safe prescribing? *West J. Med.* 2001; 174:391–394. [PubMed: 11381003]
125. Hoaken PC. Misleading drug advertising. *Can. J. Psychiatry.* 2001; 46:660–661. [PubMed: 11582833]
126. Cooper RJ, et al. The quantity and quality of scientific graphs in pharmaceutical advertisements. *J Gen. Intern. Med.* 2003; 18:294–297. [PubMed: 12709097]