

Vivian Weil's Commentary on "Stuff and Things: Paying for Publication"

Commentary On
Stuff and Things: Paying for Publication

Discussions of ethical issues in research usually focus on problems arising in the everyday conduct of scientific research and graduate training. This case helpfully draws attention instead to ethical issues concerning the structure of institutions of science. Ethical questions about what functions the institutions should serve and how these institutions should be organized and supported force attention to conventions that should govern.

Interestingly, in drawing attention to conventions, ethical questions about the structure of institutions do not differ from ethical questions about the everyday conduct of science. A frequent outcome of addressing ethical problems or quandaries of everyday research is the explicit statement, clarification, modification or creation of a convention. At the bench level, in the structures and interconnections of institutions, and in the dynamics of interactions with society, conventions and practices shape the conduct of science and define ethical responsibilities of scientists. Ethical problems force ethical scrutiny of conventions and practices and reveal the absence of needed policies and the necessity of correcting practices.

This case provides an opportunity to consider some conventions with regard to the management of a professional society's journal. The quandaries arise for the board of a professional society that joins two related fields and publishes a journal - a venerable, highly regarded publication in both fields - covering broad issues spanning the two fields and their subspecialties. Resolution of the issues in the case has implications for other institutions of science such as peer review, career advancement of science faculty in universities, graduate training and academic presses. Beyond screening scientific reports and propagating new findings, scientific journals play a significant role in the institutional structure of science. The fate of a leading journal is of major concern.

The rise in publication costs in recent years has resulted in a financial crisis for the journal in this case. Published by an academic press, it had managed to survive over a long period through library subscriptions at universities, less costly subscriptions for individual faculty and even cheaper subscriptions for students and scientists from poor countries. At the annual meeting of the society's board, discussion centers on whether to respond to the crisis by raising subscription prices. An alternative, instituting page charges averaging about \$1,000 per paper, but making exceptions for authors without resources, might allow the journal to survive without raising subscription prices.

In many fields of science (for example, physics and biology), journals have long-standing practices of assessing page charges, with the understanding that in almost all cases the funds come from the authors' grants. Investigators do not pay the charges out of personal funds. It would, therefore, not be a ground-breaking change for this journal to adopt the practice. The only novelty might be the use of grant funds for page charges in the fields served by the journal. Adoption of page charges might precipitate a need for negotiations with funding sources that support research in these two fields.

At the board meeting on Hilton Head Island, Dr. Ethan Naylor, the society's president, objects to instituting page charges. His objection is not based on practical considerations, but on "values." He argues that to adopt a new convention of making page charges to authors is to say, in effect, that the authors' product is not worth publishing on the basis of its value. Likening academic publishing to publishing in the commercial world, he holds that, if any change is to be made, academic authors should be paid for their contributions to journals. Naylor attaches symbolic value to the shift to page charges but offers a dubious rationale for his view.

In those fields in which it is conventional for investigators to pay page charges to journals, it is an accepted fact of life not freighted with implications about the value of the articles published. A predictable charge to authors for any papers accepted makes no invidious distinctions between authors based on whether or not they subsidize publication of their work. The ranking of journals according to their importance and quality persists in fields where page charges are conventional. The added value of publishing in highly rated journals is available to authors whether they are assessed page charges or not. That value persists at a time when universities and individual university scientists have more involvement with private companies than in the past. The regard of peers for one's work retains its place of

importance in academic publishing.

Naylor's suggestion that academic researchers should be paid for their research products substitutes the rewards of the commercial sector for recognition among one's intellectual peers. It would contribute to an increasing orientation toward the commercial sector, not only in replacing or supplementing the value of intellectual recognition with a market value but also in the measures that would have to be taken to provide funds to pay researchers for their papers.

Universities have evolved into institutions primarily devoted to advancing and disseminating knowledge and educating students. In recent years, universities have acquired an added role: to serve as sources of innovation in technology and science that are needed to fuel economic growth. Economists, government spokespersons and others argue that economic flourishing depends upon technological innovation. That thinking has supported the increasing involvement of universities in the commercial sector.

Many who study this trend have become concerned that increasing interdependence between universities and the private sector will bring about the erosion of university values and the gradual adoption by universities of the outlook of the private sector. If that were to happen, universities would lose those features that have made them attractive partners to business firms. It would also represent a loss of maximally open institutions providing independent thought that is very valuable to society. It appears that the resources to pay researchers for their papers would have to come from the commercial sector. The threat that this increase of involvement with the private sector would pose to the independence of published research and the public's trust in the independence of that work would have to be added to the threat already posed by commercial sector support of research itself.

In disseminating research produced and published according to practices that promote the reliability and independence of the published reports, the journals play an important role. Because this journal has a long history and is highly regarded by members of the two fields, it is especially valuable. The board should not consider lightly cutting back on the journal. That the annual meeting takes place on Hilton Head suggests that the two fields covered by the journal are doing well. Their success places a heavier responsibility on the board to deal with the financial crisis in a way that keeps the journal in place and does not threaten its independence. Many professional societies have assumed this responsibility. It is one of the

functions that make professional societies valuable.

Making the journal accessible to students and scientists who have limited resources is an ethical as well as a strategic concern. Whether the board decides to raise subscription costs or adopt the practice of making page charges should depend heavily on empirical data. Would a rise in price adequate to meet increased costs put the journal out of bounds for graduate students and scientists from poor countries? An average of \$1,000 per paper seems high even for a journal carrying papers that include tables, graphs, etc. Is that a sound figure to use for calculations?

There are reasons to reject Ellen van Graaf's suggestion that they publish fewer papers or resort to electronic publishing. If the fields are flourishing, as their meeting on Hilton Head suggests, it would be shirking responsibility to cut back on publishing papers that meet the journal's high standards. A sober look at electronic publishing is needed to prevent making a hasty decision the board might regret. Experts in the information science field point out that electronic media are valuable for prompt and wide dissemination. They contend, however, that after time has elapsed, these media are unreliable for retrieval. Rob Kling, editor of *The Information Society*, Indiana University Press, emphasizes this point in Vivian Weil, "The Information Revolution: A Dose of Reality," *Science Communication* 20 (1, September 1998): 138. A web master's reconfiguration of a web site can result in making items unavailable. To assure stable, long-term access requires stewardship that may be as costly as and more risky than either of the other alternatives under consideration in this case. The electronic option involves greater uncertainties and should be considered with great caution, especially in the case of a journal with a hundred-year history. Unbroken continuity over a long period generally adds to the value of journals, especially to those that are leaders in their fields.

The advisory board is entitled to consider the impact of each option on the status of the journal as a highly regarded publication in its fields. Such status depends not only on the quality of the papers but on the management of the journal. A journal that maintains high standards and broad reach is very valuable to the fields it covers, to science and to society.