tion at his command when, as chairman of the Subcommittee on Consumer Economics of the Joint Economic Committee, he declared at a public hearing (*1*):

> I wish somebody was a good enough engineer around here to tell us whether or not these fuel-saving devices and engineering techniques that were talked about over the years . . . are really available from a technology point of view, and . . . what the automobile industry is doing about it.

To continue this trend toward imbalance would reduce the legislative action to one of "rubber-stamping" sophisticated technological bills.

Increasing the number of scientific and technically qualified staff for those legislators who would make meaningful use of them would be my suggestion for improving the role scientific information and analyses can play in governmental decision-making. Such expertise might be provided by an expanded AAAS Congressional Scientist-Fellow Program on the national scene, but state and local governments should not be omitted. Perhaps special leaves for university faculty members to work with nearby legislators or local officials would suffice. Such proximity would demand a minimum of relocation and increase the chances of continued contact after the special semester or year of full-time work was completed. To do this, however, university career credit for public affairs activities by scientists must be accepted.

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1. H. Humphrey, in hearings before the U.S. Congress, Joint Economic Committee, Subcommittee on Consumer Economics, *The Gasoline and Fuel Oil Shortage* (Government Printing Office, Washington, D.C., 1973).

Copyright Policy

Nicholas L. Henry's article "Copyright, public policy, and information technology" (1 Feb., p. 384) states, "The American Council of Learned Societies [ACLS] has long been pro-owner in its position. . . ." This is inaccurate.

The interests of the ACLS were stated as follows in testimony submitted to the Committee on the Judiciary of the House of Representatives on 5 August 1965 (*1*, p. 1551).

> ACLS represents a wide range of individuals and institutions engaged in scholarship in the humanities, whose concern with the Copyright Law relates principally to the availability, custody, and use of copyright materials for research, as well as the writing and publication of new scholarly works and the use of copyright materials in teaching.

Subsequently in that testimony, with reference to the length of term of copyright, it was stated, "Although scholars are typically authors themselves, their basic interest is in the availability and use of copyright materials . . ." (*1*, p. 1552).

The most recent position taken on behalf of the ACLS was the endorsement by the chairman of its Committee on Research Libraries of a proposed amendment to the Copyright Revision Bill, S. 644, Section 108(d), which is intended to confirm as "not an infringement of copyright" the present practice of libraries in supplying a single copy of certain copyrighted material of limited extent to a reader on request, and which is directed toward protection of the interests of our scholarly constituency as users.

Scholars must have ready access to material for their research. They seek copyright mainly to protect the integrity of their work. Publishers need it to make publication economically viable. There is no way to resolve these conflicting interests completely, but scholarly publication would seem to be an area in which a relatively equitable solution can be found because the scholar himself is both producer and user. If his interests are the objective, then a reasonable doctrine of "fair use" would seem to be the best possible solution. Such a solution has worked in Great Britian without producing serious economic damage to publishers.

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1. F. Burkhardt, in hearings before the U.S. House of Representatives, Committee on the Judiciary, Subcommittee No. 3, *Copyright Law Revision, Serial No. 8* (Government Printing Office, Washington, D.C., 1966), part 3, pp. 1548–1561.

The admirable discussion by Henry of the growing public debate about copyright policies and practices does not clearly distinguish between two types of authors, that is, the author who hopes for remuneration (such as the novelist, poet, or textbook writer) and the writer of a scientific paper or review, who can expect no monetary compensation directly and in fact usually must expend institutional funds in order to get the work published. The former type of author should be protected by copyright laws. However, the scientist should not, nor should his publishing organization, whether it be a commercial house or a professional society. The scientist, at least in public institutions, conducts much of his research with public funds (government grants, contracts, or grants from nongovernmental public organizations). He usually helps to pay direct publication costs through page charges, again from the public funds that subsidized the research. Finally, he buys reprints from his publisher with the same public funds. His motivation toward publication is to obtain the widest possible dissemination of the new knowledge.

The profit-seeking author enters a contractual agreement with the publisher to share profits. The scientist-author does not have any such agreement and, in fact, gives up any privilege of sharing profits with the publisher by a de facto relinquishment of his rights to the publisher. For example, some society-sponsored journals are actually published by commercial houses. In these instances the copyrights appear to be owned entirely by the publishing company, even though periodic contracts between the publisher and the society are negotiated. Thus, the commercial publisher of a scientific journal is making a profit on the basis of the public funds that underwrote the research being reported in the company's journals. The big question is, Should the new knowledge that a scientist develops be protected by a copyright—not for the scientist, but for the publisher—or should the new knowledge, largely developed with public money, be considered to be in the public domain and, therefore, available for free copying for noncommercial use?

As a scientist and a former editor of a scientific journal, I opt for the right of free, noncommercial copying of information published in scientific journals. I further believe that I should have the right to offer free copying of my papers. Scientific journals should consider adopting policies that will permit free copying of the contents of the journals for educational and research purposes.

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Henry's analysis and proposals make a valuable contribution to the literature on copyright, but several points should be added, emphasized, or considered in slightly altered contexts.

First, it seems curious that most current discussions of copyright problems with photocopying and computers quickly become partial reviews of the role of libraries in copying. Frightened publishers seem to ignore the existence of coin-operated copying machines in public places other than libraries. Henry notes the influence of decreasing computational and copying costs on the increase in the rate of copying. He fails, however, to consider the potential impact of photocopiers and computers small and inexpensive enough to attract private purchasers. It would certainly be questionable public policy to prohibit copying in libraries if the only effect is to create lucrative photocopying sidelines for businesses across the street from the library or to enlarge the market for home copying devices. Focusing too narrowly on libraries diverts attention from the overriding problem—economic adjustment to technological change.

Second, neither Henry nor many other nonlibrarians seem aware that libraries now routinely pay many journal publishers "institutional rates" that are much higher than regular subscription rates. Far from being parasites, libraries help subsidize low subscription rates for members of many scientific and professional associations. Any clearinghouse system which carries an administrative price tag of $300 million would be sure to increase library costs, which must either be passed on to the patron, inhibiting copying, or absorbed by the library. Since institutional budgets in the 1970's have become less and less elastic, it seems likely that libraries that did not pass on all administrative costs would soon be forced to find some other way to reduce expenditures. Some publishers might not like the outcome of such budgetary reviews.

Third, Henry, in common with many other commentators, discusses copyright problems without any reference to the statement of purpose for copyright clearly given in the portion of Article 1, Section 8, of the Constitution, which grants the Congress patent and copyright power in order "To promote the Progress of Science and the Useful Arts." Perhaps as a result of this omission, neither Henry nor his unnamed but "informed observers" correctly anticipated the U.S. Court of Claims decision (*1*) in favor of the U.S. government in the Williams & Wilkins case. The majority quoted the constitutional purpose and buttressed it with a quote from the 1909 Copyright Act House Committee report to the effect that copyright was not " '. . . primarily for the benefit of the author, but primarily for the benefit of the public' " (*2*). In addition, the majority cited case law and quoted the Supreme Court statement that " 'The copyright law, like the patent statutes, makes reward to the owner a secondary consideration' " (*3*).

If, as now seems likely, the Soviet Union subscribes to international copyright conventions in an effort to suppress foreign publication of the works of domestic heretics, American publishers may join librarians and the rest of the scholarly community in taking the position that the public's right to know is more important than the property rights of an irascible and repressive copyright holder.

Fourth, Henry's report that three journals are born and one dies daily will startle very few librarians. Nonprofit, scholarly journals are often the part-time responsibility of harried academics who publish numbers out of order, change names of their journals with bewildering frequency, and take the offices of the journals with them as they move from one university to another. Getting photocopying permission from a defunct journal could be even more difficult than securing a missed number.

Henry's first consideration for federal policies is given as that of assuring the availability of adequate information. Availability certainly requires that the copyright system or its successor system should not permit scholarly material to become unavailable for copying because of a repressive or a defunct copyright holder.

Henry's final proposal seems valid. Sound research is always an appropriate prelude to policy decisions. But determination of public policy also involves making value judgments. In placing the public's interest before the private right to sequester information or to make profit from it, the Constitution makes a value judgment which is still a valid basis for public policies in this area.

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1. Williams & Wilkins Company *v.* The United States, No. 73–68, U.S. Court of Claims (1973).
2. U.S. House of Representatives, Committee on Copyright, *Report No. 2222* (60th Congr., 2nd sess., 1909), p. 7 [quoted in (*1*), p. 12].
3. Mazer *v.* Stein, 347 U.S. 201, 219 (1954) [quoted in (*1*), p. 12].

I am pleased to learn that the American Council of Learned Societies (ACLS) has modified its initial pro-owner position. Burkhardt stated before the House Judiciary Committee on 30 June 1964 that the ACLS could not agree with the position of the National Education Association on the copying of educational materials, which "apparently would give a full and free right for the use of photocopy by 'recognized educational institutions or organizations.' With the present development of photocopying techniques, this could work to the disadvantage of authors as well as publishers. The ACLS is in accord with the opinions of Mr. [Lee C.] Deighton . . ." (*1*, p. 290). Deighton was at that time the chief spokesman on copyright for the book publishing industry. Relatedly, in its *Newsletter* of December 1965, the ACLS stated its position as one which favored the copying of extracts for research purposes, but not of whole works without the consent of the copyright owner (*2*, pp. 9–12).

While the ACLS did not take a position on copyright and computer-based information storage and retrieval systems, Burkhardt stated before a House subcommittee on 5 August 1965 that "it seemed to us that a system of controls, royalty charges, and so forth could easily be set up on such a centralized electronic computer system," a remark that would appear to favor the position of copyright owners on this subject (*3*, p. 1550). The testimony submitted by the ACLS to the House Judiciary Committee on 5 August 1965 cited by Burkhardt refers to the period of copyright duration, not to that aspect of copyright covered in my article, which was public policies for the new information technologies.

I presume that Burkhardt is referring to the controversial amendment to Section 108(d) (1) of S. 644 proposed in 1971 by library interests. If so, then this represents a change in the ACLS position. Overall, however, I agree with Burkhardt that there "is no way to resolve these conflicting interests completely. . . ."

Moran is correct that too little attention is paid in the copyright debate to the differing motivations of different kinds of data producers. Only recently, in fact, have copyright owners begun to recognize this distinction; the formation of the Information Industry Association in 1969 and the organization by the Copyright Committee of the Association of American Publishers of two task forces on photocopying, one for scientific and medical publishing and the other for literary works (*4*), attest to this growing awareness. I also agree with Moran that the growing practice of using page charges as a means of subsidizing the production of scientific information is worth greater analysis than it has received; I discuss the role of the page charge in my article, "Copyright: An adequate policy for knowledge management in technological societies?" (*5*).

Contrary to Fraser's contention, many persons are cognizant of the increasingly frequent propensity of journal publishers to charge high "institutional" subscription rates to libraries on the obviously avaricious theory that libraries are professionally obligated to provide as much information as possible to their patrons; indeed, the practice is noted in a report on photocopying by John Walsh (News and Comment, 29 Mar., p. 1274). Many persons also are aware of Article 1, Section 8, of the Constitution. The narrow decision (3 to 4) by the U.S. Court of Claims to overturn the recommendation of its own commissioner in the Williams & Wilkins case is by most measures an unusual one, and one that I and others did not expect. I have little doubt that the Constitution was taken into account in the decisions of both the commissioner and the Court of Claims (*6*) and will be relied on again when the U.S. Supreme Court reviews the case, as it has agreed to do.

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4. *Publ. Wkly.* **200**, 29 (4 October 1971).
5. N. L. Henry, *Science*, in press.
6. M. G. McCormick, compiler, *The Williams & Wilkins Case* (Science Associates/International, New York, in press).