Letters

Jury Selection

The "social science" techniques of jury selection described by Deborah Shapley (News and Comment, 20 Sept., p. 1033) were practiced long before the behavioral sciences reached their current prominence.

Shortly after the turn of the century, the nephew of a U.S. senator from South Carolina shot the editor of the state's leading morning newspaper.

In those days, it was not uncommon for citizens of South Carolina to have portraits or photographs of people they admired hanging in their homes (such as Washington, Lincoln, Robert E. Lee, and the like).

Lawyers for the accused identified the veniremen from among whom the jury would be impaneled. They employed persons to pose as salesmen of portraits and photographs to go, door-to-door, to the homes of these individuals. In addition to pictures of Washington, Lincoln, and Lee, a picture of the senator—the uncle of the accused—was included, and comments (positive and negative) about the senator were recorded.

When the case came to trail, the defense lawyers struck from the jury those individuals who did not like the senator and kept those who did. They brought the senator from Washington to sit beside his nephew. The nephew was acquitted.

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Hydrogen Storage

We would like to call attention to an item in *Physics Today* (*1*, p. 64) concerning work by Zijlstra on hydrogen storage in intermetallic solids. A compound of a rare earth and nickel or cobalt (for example, $LaNi_5$) under certain conditions will form a hydride and at "4 atmospheres the hydrogen has a density that would otherwise require a compression to 1000 atmospheres. . . . If the pressure is lowered below the equilibrium pressure, the hydrogen will be liberated." We recall that Winsche *et al.* (*2*) stated last year that "the key problem in the application of hydrogen as an automotive fuel is storage." These authors predicted that metal hydrides might provide a solution to this storage problem.

Jones (*3*) has discussed the desirability and feasibility of nonpolluting engines using liquid hydrogen as a fuel. A rough calculation shows that the storage method proposed by Zijlstra can produce hydrogen densities approximately one-third that of liquid hydrogen without the attendant problems of storing and maintaining a liquid at 20°K. This process appears to us to make it feasible to store hydrogen produced by electrolysis of water or by other means for use as an energy source.

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1. G. B. Lubkin, *Phys. Today* **27**, 61 (June 1974).
2. W. E. Winsche, K. C. Hoffman, F. J. Salzano, *Science* **180**, 1325 (1973).
3. L. W. Jones, *ibid.* **174**, 367 (1971).

Presidential Science Advising

G. B. Kistiakowsky, in his interesting and informative article "Presidential science advising" (5 Apr., p. 38), misdescribes one aspect of the situation in the Kennedy Administration. He says that "the Assistant for National Security Affairs set up his own staff to deal with arms control matters; the science advisor was less welcome to him in the White House meetings on national security affairs than science advisors had been in Eisenhower years." I was a senior member of the National Security staff during the period described (and for most of it, the deputy special assistant) and was involved deeply in all the arms control problems and in a wide variety of other problems relating to defense and intelligence. At all times I worked closely with Jerome E. Wiesner, the then science advisor. One of Wiesner's staff members, Spurgeon Keeney, in effect divided his time between the Special Assistant for Science and Technology and the Special Assistant for National Security Affairs. It is incorrect to say that the Special Assistant for Science and Technology was in any way excluded from or unwelcome at White House meetings involving arms control, military problems, or military budget problems with a technical component, or to imply that he was in any way barred from making his views heard.

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I disagree with Kistiakowsky's main premise that "leadership of technology-oriented policy innovations needs to be returned to the Executive Branch. . . ."

The executive branches at both the federal and state levels have become exceedingly powerful in recent years. So much so that the balance of powers has been tipped in such a way that legislative branches are often relegated to a weak review role. This is especially true with questions of scientific and technical import which demand specialized expertise. As chief executive officer, the President or the governor enjoys direct and full access to the technical exports employed by the agencies under their management. Advice from one's employees may come with certain empire-building or self-preservation overtones, as Kistiakowsky points out, but at times such values may be in agreement with those of the chief executive. The Atomic Energy Commission's recommendation to President Nixon that he achieve his "Project Independence" by spending more than half of the proposed $10 billion over the next 5 years on nuclear research done by the Atomic Energy Commission is a case in point.

Individual legislators and their meager staffs are ill-equipped to critically evaluate budget requests for highly technical research projects, let alone to prepare bills that would fund alternative programs. Senator Hubert Humphrey (D–Minn.) expressed his frustration over this lack of reliable technical informa-

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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