

SCIENCE

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LETTERS

Article Copying

If there was ever any doubt that the density of laws (and lawyers) in the United States has far exceeded the point of diminishing returns, Andrew Lawler's News & Comment article "Court says no to copying articles" (25 Nov., p. 1315) should settle the matter once and for all. From the relevant facts of the case against Texaco Corporation's researcher Donald Chickering presented in the article, it would seem that anyone who makes even one photocopy of an article for their personal library, without first obtaining a photocopy license, violates U.S. copyright law. How utterly absurd.

As a writer, I have written and published hundreds of copyrighted articles, and over the years I have received numerous requests from teachers and professors who want to make multiple photocopies of some of my articles for their students. But no one has ever asked me for permission to make a single photocopy for their personal library, nor should anybody have to. This kind of copyright protection I do not need, nor is it enforceable.

Nevertheless, Lawler says that attorney Jon Baumgarten warns academic researchers to "Consult with your university counsel before making copies." Presumably, Baumgarten is recommending that researchers seek legal counsel before making even a single photocopy. How ridiculous. Copyright law is designed to protect authors and publishers against the wholesale distribution of their intellectual property, and any sensible interpretation of the fair-use doctrine must allow for personal copies such as the ones Chickering allegedly made.

One hopes that future jurists hearing this case will use the same good sense exhibited by Judge Dennis Jacobs, whose lone dissenting opinion some lawyers say "should be taken with a grain of salt." In reality, it is the majority opinion that will be taken with a grain of salt, because regardless of the eventual outcome of this case, researchers will continue to make individual copies of articles for their libraries, with or without legal counsel.

But as a paying member of the American Association for the Advancement of Science (AAAS), what bothers me most about this case is that the AAAS is one of the plaintiffs and therefore has presumably squandered some fraction of its members' dues on a legal exercise in futility. The AAAS should have withdrawn from the suit when it was nar-

rowed to include only the actions of Chickering. And if it has not already done so, the AAAS should withdraw now.

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I am concerned about the role the AAAS played in the recent litigation regarding what constitutes fair use of copyrighted material. It is surprising to see the AAAS as one of the plaintiffs claiming that a researcher photocopying articles for personal use violates copyright laws. Most researchers copy articles, and then file (or pile) them in their offices even before they have read them or "transformed [them] through satire." I clearly consider this fair use. As an author, I am happy if people are copying my papers, and I guess that so would most other scientists be.

The AAAS, which is not only publisher of *Science*, but also a leading scientific organization, clearly did a disservice to most of its membership by taking part in this litigation. If it is of consequence at all, this case will add yet another bit of "red tape" to the daily work of scientists and another cost to their research budgets.

I express my strong hope that the AAAS will defend the interests of its membership in the next trial on the issue and leave the plaintiff's side to commercial publishers.

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Indirect Costs

Two News articles in the 28 October 1994 issue ("House Republicans promise science cuts," *ScienceScope*, p. 531; A. Lawler, "Stanford, Navy resolve indirect costs," p. 535) explain university indirect costs reimbursement incorrectly. A 55% indirect cost rate is described on page 535 as one that means that a university with that rate "gets paid 55 cents to administer each dollar of federally funded research."

First, the largest share of indirect cost reimbursement is not for "administering" research; rather, it is for use of buildings and instruments, maintenance of those buildings, interest on borrowed money, humane

care of animals, and compliance with rules for the use of human subjects in research. It is for disposal of hazardous waste, radiation safety, laboratory safety, the fuel to heat research laboratories, electricity used to run the instruments, and lighting, cooling, and exchanging air as necessary for the conduct of research. It is for campus security, libraries, the backbone of campus computer networks, and secretarial support for researchers. It is for compliance with government-mandated regulation of university research. These activities are neither optional nor frivolous. Almost 80% of indirect costs is used to support bench science. Much of it is mislabeled as administrative costs.

Second, a 55% indirect cost rate means that, at most, slightly more than one-third of grant costs are indirect costs. Perhaps the following example can serve as a useful explanation.

A \$100,000 grant is composed of direct costs of \$64,520 and indirect costs of \$35,480. The indirect cost rate is applied to the Modified Total Direct Costs, not to total grant costs. Hence the indirect cost rate is 55%, but actual indirect costs are only slightly more than one-third of the total, or \$35,480 ($\$64,520 \times 55\% = \$35,480$).

Further, in a typical grant, some of the direct costs do not have the indirect cost rate applied against them. This means that

reimbursement is less than in the illustration above. For example, subcontracts over \$25,000 and instruments are removed when applying the rate. That is where the term "Modified Total Direct Costs" comes from.

Additionally, many grants are legislatively or otherwise restricted to lower rates of indirect costs. Typically, the mix of grants that permit reimbursement at the full indirect cost rate and grants that allow less reimbursement is such that universities are actually reimbursed at an effective rate of about 23% of total costs with regard to all federal grants in a university's portfolio.

At the National Institutes of Health (NIH), indirect costs as a percentage of total grant costs have been the same, about 31% each year, for more than 10 years. This indicates that for every dollar a university receives from NIH for research, the university spends \$0.31 for indirect costs; of that amount, \$0.25 ($80\% \times \$0.31 = \0.25) is for essential support of bench science and \$0.06 for administrative costs.

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DOE Lab Competition?

The last paragraph of Andrew Lawler's News & Comment article "White House ponders increase for DOE labs" (11 Nov., p. 963) implies that there is a competition between funding for basic research at Department of Energy (DOE) facilities and the programs for environmental cleanup and applied research. The distinction is not, however, clear-cut. The facilities (combustion research, neutron scattering, and synchrotron radiation) funded by the DOE's Office of Basic Energy Sciences are an important part of that program's contribution to industrial research and development in the United States. More than 100 industrial corporations use these facilities for research defined by their own goals. These corporations range from the giant multinational companies that have major research facilities to one-person ventures. The importance of the facilities to these companies is evidenced by their instrumentation contributions, worth many tens of millions of dollars over the past two decades, as well as by their significant continuing expenditures for experimentation at the facilities. It is an appropriate role for government to allow such industrial use of facilities that are very large and very expensive and depend on

Celebrate 150 Years of Scientific Advancement



In 1998, the American Association for the Advancement of Science (AAAS) will celebrate the 150th anniversary of its founding. A commemorative postage stamp would be a fitting tribute to the Association's historic efforts to promote the progress of science and engineering in the service of humankind.

But your help is essential.

We need letters expressing support for a AAAS commemorative stamp as well as ideas for the stamp's theme and design.

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