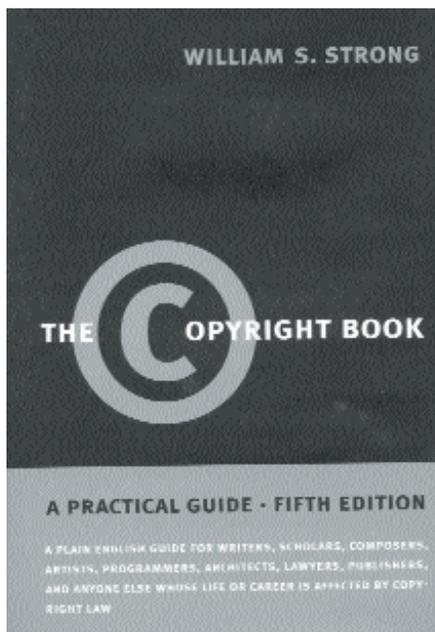


*edited by Walter Pagel*

**THE COPYRIGHT BOOK: A PRACTICAL GUIDE, 5TH ED.** WILLIAM S STRONG. CAMBRIDGE, MA: THE MIT PRESS; 1999. IX + 376 PP. HARDCOVER \$34.95. ISBN 0-262-19419-8.

William Strong's book on copyright is billed as "a plain English guide for writers, scholars, composers, artists, programmers, architects, lawyers, publishers, and anyone else whose life or career is affected by copyright law". The reader will find that in fact Strong has much to say to each, including in this edition detail essential to computer programmers and to publishers and authors involved in electronic publishing. He meets his goal of writing in plain English, too, laying down clear, lucid prose in the rhythm of a fine essayist. The modulation of syntax and tone in this book would make a case study for a writer who must turn a story with a boring surface into a glossy tale that holds readers' attention.

Strong runs in sequence through the copyright law and legal cases that bear on it, and he appends a few documents produced by the copyright office and others. There are chapters on what can be copyrighted, who owns the copyright, how it can be sold and transferred, how to provide notice, and how to register copyright. A chapter on compulsory licenses describes the process for obtaining a license and the procedure by which the copyright holder secures royalties to works under compulsory license.

For technical publishers, the chapter on infringement and fair use stands out. The following brief quotation is a good example:

"Underlying the concept of fair use is the problem of economic competition. In English law what we call 'fair use' is called 'fair dealing'; while that term is inadequate in certain ways, it also captures something important. A use is most likely to be considered permissible if the resulting work does not poach on the commercial value of the original. In this context the quality or nature of the use becomes of primary concern."

A long section on fair use in scholarly publishing is likewise summed up well as follows: "In my view, the publishing industry has become needlessly punctilious in seeking permission to quote short passages. . . . By the same token, too frequent quotations from any one work or related body of work will not be fair use." This chapter's clarity and practicality stand out when compared with a discussion about what constitutes fair use on the University of Texas System Web pages, which strands the reader in a no-man's-land between everything and nothing. After Strong's discus-

sion of the topic, the answer to the question of whether to seek permission is much clearer.

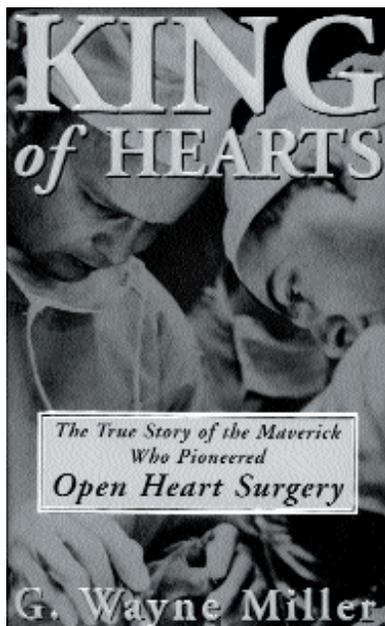
Work made for hire, another topic of considerable importance to science publishers and authors, receives a 13-page delineation of the relationship, how it can be created, and its attendant obligations. It is not always clear whether the employer or the employee should be considered the author of something that the employee creates, and the employer-employee relationship receives careful exposition here. Strong deems cases in which publishers label unsolicited manuscripts as works made for hire "illogical and ineffective: At most, such a contract will be interpreted as a transfer of copyright ownership from the author to the [publisher]."

Coverage of Internet publishing is also extensive, including the Digital Millennium Copyright Act. Questions about the difference between performance and display have added impact on the Internet, and the possibility that anyone anywhere may have access to a document plays havoc in connection with variations in copyright law from country to country. Likewise, the Internet has more tightly constricted definitions of fair use, especially when systems become available on the Internet for seeking and paying for permission to reproduce. Efforts to apply guidelines regarding "copyright management information" to Internet documents are extensive, but Strong believes that "the cure goes well beyond the ostensible disease." As unsettled as this area of copyright is, Strong provides a good flavor for how it may evolve.

To some extent, this book's accomplishments—a wide range of audiences in an attention-grabbing, interest-bearing handbook—make its goal of being a "practical guide" more difficult. As a member of the Boston firm Kotin, Crabtree & Strong, Strong naturally is keenly hopeful that readers understand the complexity of the written law and case law. That complexity is often discouraging. In other cases, the discussion might concern boat hulls, architectural renderings, or masks for transistor circuitry—that is, subjects of peripheral interest to most. For those cases, the handbook seems more like a good story about copyright and a practical guide to when to seek an attorney. I recommend it as either.

**Walter Pagel**

WALTER PAGEL is director of scientific publications at The University of Texas M D Anderson Cancer Center in Houston. He is often called on to give judgments based on his (very limited) understanding of copyright law.



**KING OF HEARTS: THE TRUE STORY OF THE MAVERICK WHO PIONEERED OPEN HEART SURGERY.** G WAYNE MILLER. NEW YORK: TIMES BOOKS; 2000. 352 PAGES. HARDCOVER \$25.00. ISBN 0-8129-3003-7.

CHRISSE CHAMBERS is medical editor in the Section of Scientific Publications at the Texas Heart Institute.

Clarence Walton Lillehei (1918-1999) may rightly be called the “father of open-heart surgery”, not only for pioneering a direct approach to open-heart surgery in the 1950s, but also for his groundbreaking techniques and concepts in pacemaker and cardiac valve technology. Despite his controversial reputation (he lived by his personal motto, “work hard, play hard”), his surgical innovations have yielded immeasurable benefits for thousands of patients.

In 1950 Lillehei was a full-time member of the surgical faculty at the University of Minnesota Medical School. During his residency he had gained confidence in the operating room. The intestines, the liver, the stomach, the lungs—each provided a surgical challenge, but none captured his interest as the heart did. Lillehei was fascinated by the possibility of repairing complex intracardiac birth defects, which then meant certain death for the children born with them.

The main obstacle to repair of intracardiac birth defects was the lack of a way to support the patient’s circulation while the heart was stopped and opened. In 1953 John Gibbon had used a complex heart-lung machine to correct an atrial septal defect. For 26 minutes his machine sustained the patient’s life, and the repair was a success. However, Gibbon had difficulty duplicating his results, and his next two patients died. Gibbon became discouraged, declared a 1-year moratorium on the use of his machine in humans, and in fact never used the machine again.

Meanwhile, Lillehei and his associates were researching the experimental approach of “cross-circulation”, in which the patient was connected to a human “donor” who served as a living oxygenator. In 1954 and 1955 Lillehei used this method to repair 45 hearts that had complex defects. But physiologically, cross-circulation was a high-risk procedure, especially for the donor. And because of ethical considerations—including the potential loss of two patients during a single procedure—it was never widely used.

Lillehei knew that he needed a machine to support circulation during open-heart surgery. In 1955 he and Richard DeWall introduced the first successful bubble oxygenator. The machine—made of cork, plastic tubing, a reservoir, needles, two filters, and some beer hose—worked by introducing large bubbles into the blood. The oxygen in the bubbles was absorbed by the blood, which was then passed through an antifoaming agent, down through the beer hose, and into a reservoir. As the blood moved down the hose, any remaining air bubbles rose to the top of the stream and burst before the blood was circulated back to the patient. For the next 25 years the DeWall-Lillehei heart-lung machine would be the preferred cardiopulmonary bypass device.

Lillehei’s ingenuity was not limited to the development of the heart-lung machine. He helped to pioneer two other techniques of open-heart surgery: hemodilution (increasing the fluid content of the blood) and moderate hypothermia (cooling the body to lower its oxygen requirements and to slow circulation). He also introduced the first portable, permanent cardiac pacemaker and designed several heart-valve prostheses, including the Lillehei-Kaster and St Jude Medical valves.

By the age of 55, Lillehei had begun to lose his eyesight (as a late complication of irradiation for lymphosarcoma of the parotid gland), and he retired from surgery. Despite retirement, he remained active as a lecturer and writer. From 1979 until his death in 1999 he also served as medical director of the St Jude Medical Heart Valve Division.

*King of Hearts* presents a sometimes melodramatic but ultimately moving biography of a complex and controversial hero. Avid readers of medical thrillers, biographies, or historical novels will each find something to their liking. For the most part, the narrative is gripping and very readable:

Lillehei began to explore the inside of

Gregory's heart with his fingers and forceps. He did not have magnifying lenses, nor proper light—his headlamp threw too narrow a beam. . . . Still, Lillehei found the defect easily. . . . The diagnosis seems to be correct, Lillehei said. Let's go ahead.

Because *King of Hearts* is aimed at a lay audience rather than at medical professionals, some readers may find its style overdone. Such chapter titles as "A River of Blood" and "Bread Upon the Waters"

provide some clue as to language and style. Despite this minor criticism, *King of Hearts* tells a story of great medical importance. The book is also meticulously researched, referenced, and indexed, and it includes 17 photos of Lillehei, his patients, and his associates. All in all, *King of Hearts* provides a deserved tribute not only to a pioneering surgeon, but also to his brave young patients and their families.

**Chrissie Chambers**

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