

senting these results, we are not making judgments regarding their validity. Many reports presented at the Tri-Service conferences and elsewhere, both supporting and challenging the safety of exposure to 10 mW/cm², were questioned at the time. Negative discussion was apparently very lively at times. However, since little criticism of existing data was ever published, we have had to assume that all unchallenged studies were available to those who set the standard.

34. G. Knauf, in (30), p. 9.
35. S. M. Michaelson, *IEEE Trans. Microwave Theory Tech.* **19**, 133 (1971).
36. U.S. Senate Committee on Commerce, *Hearing on S. 2067* (90th Congress, 1st session, 1968), pp. 407-408.
37. J. H. Vogelmann, in (30), p. 31.
38. T. S. Ely and D. E. Goldman, *IRE Trans. Bio-Med. Electron.* **11**, 38 (1956); *IEEE Trans. Biomed. Eng.* **11**, 123 (1969).
39. S. Bach and S. Lewis, in (32), p. 87.
40. S. Bach, in (30), pp. 131-132.
41. Perhaps the best evidence for a lack of research of low-level effects is the problem the military had in finding researchers to study such effects in the early 1960's, when the Moscow Embassy problem arose.
42. J. W. Schereschewsky, *Public Health Rep.* **41**, 1939 (1926); *ibid.* **43**, 927 (1928); *ibid.* **48**, 844 (1933); *Radiology* **20**, 246 (1933).
43. E. Schliephake, *Kurzwellentherapie* (Actinic Press, London, 1935).
44. W. T. Szymanowski and P. A. Hicks, *J. Infect. Dis.* **50**, 1, 466 (1932).
45. D. Goldman, in (32), p. 93.
46. R. L. Carpenter, D. K. Biddle, C. A. Van Um-mersen, *IRE Trans. Med. Electron.* **7**, 152 (1960).
47. *J. Am. Med. Assoc.* **150**, 528 (1952).
48. G. Knauf, in (30), p. 10.
49. H. P. Schwan, letter to J. J. Anderson, 16 June 1965.
50. H. P. Schwan, in (18), p. 88.
51. A. Frey, personal communication.
52. Minutes, meeting of American Standards Com-

mittee C95, 20 November 1962, p. 5. See also the minutes for the meeting of 24 April 1962.

53. It is impossible to summarize the many developments that have taken place since 1966. Even as we write, voluminous reports are being prepared and published by numerous federal and private organizations, including newly formed ones such as the Bioelectromagnetic Society. The proliferation of reports and organizations could lead to effective problem-solving or could further fragment an already complex field and make effective problem-solving more difficult. Our objective is not to suggest that one or the other will result. Rather, our objective is (i) to suggest, on the basis of past experience, that organization or increased funding alone will not solve problems of this sort and (ii) to give some reasons why this is the case.
54. Supported by NSF grant OSS-78-06675 and by the Science, Technology, and Values program of NEH. We thank the University of Michigan Collegiate Institutes for Values and Science for their encouragement.

Court Finds That *Science Digest* Infringes on Logo of *Science*

William J. Broad

On 28 April, after 5 days of trial, the U.S. District Court for the District of Columbia ruled that a redesigned edition of *Science Digest* magazine had infringed on a registered trademark of the AAAS, the cover logo of *Science* magazine. Infringement first occurred in October 1979 when the Hearst Corporation published a "special edition" of *Science Digest* in which the word "Digest" on the cover had shrunk to 9 percent of the area occupied by the word "Science." In the regular edition of the magazine, both words are the same size. Hearst has so far published three issues of the special edition, which is slated to eventually replace the regular edition.

Throughout most of the trial, a copy of the special edition rested on a stand some 14 feet away from U.S. District Court Judge Joyce Hens Green, who in her 28-page opinion commented on the visibility of this exhibit. "Although abundantly cognitive of the true title of the magazine and the words which actually existed on the cover, and forcefully straining for a more neutralized perspective, the Court nonetheless continually found the word 'Digest' blurring into oblivion."

On the basis of this and a good deal of other evidence, Judge Green enjoined

Hearst from further publication of the special edition in its present form, ruling that the word "Digest" must in the future occupy at least 75 percent of the area occupied by the word "Science." The case is one of the few in which a court had found trademark infringement on the basis of word size, rather than meaning.

During the trial, attorneys for the AAAS argued that Hearst had deliberately infringed on the cover logo of *Science* in an attempt to lure new customers. If this had been found true, it would have required Hearst to pay AAAS profits from the special edition as well as damages. The court ruled, however, that there was insufficient evidence of deliberate intent to infringe. "In Hearst's selection for the title of its revised publication a logo visually almost identical to *Science*, with 'Digest' virtually obfuscated and therefore falling from sight and mind, there is the suggestion, but just that, of an intent to capitalize deliberately on *Science*'s enviable good will, prestigious reputation, and alluring market."

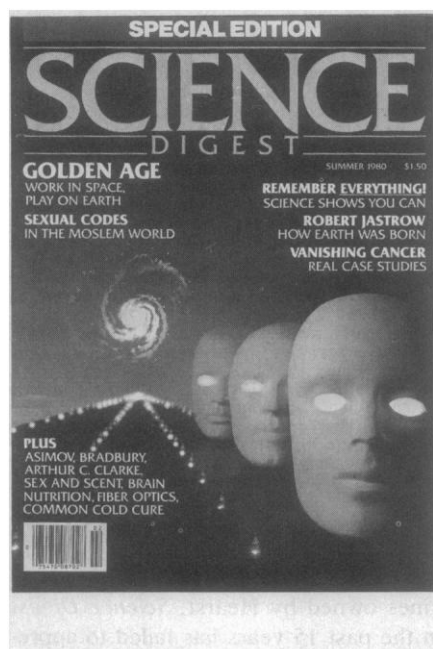
Science Digest first appeared in 1931, and for years it has been published as a small monthly, about the size of *Reader's Digest*. Unlike the 14 other maga-

zines owned by Hearst, *Science Digest* in the past 15 years has failed to appreciably increase its circulation, and in the past 5 years has suffered a financial loss. In an attempt to upgrade the magazine and treble its circulation, Hearst launched the special edition as a test of commercial success. Unlike the regular edition, it is the same size as *Science* and *Science* 80. This special edition, according to the court, "is a flashy, up-beat magazine that differs from *Science* as a Philip Roth novel differs from a Shakespeare play, as Bo Derek does from Katherine Hepburn."

The cover of the Winter 1979 issue announced articles on "Sex and Survival—Our Erotic Origins," "Fuel from Water—Science says Yes," "Plus Urgent News on Radiation, Pain, Cancer, Smoking, Pesticides, Burns." Some of the stories, the court wrote, "recall the old *Science Digest* as far as their implausibility."

At the trial, Hearst's expert witness on the design of the magazine covers testified that because *Science Digest*'s logo was designed as a "unitary title," a consumer approaching a newsstand would perceive the title correctly as "Science Digest." A key AAAS witness took issue with this, and testified as to his own confusion. Arthur Habel, a public relations consultant by profession, had become familiar with *Science* over the years, and had read it continuously for 6 months in 1974. Last fall, Habel saw a copy of the special edition of *Science Digest* in the office of a friend and thought it was a special edition of *Science*. He later wrote Hearst, asking for the "special edition of Science." All this became known to attorneys for AAAS during the discovery process, when they came up-

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The "special edition" of *Science Digest* (left) is about the same size as *Science*. The regular edition (right) is about the same size as *Reader's Digest* and *T.V. Guide*.

on Habel's letter in Hearst's files. "The circumstances," wrote the court, "under which Habel was located by AAAS's counsel serve to add great credibility and weight to his testimony."

Hearst, in addition to arguing that the special edition did not visually infringe, argued that "Science" was a generic term for a class of magazines, and that the AAAS claim to the trademark should thus be canceled. Aspirin, to take a related example, has become a generic term that cannot be registered. The court, however, dismissed Hearst's argument. "[Hearst's] list of apparent candidates for a supposed class of science magazines includes publications with such diverse sounding titles as *Science Citation Index*, *Compost Science/Land Utilization*, *Tire Science & Technology*, to name a few. The only commonality among these publications would appear to be that their titles include the word 'science.'

"Yet even if there were some definite class of science magazines," the court went on, "it does not follow that AAAS's mark is a generic term for that class. Plaintiff's mark is 'science,' but neither its product nor any class of magazines constitute science. 'Science' refers to bodies of knowledge. The product is 'magazine.' Simply characterized, plaintiff's mark is not generic, but descriptive." The court also noted that Hearst holds the registered trademark to a magazine with a similar title, *Motor*.

On a slightly less esoteric issue, Hearst also alleged that *Science* had not

achieved a "secondary meaning"—an association in the mind of the buying public between the name of the product and the product itself or its source. This is an important allegation, since a trademark's secondary meaning bestows upon a descriptive title the "distinctiveness" which is a prerequisite for trademark protection. The court found, however, that "AAAS has gone far beyond its burden, producing substantial evidence of *Science*'s secondary meaning."

Some of this evidence included the fact that the mark has been used continuously for almost 100 years, and that more than 1 million people received promotional materials from *Science* in 1979. In addition, attorneys for AAAS showed that *Science* is cited in newspaper articles approximately five times a week. From May 1978 through April 1979, moreover, articles in *Science* were cited in 1048 stories in newspapers and other nontechnical publications throughout the country. These stories appeared in 412 newspapers, 23 general interest magazines such as *Time* and *Newsweek*, and 53 specialized publications. The attorneys noted that very often it is cited in other scientific journals, one study finding *Science* the seventh most frequently referenced journal in the world. Moreover, hundreds of thousands of reprints of *Science* articles are sold annually.

In addition to the issue of secondary meaning, the question of intent to infringe upon the AAAS trademark loomed large at the trial. The evidence seemed straightforward. In January

1979, the artist who eventually designed the present logo of the special edition of *Science Digest* met with Gilbert C. Maurer, president of the Hearst Magazine Division, to discuss the graphics of the special edition. At this meeting, according to the court, Maurer asked the artist to redesign the logo.

A critical question in court was whether or not Maurer knew of *Science* and the plans for *Science 80* when he did this. According to court records, Daniel Button, editor of the regular issue of *Science Digest*, sent several memos between November 1978 and February 1979 to Maurer concerning AAAS, *Science*, and *Science 80*. In the third, received in February 1979, Button discussed *Science* magazine and noted that there was a "copy attached" to the memo. Maurer testified in court, however, that he did not recall reading any of these memos or seeing the copy of *Science*. The court found this testimony hard to believe. "It is highly implausible that a man who had assumed full and personal control over the revitalization of a stagnant magazine, the single disappointment of a flourishing empire, would fail to read six memoranda concerning such an important development as the plans of a prestigious scientific organization to introduce a potentially competitive magazine. The court is not convinced that Mr. Maurer, a forceful executive and member of the Hearst Corporation's board of directors, could have failed further even to suggest ideas and provide guidance to his art director who testified that he blazed the new trail on his own without any directional scope."

In its ruling, however, the court found insufficient evidence of deliberate intent. "At the minimum," the court wrote, "Hearst was careless, and carelessness is a factor weighing in favor of granting relief to AAAS."

A fourth issue of the special edition of *Science Digest* is slated to appear at the end of June. For the moment, Hearst has not revealed how it will change the cover logo to meet the court-ordered requirement that the word "Digest" occupy at least 75 percent of the area occupied by the word "Science." But change it must. Said the court in its written opinion: "To prevent irreparable harm to AAAS by the dilution of the distinctiveness of its trademark, the loss of control over its unblemished reputation for quality, and the diminishment of its goodwill, Hearst must be enjoined from publishing its magazine with the word 'Science' displayed to such a predominance that the viewer is magnetized into perceiving it as the title."