# Letters

## Laser Patents

There has been so much misunderstanding arising from reports about a recent California court decision involving lasers that it seems desirable to set the record straight.

The San Francisco court did *not* decide that the Gould patent had precedence over the earlier Schawlow-Townes patent for the invention of the laser. Quite the contrary, in 1966, in the only direct confrontation between Schawlow-Townes and Gould, in the Court of Customs and Patent Appeals, Schawlow and Townes were victorious. This issue is settled beyond further legal challenge.

A. A. PENZIAS

*Bell Laboratories,*
*Murray Hill, New Jersey 07974*

As noted in an article on this subject (News and Comment, 23 Apr., p. 392), Gould narrowed his claims after losing the priority dispute with the Schawlow-Townes patent in 1966. However, he did win a narrower patent in 1977 for a device described as an "optically pumped laser amplifier." The San Francisco decision affirmed the validity of that patent. But on 9 July, AT&T, Bell Laboratories, and Western Electric sued in New York to have the patent declared invalid. Gould and his partners have countersued, charging AT&T *et al.* with anticompetitive practices.

—ELIOT MARSHALL

## Nuclear Proliferation

The Reagan Administration has approved the export to West Germany and France of special lasers that will be used to develop an advanced isotopic separation technique called laser isotope separation (LIS) (*1*). Once this technique is developed, each country will be able to produce highly enriched uranium and weapons-grade plutonium at potentially less cost than current techniques. Furthermore, France could divert reprocessed plutonium from its commercial nuclear reactor program to its weapons program, something it could not do without this technology.

The export of this technology further erodes the separation between the military and civilian nuclear programs. The Office of Technology Assessment of the U.S. Congress has stated that "the sale of LIS and other advanced enrichment technologies presents a greater proliferation danger than indigenous development of the technologies"(*2*).

France and West Germany both have an extensive commercial nuclear reactor program and a reprocessing capability. By 1990, when each country could possibly have a LIS pilot plant in operation, France would have produced about 37 metric tons of plutonium-239 in its light water reactors' spent fuel and Germany would have produced 21 metric tons (*3*). The plutonium-239 could be extracted from the other plutonium isotopes at this pilot plant. In France, this weapons-grade plutonium could then be diverted to its weapons program.

By the turn of the century, both countries would have access to about 185 metric tons of weapons-grade plutonium. To date the United States has only produced about 100 metric tons for its weapons program (*4*). This 185 metric tons of plutonium could be used to produce about 30,000 Nagasaki-sized fission bombs.

Currently, Congress is on the verge of enacting legislation that would prohibit the transfer of plutonium generated by commercial nuclear power plants to the Department of Energy for the manufacture of nuclear weapons, except in a case of national emergency. The export of essential parts of the LIS technology to France and Germany does not conform with the intent of Congress to discourage proliferation.

DAVID ALBRIGHT

*Environmental Policy Institute,*
*317 Pennsylvania Avenue, SE,*
*Washington, D.C. 20003*

### References and Notes

1. M. R. Benjamin, Washington *Post*, 9 July 1982, p. A-1.
2. Office of Technology Assessment, *Nuclear Proliferation and Safeguards* (Praeger, New York, 1977), p. 184.
3. *Fuel Trac* (Nuclear Assurance Corporation, Atlanta, Ga., October 1981). The values were derived from data on fissile and total plutonium inventories.
4. For a discussion of this estimate, see T. B. Cochran and W. M. Arken, "Nuclear weapons data book" (in preparation) or H. Morland, "Technical memorandum on the DOE's alleged shortage of bomb-grade plutonium" (Coalition for a New Foreign and Military Policy, Washington, D.C., January 1982).

## Genetic Screening

Constance Holden's article about the Office of Technology Assessment's (OTA) study of genetic screening in the workplace (News and Comment, 23 July, p. 336) illustrates a problem with that study. According to Holden, OTA, ". . . said that at least 59 major corporations may be planning to inaugurate some kind of genetic testing of employees in the foreseeable future." This conclusion may be more a reflection of biases in OTA's questionnaire than of corporate intent.

As one of those in industry who was consulted by OTA on the questionnaire design, I objected strongly to the question, "Does your company anticipate conducting biochemical genetic [cytogenetic] testing during the next five years?" The only choices for answers were "yes," "no," and "possibly." With no specific place to say "don't know," anyone who responded with other than an unequivocal "no" "may be planning to inaugurate . . . testing."

Holden correctly points out the controversial, emotional aspects of biochemical and cytogenetic screening. It certainly is not necessary to add to the controversy by using a questionable research technique and then reporting the results as facts.

HOWARD L. KUSNETZ

*Safety and Industrial Hygiene,*
*Shell Oil Company, One Shell Plaza,*
*Houston, Texas 77210*

## Study of Anomalous Phenomena

Constance Holden's account (News and Comment, 25 June, p. 1390) of the first meeting of the Society for Scientific Exploration contains errors that I would like to correct.

By the time of the June meeting, our total membership was indeed 130 (and is now larger), but the requirement of a professorial appointment at a major university applied only to the 100 founding members. One-third of our membership is from physics, chemistry, and mathematics; one-quarter each is from space science and astronomy and from the life sciences; and the remainder is from the social sciences.

Holden's perception that "the assumption of the group is that it is not getting a fair shake" is not shared by the council of the society. On the contrary, we are most gratified that the society has been received with courtesy and open-minded interest by our colleagues in a