

Patents, copyrights a bargain—for now

From basement workbenches to national labs, creative minds are constantly developing what they hope will prove popular and useful products. With a patent, these inventors can establish a right to profits from the commercialization of their innovations. A congressional audit now reports that fees to cover the costs of processing U.S. patent claims are generally not commensurate with the services an inventor receives. Its recommendation: Raise those fees.

The Patent and Trademark Office, which is supposed to be economically self-sustaining, is not running in the red yet. Trademark processing fees “appear to be aligned with costs,” according to a new report by the General Accounting Office (GAO), an investigatory arm of Congress. Many of the 139 types of patent fees, however, are not in line with the expenses.

Evaluation of the material filed by an inventor accounts for about 90 percent of a patent’s costs, the GAO notes. Yet owing to the agency’s fee structure, it brings in only 19 percent of the revenues. Applications that a filer abandons midway through the process—about one-third of all submissions—incur normal patent examination costs, yet bring in only a small submission fee. Among other inequities, large entities pay twice the fees of small inventors, even though the cost of processing their claims is the same, and fees for complex filings are identical to those for simple ones.

The report also observed that copyright fees, typically \$20 per filing, do not cover the average processing costs of \$36.53. In addition, the Library of Congress holds a copy of most unpublished works granted a copyright, and it does so throughout the copyright’s full term, usually about 125 years. GAO recommends that Congress establish far shorter holding times for unpublished works, perhaps 5 years, after which the library should dispose of the work—unless the author antes up an additional one-time holding fee of \$270. —J.R.

Elementary science and math

Third- and fourth-grade children from Korea, Singapore, Japan, and Hong Kong outperform their peers in the rest of the world in math. Korean and Japanese children also top the list in science. However, children from most of the developed Western nations don’t lag behind their high-performing Asian counterparts by much, according to the latest installment of the Third International Mathematics and Science Study (TIMSS).

TIMSS, which assesses both teaching styles and student achievement, seeks “to find the correlates of good education around the world,” explains Albert E. Beaton of Boston College, who directed the analysis. Asian children also led the pack in science and math when his team reported achievements of middle schoolers last fall (SN: 11/30/96, p. 341).

Most countries had similar standings at both grade levels. The United States was among the exceptions. Its elementary school students averaged 11th among 26 surveyed nations in math and third in science—in both cases, solidly within the top cluster. In contrast, U.S. seventh and eighth graders were only average in each field, compared to peers in 40 other countries.

Indeed, Beaton says, “the big surprise was these flips [in U.S. achievement] between the fourth and eighth grades.”

U.S. parents are likely to ask how to improve students’ performance. The simple answer, Beaton says, “is that we don’t know. The easiest part is what we’ve done—the standings. The hard part is trying to explain those standings. That’s going to take some thought.”

In fact, Beaton says, “If there were any simple answers”—add an hour to the school day, give each student an abacus, or cut television viewing—“I think we’d have known that already.” What does emerge repeatedly, he says, is a strong

link between a child’s performance in school and the family environment, such as the number of books in the home and the parents’ education.

Coming soon: TIMSS data on high school seniors. —J.R.

Finding better homes for captive oranges

To discourage an illegal pet trade in orangutans, Indonesia has confiscated hundreds of the animals over the past few decades. Now, lacking funds to maintain them all, it has to figure out what to do with the captives.

Rehabilitation has long been considered a humane option. Confiscated animals have been sent to holding centers in Malaysia and Indonesia, the only places with native populations, where scientists initiate a lengthy and costly program to prepare the animals to rejoin their wild kin.

Now, a study by primatologist Carey P. Yeager of Fordham University in Armonk, N.Y., finds that “despite the best of intentions,” reintegrating most captive orangutans into wild populations just doesn’t work.

Yeager studied the fate of 27 animals released at Indonesia’s Tanjung Puting National Park rehabilitation center in 1981 and 1982. As of 3 years ago, only 11 were definitely known to be alive, she reports in the *JUNE CONSERVATION BIOLOGY*. Since many animals remained strongly dependent on the center for food after their release, a sudden, prolonged absence suggests that they have succumbed to injury or disease.

Inappropriate behavior compromises the released orangutans’ survival. Most had been captured in infancy, long before finishing some 7 years of schooling by their mothers in foraging and other ways of the wild. The naturally solitary animals, which can live 60 years, also become abnormally sociable in captivity—a trait that fosters contact with people and unwelcome, even violent interactions with wild orangutans.

Zoos aren’t a viable alternative, because the birthplace of most captives is uncertain—and zoos no longer combine orangutans taken from different areas (SN: 3/25/95, p. 184). So rather than mixing behaviorally incompatible animals, Yeager recommends that governments release captives to forested areas where no wild orangutans exist. “As ex-captives are a major tourist draw, it might be possible to completely fund the feeding and maintenance of [these animals] and provide funds for protection of the wild population through eco-tourism.” —J.R.

Seen any deformed frogs?

Two years ago, middle school children on a field trip to a farm in southern Minnesota observed that about half of the local pond frogs sported unusual numbers of legs or structural limb deformities. Local biologists and the Minnesota Pollution Control Agency soon found this was just the leading edge of a worrisome trend. Scientists from California to Quebec have now witnessed regional pockets with similarly high rates of limb and eye malformations in frogs, toads, and salamanders.

Though many researchers worry that these animals may serve as harbingers of a threat to humans, to date they have been unable to pinpoint what underlies the problem.

As part of a new, coordinated investigation of the issue, the U.S. Geological Survey has launched a North American Reporting Center for Amphibian Malformations (NARCAM) out of its Northern Prairie Science Center in Jamestown, N.D. Hoping to locate hot spots, NARCAM put out a call 3 weeks ago for help from the public. It wants everybody who encounters a deformed amphibian to report it, either through NARCAM’s Website (www.npsc.nbs.gov/narcam) or a toll-free number (1-800-238-9801).

NARCAM requests that people “please leave amphibians where you found them.” If there is a need to study or collect specimens, it will dispatch a local herpetologist. —J.R.