Russia's Science Spending Diving Toward New Low

Russian science dominated a workshop in Moscow on 15–16 December sponsored by the Russian Ministry of Science and the Paris-based Organization for Economic Cooperation and Development (OECD). But the meeting produced no tangible strategy for reforming a beleaguered scientific community.

Russian scientists received more gloomy news last month: The government has sent to parliament a 1999 budget that is unlikely to keep pace with inflation and which amounts to a 70% cut when converted to dollars. Discussions about how to rescue Russia's R&D budget has spiraled downward in the last decade, from $10 billion in 1990 to $1.83 billion in 1998. As a result, federal spending per researcher dropped from $9000 in 1997 to $5000 in 1998—less than 4% of expenditures typical in the West, says Levan Mindeli, director of the Center of Science Research and Statistics in Moscow. The Yeltsin Administration's budget submitted to the lower house of parliament, or Duma, last week would give science 11 billion rubles next year, at the present exchange rate about $520 million. Such numbers will make it harder than ever for new Science Minister Mikhail Kirpichnikov to protect basic research (*Science*, 11 December 1998, p. 1979).

At the meeting, Russian officials said the best hope for salvation is the development of high-tech industries. "This is the only way to pull Russia out of the crisis," says Deputy Science Minister Gennady Tereshchenko, who argues that the ministry could lay the groundwork for such an industry. OECD's Michael Oborne, however, says he doubts that an industry could be born from "administrative measures." The OECD has estimated that getting such a sector on its feet would require a cash infusion of approximately $1 trillion. Bake sales and IMF loans are unlikely to do the trick.

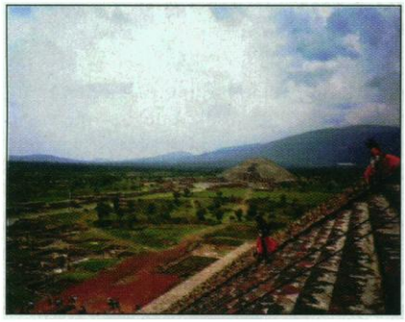
Open Your Eyes

"Clinical research misconduct is like child abuse. Once you recognize it, you start to see there's a lot of it about."

—Richard Smith, editor of the *British Medical Journal*, last month at the Hong Kong Academy of Medicine's First International Congress.

Urban Decay in Old Mexico

For centuries, Teotihuacan was one of ancient America's crown jewels, with magnificent buildings, powerful kings, and bustling markets. But by 600 AD it was in the grips of urban decay, with pollution and disease killing off young laborers in this ancient Mexican city, a researcher reported last month at the annual meeting of the American Anthropological Association in Philadelphia.



A town that went extinct.

Teotihuacan stood just northeast of where Mexico City is today, with an estimated 125,000 citizens packed into 20 square kilometers. "Teotihuacan was the first really urban society of the New World," says anthropologist Rebecca Storey of the University of Houston in Texas.

Since 1991, Storey has been studying the city's grimy underbelly, examining the skeletons of 206 ghetto dwellers who worked as stone polishers or potters. In preindustrial cities, most deaths typically occur in children or in adults older than 45—a pattern that appeared to prevail in the early days of Teotihuacan as well, around 200 AD. But within 400 years, the number of skeletons belonging to teenagers and young adults increased by as much as 35%. Their teeth and bones revealed poor nutrition and infections.

The culprits were pollution and poor sanitation, Storey suspects. With no sewer system, citizens depended on seasonal rains to flush garbage away, but it would have piled up and rotted during the dry summer, causing stench and disease. The city ceased being "a dynamic, attractive place," Storey imagines. Indeed, the potters and stone polishers abandoned their compound by 600 AD: There are no signs of human habitation such as tools, trash, or bones in more recent layers. Within 50 years the entire city had become a ghost town.

The findings provide a new glimpse into New World city life, says Deborah Nichols of Dartmouth College in New Hampshire. "We tend to think of these cities as romantic 'shining stars' that attracted people from all over. ... Storey's work shows they could also be black holes, sucking people in and destroying them."

1999 Japan Prizes Announced

Keeping things up and running could be the common theme for winners of the 1999 Japan Prize, announced in Tokyo on 16 December.

Jack Strominger and Don Wiley of Harvard University's Department of Molecular and Cellular Biology will split 50 million yen ($430,000) for deciphering the 3D structure of human histocompatibility molecules—hailed by the committee as "an extremely important contribution toward understanding the mechanism of immune, auto-immune, and allergic responses." The other 50-million-yen award goes to computer scientist W. Wesley Peterson at the University of Hawaii, Manoa, who back in 1961 pioneered the development of error-correcting codes for computers. The awards will be presented in Tokyo next April. The Japan Prize is awarded in two preselected categories each year. Next targets: immunology ("host defense") and city planning.

Peterson

Strominger

Wiley

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