GERMAN RESEARCH

Max Planck at 50 Seeks to Move With the Times

MUNICH—Fifty years ago, the surviving leaders of Germany's scientific establishment—battered by a dozen years of Nazi rule and a devastating world war—met in the university city of Göttingen to rebuild what had once been the nation's most respected scientific organization, the Kaiser Wilhelm Society. Founded a few years before World War I, the society had built institutes around great researchers (including physicist Albert Einstein) but had lost many of its best scientists and much of its international reputation during the Nazi era.

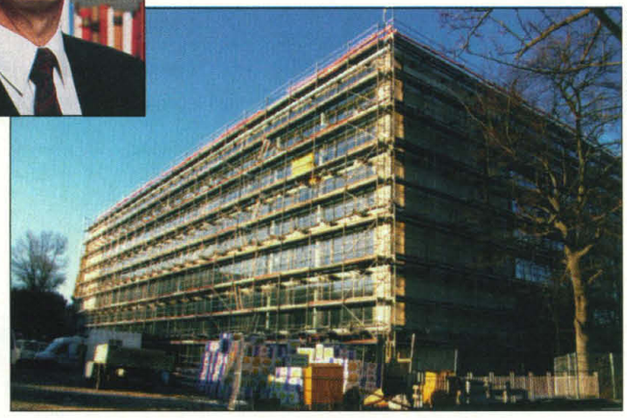
MAX PLANCK SOCIETY

The victorious Allies considered dissolving the society shortly after World War II, but German scientific leaders convinced British and American occupiers to allow them to reconstruct the renowned research organization under a new banner, the Max Planck Society—named after the Nobel Prize–winning theoretical physicist. The new society's first meeting, on 26 February 1948, proved to be a seminal event in the rebirth of postwar German science. With an annual budget of about $1.1 billion, Max Planck now maintains 75 institutes, and its scientists have won 10 Nobel Prizes since 1984.

As prominent German scientists gather next week in Göttingen to celebrate the society's 50th anniversary, Max Planck President Hubert Markl is focusing more on the organization's future than its past. In an interview with *Science*, Markl said he wants to move forward with plans to make the society more competitive and future-oriented. As a first step, Markl expects the society's governing board to approve a plan to put all Max Planck institutes through a thorough evaluation every 6 years, as well as to give the society's leadership more power to dissolve unproductive institutes and shift their resources to more cutting-edge, productive research. At the same time, Markl wants to increase flexibility by hiring more scientists on limited-duration contracts. "Ideally," he says, "about two-thirds of the positions in institutes should be temporary. The idea is to have more turnover, more renewal, at the institutes."

Rather than impose such reforms from the top, Markl seeks the backing of a strong majority of his directors. It could be a tough sell: Institute directors are widely envied because they receive lavish support with few strings attached, and some of Markl's proposals would make them more accountable. "I will never get 100% agreement," Markl acknowledges, "but let's say 75% of the directors should agree with the new procedures. And I think they will."

Some prominent scientists within the organization who are familiar with Markl's plans have so far been cautiously supportive. Gerhard Ertl, a director of the society's Fritz Haber Institute for physical chemistry in Berlin, supports the concept of such evaluations if they can "improve the efficiency" of Max Planck's research activities. Dieter Oesterhelt, a director of the Institute for Biochemistry in Martinsried, cautions that any changes should be implemented in a way that will not endanger a key advantage of Max Planck institutes: the opportunity for scientists "to initiate long-term projects that do not promise immediate scientific return."



ROBERT KOENIG

Looking ahead. Max Planck President Hubert Markl and the society's new headquarters, under construction in Munich.

Markl is no stranger to reform. Since taking office in June 1996, Markl—a biologist who is the first president to come from outside the ranks of Max Planck—probably has had to make decisions on more changes than any of his predecessors. "It's not because I am a 'hatchet man,' but because the government has demanded substantial cutbacks in personnel," he says. Since 1996, Max Planck has ordered the closure of three full institutes, plus about 20 departments of other institutes in western Germany. Meanwhile, in the former East Germany, the society has opened or announced plans for 17 new institutes, a partial institute, and a research center. All will be in full operation within 3 years.

Markl says he wants to continue insulating the best scientists from funding worries, but he also warns that the "idea of a lifetime entitlement to [the society's] resources simply cannot be maintained in the future." He adds that he wants "the flexibility to be able to shift resources to the most productive groups." To help achieve that, he wants to put more teeth into the organization's evaluation process.

At present, internationally known scientists evaluate the work of individual institutes every second year, and they also provide some longer term evaluations. Although those critiques are useful, "there are seldom any hard consequences," Markl says. "I don't want to put our scientists under a year-by-year pressure," because that would discourage many directors from taking on risky, long-term projects, he says. "But I think that, after 5 or 6 years, a qualified expert advisory review board should be able to review what has been achieved" and give a frank analysis to the society's president. If an institute's work is faltering, says Markl, "we must be able to interfere."

While he is pushing for these internal reforms, Markl is also putting together panels of prominent scientists to work out a future direction for the society and its institutes. "I want vision, perspective, a general direction," Markl says. "In which fields should we intensify research in the future? Which areas are of less interest and should be scaled back?" The exercise, called the "Max Planck Society 2000-Plus" project, will publish a set of recommendations by mid-1999, about the time that Max Planck's new headquarters building will open in Munich.

Realistically, because of Germany's current budget constraints and the need to complete the new institutes in eastern Germany, there will be little opportunity for founding big new institutes or making sweeping changes over the next 3 years. "But when we look toward 2002 to 2005, then we should be prepared to make significant changes," says Markl. While those changes will help prepare Max Planck for the new century, Markl recognizes that the key to Max Planck's future success still resides in the quality of its scientists. "We are only as good as our researchers."

–Robert Koenig

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