U.S.-Style Universities for Germany?

While reform of Germany's public university system stalls, entrepreneurs are preparing to challenge the status quo with a new generation of fee-paying colleges

A disused army compound may seem a far cry from the dreaming spires of most of Germany's ancient universities. But if the German city-state of Bremen gets its way, the barracks and huge tank warehouses of this former military school in the north of the city will soon be renovated to become the laboratories, college halls, and living quarters of a new university. The location is not all that is unusual about this new institution: It will be Germany's first private, American-style research university. It will select its own students, charge them hefty tuition fees, and pay its staff members a salary based on their achievements—in short, it will break some of the most sacred taboos in German higher education.

The initiative in Bremen is the boldest of about 10 schemes that have been hatched in recent months to circumvent the seemingly intractable problems of Germany's universities. Almost all of the country's existing universities are run by local state governments and are overcrowded, overregulated, and lack effective quality-control mechanisms. Students spend many years working their way through often ill-structured programs, and interest from foreign students is dwindling because of their reluctance to learn German, the confusing programs, and the German degree structure, which does not match that of other countries (*Science*, 2 February 1996, p. 684 and 12 July 1996, p. 172).

German industry in particular has become impatient with the slow pace of change and is backing many of the private university projects. Although critics scoff that these embryo institutions are too small to make much of an impact, their proponents say that if they are successful, they could change the face of German higher education. Says Dietmar Brodel, acting managing director of one of the new projects, the Stuttgart Institute of Management and Technology (SIMT), such institutions will function as a "catalyst for university reforms."

A catalyst may be needed. The federal government has been making a concerted attempt to improve German universities, but it has been slow going. Last year it introduced a draft federal framework law for higher education, known as the Hochschulrahmengesetz (HRG), to give the universities more autonomy and flexibility. The HRG would, for example, link funding with research performance, limit a master's degree course to 5 years, and allow universities to select up to 20% of students for popular courses and issue internationally recognized degrees. The Bundestag passed the legislation in February, but a political squabble has prevented it from becoming law. The opposition Social Democratic party wants the HRG to include an explicit ban on public universities charging tuition fees. When the Christian Democrat federal government refused, the Social Democrat–dominated Bundesrat, the German parliament's upper house, voted down the whole HRG in March (*Science*, 13 March, p. 1625). It is now back for discussion in the Bundestag, which was expected to overrule the Bundesrat's rejection this week.

Swords into plowshares. This Bremen military school is due to become Germany's first private university.

But even before the HRG ran aground, some groups had begun taking matters into their own hands. Leading the way are German businesses: Fed up with universities that do not deliver the kind of graduates they need, many are now backing plans to start new universities. In the southwestern state of Baden-Württemberg, for instance, business software producer SAP is backing a plan to establish an institute called the "International University in Germany" in the town of Bruchsal. In September, the institute will enroll its first 50 students in a 2-year master's course in information and communication technology. Similarly, a broad coalition of big Baden-Württemberg companies is backing plans for SIMT. Expected to open in 1999, SIMT will offer courses in international management, finance and investment, and information technology. In Kassel, in the state of Hessen, a small private MBA school will open its doors this fall. Further north, in the city-state of Hamburg, there are plans for a Northern Institute of Technology—with support from companies such as Siemens, Daimler-Benz, Compaq, and Hewlett-Packard—and an International Center for Graduate Studies, both to start in 1999, and a private international law school.

But by far the most ambitious plan is the one being drawn up in Bremen, where the state government has teamed up with Rice University in Houston, Texas, to set up an entirely new university for 1200 students and a staff of about 100 scientists. The two partners are losing little time. After signing a memorandum of understanding in February, they set up a joint planning committee, chaired by Reimar Lüst, former head of both the Max Planck Society and the European Space Agency. The committee intends to have an academic plan finished by this summer, after which the search for a president will begin. The first students are scheduled to arrive in the fall of 2000. "That's pressing it, but I think it's possible," says Thomas Hochstettler, assistant provost of Rice University.

What makes the plan interesting from the American side, says Hochstettler, is the chance for Rice students and faculty members to spend some time overseas. To facilitate exchanges, the new university plans to focus on natural sciences and technology, as Rice does, and if possible match its semester schedule. At Bremen's request, Hochstettler is looking for another renowned American university to join the team. The Massachusetts Institute of Technology has already had high-level discussions with Rice and Bremen.

In Bremen, it was the influence of business that got things moving. The plan—which has the backing of the city's Social Democrat–controlled science and education ministry—was masterminded by Josef Hattig, the energetic longtime head of the Beck's beer company, who recently became Bremen's trade and economy minister for the Christian Democrats. Hattig, still well connected to the business world, told *Sci-*

ence that Bremen wants to "educate the international manager of tomorrow" and that a private university is the most promising way to go about it. "I'm not blaming the German university system. But we intend to do things in a completely new way," he says. "*Vive la différence*!" Part of that difference is that the new university's teaching language will be English, students will have to pass an entrance exam, and they will have to pay up to $8500 a year in tuition fees.

Other private institutions will charge similar or even higher rates, not just to cover their costs, says SIMT's Brodel, but also to introduce a financial incentive for students to complete their studies more quickly. "Many students in Germany are enrolled formally, but they don't really push their studies," he says. "Once they have to pay, their motivation is raised."

GERMANY'S PLANNED PRIVATE UNIVERSITIES

Name	Location	Programs	Opening	# of students
International University in Germany	Bruchsal	Business and Information Technology (IT)	1998	400
German-Chinese MBA Program	Berlin	Management and Economics	1998	24
Stuttgart Institute of Mgmt. and Technology	Stuttgart	Management, Finance, and IT	1999	300
Private Hochschule	Kassel	Management and Marketing	1999	50–80
International Center for Graduate Studies	Hamburg	Science, Law, and Economics	1999	60
Northern Institute of Technology	Hamburg	Engineering	1999	60
International Dept., University of Karlsruhe	Karlsruhe	Mechanical Engineering and Electronics	1999	160–180
Bremen International Univ.	Bremen	Science and Engineering	2000	1200
Gerd Bucerius International Law School	Hamburg	German and International Law	Uncertain	400–450

The fees make the new universities something of a gamble, however. It's not yet clear how many students will be willing to pay to enroll in a new institution that hasn't established a reputation and issues international diplomas that few future employers will be familiar with. "We're fully aware that for most students it will be a departure from what they consider to be a traditional career path," says Hochstettler. When he recently met a group of German students in Houston, their feelings were mixed: "Half of them said 'It sounds like an exciting thing.' ... The others said 'Oh, I'd never give up the opportunity to attend a university for free.' "

The federal government applauds the new initiatives, says a spokesperson for science and education minister Jürgen Rüttgers, because they will help bring about a "more varied and colorful higher education landscape." But reactions from the academic community have been mixed. Some universities, like the state-run University of Bremen, welcome the possibility of cooperating with the new institutions because of the opportunities they bring: business and academic contacts, students from abroad, and money. But many academics say some of the new institutions do not deserve to be called universities at all, because they only cover a few disciplines and intend to do little research. "Research and education belong together," says the University of Karlsruhe's rector, Sigmar Wittig, a critic of the new institutions, which he says "are lacking depth in research."

One particularly sensitive issue is that, while calling themselves private, almost all the new institutions rely partly on government support to close the gaps in their budgets, at a time when many of the public universities face cutbacks. "These are tiny little schools for the education of princes and princesses," says Klaus Landfried, president of Germany's Association of Higher Education Institutions. "If they don't have any added value above existing programs, it's unacceptable that they are subsidized by taxpayers' money." Landfried adds that even if they attain their projected enrollments, all the new private institutions together will enroll less than 0.5% of Germany's 1.85-million student population: "They claim that they will make a major contribution to the higher education system in Germany. Quantitatively speaking, that's ridiculous." But Hochstettler believes the new university in Bremen "will shake up the system." If freeing an institution from the state's bureaucratic stranglehold actually works, it might eventually lead to more freedom for the state-run universities as well.

From a science point of view, such a shake-up would be most welcome, says historian Winfried Schulze, president of Germany's Science Council, which plans to issue a formal viewpoint on the matter later this year. Salaries based on scientific merit, Schulze says, would be a good incentive to promote the quality of research, as would increased specialization and competition among universities. But with or without the new wave of private institutions, "there will be reforms in German universities anyway," he predicts. "It's impossible to go on as we did in the last 30 or 40 years."

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U.S. AGENCY FUNDING

Lawmakers Back R&D Boosts for 1999

The first pieces of a 1999 science budget began to emerge last week in Congress, and the results are encouraging for R&D advocates. Basic research at the Department of Energy (DOE) fared well, with spending committees in both the House and Senate giving a green light to a $1.3 billion neutron facility. A Senate panel granted the National Science Foundation (NSF) and NASA more generous funding levels than most observers anticipated, while basic research spending by the military would jump more than 6%. The numbers so far are surprisingly close to the request made in February by President Bill Clinton, who sought substantial increases in most R&D efforts (*Science*, 6 February, p. 794).

"I'm thrilled," House Speaker Newt Gingrich (R–GA) told *Science* in response to the first raft of R&D spending bills approved by House committees. "I want to see as high an increase as possible—and I support doubling the science budget every 8 to 10 years." Administration officials, meanwhile, say they are relieved at the proposed congressional funding levels, given competing pressures under tight spending limits to fund everything from highways to veterans' medical care.

The spending levels approved so far have a long way to go before they become law. Among the highlights of these preliminary actions are:

■ *DOE*: The new big-ticket item in DOE's 1999 request, the Spallation Neutron Source, won a qualified victory. Thanks in part to lobbying by Vice President Al Gore—whose home state of Tennessee