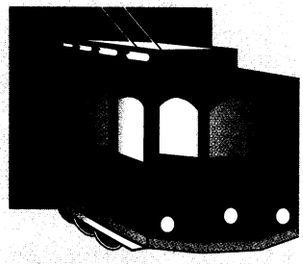
LETTERS



On track?

If human fertility is declining, "Is this bad or good"? German universities might be "in dire need of reform, but what kind of reform?" Is a new theory of turbulence possibly based on "two mistakes"? Could the California Civil Rights Initiative actually *reduce* opportunities for women? And what led up to the coining of the phrase "the streetcar theory of evolution"?

"Environmental Estrogens"

Left out of the discussions of "environmental estrogens" in the 7 June Perspective by S. S. Simons Jr. (p. 1451) and the Book Review by A. N. Hirshfield *et al.* (p. 1444) were the ethical dimensions of this putative problem.

Let us suppose human fertility *is* declining precipitously. Is this bad or good? On an overcrowded Spaceship Earth, this would seem the least painful of Malthusian mechanisms—infinitely preferable to war, famine, and pestilence. It also does away with any element of coercion or racism in birth control—or does it? Perhaps the most affluent would still be able to procure high-tech access to reproduction. Perhaps the "cure," if found, might be withheld from certain elements of global society.

Even those who wish their own species would go away might balk at a mechanism of human extinction that would take down alligators, herring gulls, and a variety of other nonhuman species.

Once again, reality converges to Kurt Vonnegut.

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German Education

The article "The decline of German universities" by Patricia Kahn (News, 12 July, p. 172) presents an accurate account of the current misery prevailing in many institutions of higher learning in Germany. The reasons for this deplorable state of affairs, however, could have been more fully explained. Admittedly, the German universities are in dire need of reform, but what kind of reform?

To understand the problem, one should know the historical development of higher education in Germany. Universities were the creation of medieval potentates—princes and clergy. With the Napoleonic reforms of 1806, the institutions lost their often generous endowments in real estate and thus lost their relative independence to state government. As long as the administration was in the hands of well-disposed officials, brought up in the tradition of humanities and culture, the universities fared well, but the picture changed markedly when political ideology gained the upper hand. Egalitarian precepts opened the door to large numbers of often unqualified students, creating a crowding of incredible dimensions. Doors of the medical schools were opened to anybody, even without a high-school diploma. Politicians diverted large sums of public funds to provide the students—who pay no tuition—a hefty subsistence. Because such gifts come in steadily and without strings attached, it follows that Germany boasts the longest study periods before graduation. Certain scientific developments, such as genetic engineering and nuclear power research, were denigrated and designated as unwanted public risks, which has been driving abroad top students.

One may ask, cui bono? The political parties hope to swell their membership rolls by giveaways, but they also expect to benefit from a proletariat of unemployed graduates who promise to strengthen the party ranks by building a utopian system of social justice. The not uncommon installation of advocates of the New Left as university presidents is obviously helpful in achieving these goals.

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A series of sieves has removed most of the best scientists from Germany, leading to its dropping from first to perhaps third place in world science. After the 1932 elections,

which installed the National Socialists, both Jewish scientists and gentiles opposing Hitler were removed and replaced by lesser talents who were selected according to their political correctness. Relatively few Nazi professors lost their positions after the war (*1*), and some even gained chairs. For example, Otmar von Verschuer received the genetics chair at the University of Münster in 1951 (*2*). Some of the more skilled Nazi scientists, continuing to be opportunists, sought to associate themselves with the victor, and, owing to the blooming Cold War, the American government welcomed them. The remaining Nazi faculty cohort not only had little to offer their students, but tended to be intolerant of those more capable than themselves, thus crushing possible future stars of German science.

In Germany, America is often colloquially termed "the land of limitless possibilities," which perhaps reflects the endless rigidities in German life, scientific and otherwise. The quality and quantity of a German investigator's research may often be far less appreciated than obedience and "not rocking the boat." Divergent thinking, so crucial to scientific advances (*3*), is generally not rewarded.

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1. G. A. Craig, *The Germans* (Meridian, New York, 1991).
2. P. Weingart, *OSIRIS* **5**, 260 (1989).
3. D. K. Simonton, *Scientific Genius: A Psychology of Science* (Cambridge Univ. Press, Cambridge, 1988).

As the U.S. coordinator for a European Union–U.S. student exchange program in chemistry, I would like to comment on the aspect of Kahn's article about the low number of foreign students studying in Germany. In my view, a major problem in such exchanges is the German visa process. American students do not notice this problem because they can enter Germany without a visa.

In our exchanges, we attempted to send two immigrant City University of New York students to a German university. Both had permanent U.S. residence visas and passports from developing countries. The German government never issued visas for them. We then placed both students in an English university without any problems from the British immigration authorities.

The German visa applications apparently spent about 4 weeks on the desk of a local police official in the destination city and then took about 4 weeks to leave the German consulate in New York City. This happened despite personal intervention both in New York and in the destination city. Unless the process used in Germany for visa applications is revised, I would advise against sending foreign students to German universities.

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Turbulence Hits Wall

The article "A new theory of turbulence causes a stir among experts" by Barry Cipra (Research News, 17 May, p. 951) describes a then in-press paper by Grigory Barenblatt and Alexandre Chorin (*1*) that is based on what appear to be two mistakes.

First, the "law of the wall" (which describes mean velocity distribution in turbulent flows at boundaries such as wings, fan