Contact with aliens is denied. Asking the right question is said to be important in determining how males and females function in science. Reactions to "E-biomed" are offered. Dr. Seuss is credited with a philosophical explanation of the authority of science: "If you eliminate all error, you'll be left with the truth." Chiron defends its licensing policy. The time needed for the discovery of the Higgs particle is said to be unclear. The development of a DNA sequencing instrument is described. And a chemistry rap group describes the virtues of its approach.

Illustrative Prediction

Barry Allen devotes much of his review (*Science*'s Compass, 9 July, p. 205) of Ian Hacking's book *The Social Construction of What?* (Harvard University Press, Cambridge, MA, 1999) to an attack on a statement that he attributes to me: "Any intelligent alien anywhere would have come upon the same logical system as we have to explain the structure of protons and the nature of supernovae." I don't believe I ever said that. Probably Allen was thinking of a remark in a 1996 article of mine in *The New York Review of Books* (which Hacking quoted accurately): "To put it another way, if we ever discover intelligent creatures on some distant planet and translate their scientific works, we will find that we and they have discovered the same laws."

Allen complains in response that "Weinberg knows no more about how aliens think than you or I do." I feel compelled to confess the truth: I have not been in touch with creatures on distant planets. This would be a damning admission if I had offered this remark as evidence of the objective character of the laws of physics. Of course, my remark was not offered as evidence, but as an illustrative prediction. This prediction is based on our experience, right here on Earth, of the way that physicists working in different cultures come to agree on laws that survive subsequent revolutions in physical theory.

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Do Questions Matter?

Does sex matter? In science, as perhaps in sex, it is the questions that matter. Thus the question that Florence Haseltine, the reviewer (Books, *Science*'s Compass, 23 July, p. 538), had asked of her by a male "science-policy wonk," "What contributions have women made in science that a man could not have made?" may be the wrong question. Why not ask, "What contributions have men made in science that a woman could not have made?" It is, of course, the male culture of science that conditioned him to ask the question he did.

In speaking to science students, I often pose the following experiment. Listen carefully as you say, "There is no science problem that has been solved by a man that could not be solved by a woman." Then say, "There is no science problem that has been solved by a woman that could not be solved by a man." Do they mean the same thing? And the students often answer, "No"; the first seems to say that a woman scientist can be a good as a man. In contrast, the second seems to say that women solve only simple problems, which of course a man could solve.

Haseltine's review is interesting and thoughtful. But it would have been fun to read what her colleagues would have said if she had asked, "What contributions have men made in science that a woman could not have made?"

Does sex matter? Of course it does. But does it matter enough to matter? That's a different question.

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E-Publication Proposal

I was disappointed that Floyd E. Bloom, Editor-in-Chief of *Science*, in his editorial "Just a minute, please" (*Science*'s Compass, 9 July, p. 197), does not take the opportunity to offer constructive criticism of the "E-biomed" [now "E-biosci"] proposal [an "all-encompassing online electronic archive for biomedical research data," to be facilitated by the National Institutes of Health (NIH)], but instead diverts attention from substantive issues.

This is the age of electronic publication and communication, and its quick pace gives us few windows of opportunity to mold it to our liking. The proposal is intentionally not specific in many areas to allow the scientific community and the scientific publishers to shape the final system. That is preferable to having e-publishing preempted by ad hoc commercial efforts and a new hypercompetitive publication system comprised of electronic monopolies driven by profit and self-protection.

The nature of scientific communication is an appropriate concern of NIH and other organizations that pay for research. The present system limits access, truncates data, leaves a great deal of useful information inaccessible to the scientific community, and wastes time and effort. The image of an NIH Leviathan crushing free speech may appeal to some, but the "monopolistic archive under government control" that Bloom describes does not reflect an accurate reading of the proposal. First, E-biomed would be a means of delivery, not a means of censorship—it is the equivalent of a modern post office. Second, it does not presuppose the loss of existing print journals, but instead would depend on their voluntary contribution to the goal of wider access. Third, it envisages a world where anyone with access to the Internet can, without cost, scan, read, and print an article from the world's scientific literature. We have come far from the time when all libraries were private and books were prohibitively expensive for the average reader. Long ago we recognized the value of providing access to knowledge without a means test. Yet a means test for science still exists. E-biomed would seek to abolish it.

Harold Varmus, NIH director and proposer of E-biomed

Bloom, with his wide experience in scientific publishing, should offer constructive suggestions to help publishers find ways to participate in this valuable effort, rather than tilt at windmills.

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The concerns raised by Bloom are valid and need answers before any centrally run electronic publications service is actually launched. But it is also worth pointing out that, from the point of view of the users, the system that now exists for the distribution of research findings is remarkably efficient.

Certain high-impact journals capture the most dramatic (and usually interesting) new data in fast-moving fields, so we consult them unfailingly. We search out discipline-based journals of reputation because their manuscripts are validated by zealous reviewers, who examine everything with the microscope of criticism. If we look

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