lives to "stemming the tide of environmental degradation and the associated losses of biodiversity and its ecological services, and to teaching the public about the importance of those losses." My problem is not with preserving biological diversity, but with the difficulty in distinguishing between objective reporting and preaching. When an ecologist makes an apocalyptic statement about the death of one or another ecosystem, he trades his credibility as a scientist for his passion as an advocate. Credibility is a basic coin of science, and while scientists have every right to be avid supporters of whatever cause, they should not expect to be taken as seriously in their advocacy as they hope to be in their science.

Warren S. Wooster
School of Marine Affairs, University of Washington, Seattle WA 98105–6715, USA. E-mail: wooster@u.washington.edu

Human Cloning

Paul Berg and Maxine Singer ("Regulating human cloning," Editorial, 16 Oct., p. 413) draw a false parallel with the issues raised by the original recombinant DNA debate in the 1970s and conclude that legislation to ban or even restrict human cloning is not needed. They were participants in the earlier debate and know well that the major worries then concerned potential hazards presented by recombinant organisms, in the form of novel pathogens and threats to the ecosystem. The opponents of regulation affirmed back then that recombinant genes had little chance of being accidentally transferred to new hosts. Yet recent evidence (*1*) calls this into question. At the time, some called for legislation, anticipating that voluntary governmental guidelines curtailing the indiscriminate horizontal transfer of genes would be dismantled as they restrained commercial development, which is indeed what happened (*2*). Such guidelines do not protect the public interest and can increase the probabilities of social harm.

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Human cloning raises ethical and moral issues that go well beyond questions of safety, as acknowledged by the National Bioethics Advisory Commission (NBAC) in their report earlier this year (*3*). Berg and Singer object to the commission's recommendation of a legislative ban, even though it is limited in time. They assert that "scientists and the general public agree that too many questions remain to allow creation of a human being by cloning." But scientists are not of one mind about human cloning, or other technical applications of equal enormity (*4*). Adequate public discourse remains sadly missing. Still, Berg and Singer argue for a voluntary regime so that "advances in biology and growth in the biotechnology industry" can move along an unfettered path. Their position goes to the larger question of the democratic control of the directions of science and its applications. We should be focusing on how best to promote wide public debate, not on how to narrow the public's participation in deciding life-shaping issues posed by the new biology.

Claire Nader
Council for Responsible Genetics, 5 Upland Road, Cambridge, MA 02140, USA

Stuart A. Newman
Chair, Human Genetics Committee, Council for Responsible Genetics, and Department of Cell Biology and Anatomy, New York Medical College, Valhalla, NY 10595, USA

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Lead Regulation

In "The paradox of lead poisoning prevention" (Policy Forum, *Science*'s Compass, 11 Sept., p. 1617), Bruce P. Lanphear states that primary prevention should be the national approach for addressing the problem of childhood lead poisoning. I could not agree more. Because some of the health effects associated with lead exposure in young children are irreversible, our children should not be used as devices to test for the presence of lead hazards. I disagree, however, with Lanphear's assertion that the federal government's efforts are focused on "screening children for elevated blood lead levels and controlling lead hazards after a child has been unduly exposed." The Environmental Protection Agency (EPA) has long emphasized primary prevention, beginning with the phase-out of lead in gasoline (*1*) and including many other efforts to get the lead out of air and drinking water (*2*). Currently, EPA works closely with the Centers for Disease Control and Prevention (CDC) and the Department of Housing and Urban Development (HUD) on primary prevention efforts to get lead out of housing. The following are some concrete measures that have been taken.

EPA and HUD have issued final regulations requiring property owners to disclose the presence of lead-based paint or lead-based paint hazards before the lease or sale of most pre-1978 housing (the year the sale of residential lead paint was banned); prospective buyers also have a 10-day opportunity to evaluate the property for the presence of lead-based paint or lead-based paint hazards (*3*);

EPA has provided an extensive amount of public education to property owners and parents, giving them the information they need to protect young children from lead exposure (for example, *4*).

EPA has issued mandatory requirements for the training and certification of individuals and firms that do lead work so that we can avoid the hazards cited by Lanphear (*5*).

EPA has issued requirements for renovation contractors to provide information to occupants before the start of a project so that work can be done in a way that prevents exposure to children and workers (*6*).

EPA and HUD have spent millions of dollars on research to develop safe, effective, and affordable abatement methods and products (for example, *7*).

HUD has provided almost $400 million in grants to evaluate and control hazards in high risk communities (*8*), and HUD and CDC have jointly funded primary prevention projects to develop community-based approaches to the elimination of childhood lead poisoning.

To support implementation of the national lead-based paint hazard reduction program, EPA is developing residential hazard standards for lead in paint, dust, and soil. The proposed standards, which were published for public comment on 3 June 1998 (*9*), are designed to be used prospectively. That is, they should be used to identify hazards before children are exposed and injured. In addition to obtaining public comment, EPA also presented its technical supporting analysis to the agency's independent Science Advisory Board (SAB) and is currently awaiting the results of the deliberations. The science base for developing lead, soil, and dust standards is complex. The EPA is committed to a set of final standards that we can be confident will