



Toothpick use is not unique to hominids—it is noted that chimpanzees use toothpicks as well. The contribution of international family planning and reproductive health programs to the “health and wealth of nations” is discussed. Database searches for literature related to adverse health effects of genetically modified (GM) foods reveal few citations: “If...safety and toxicity studies of GM foods have been carried out...why have the results not been subjected to the judgment of the international scientific community...[through publication] in reputed journals?” And the history of the design and development of late-metal catalysts for the production of polyolefins (“plastics”) is outlined.

### Dental Care in Chimps

Contrary to the speculations in the Random Samples item “Man, the toothpick user” (28 Apr., p. 607) and to Peter Ungar and co-workers’ suggestions (1), toothpick use is not unique to genus *Homo*, nor even to hominids. Chimpanzees (*Pan troglodytes*) use twigs not only to clean their teeth, but also to extract loose deciduous ones. Such tool use is self-directed (2), as well as done socially when one individual ape performs elementary dentistry on another (3). Once again, an assertion of human uniqueness does not stand up to closer scrutiny.



An adolescent female chimpanzee uses a twig to clean the teeth of an adolescent male [figure 1 from (2)].

W. C. McGrew

Department of Anthropology and Zoology, Miami University, Oxford, OH 45056, USA. E-mail: mcgrewwc@muohio.edu

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### Questioning Placebo Controls

In his News of the Week article examining the ethical issue of placebo control groups in psychiatric drug trials (21 Apr., p. 416), Martin Enserink suggests that nobody would consider using placebos for such treatable diseases as cancer and AIDS. However, this is not true. The National Institutes of Health is conducting anti-VEGF (vascular endothelial growth factor) tests on patients with renal cell carcinoma, and there is a placebo group. Patients join the study as they seek help for this disease, for which nothing re-

motely resembling that “magic bullet” has yet been found. An acquaintance of mine participated in the study, only to find out after continued growth of his metastases that he had been receiving saline injections.

The Children’s Cancer Group, a cooperative research network of more than 100 institutions, has a remarkable history of treating children with cancer and developing new treatments. This group does not use placebos in clinical trials. One set of patients receives the best standard treatment; the other receives the new drug or procedure under investigation. In an

April 1998 issue of the *New England Journal of Medicine*, a French group (Groupe Français d’Immunothérapie) said it was unethical to conduct a randomized trial with an untreated group (1). Patients do not join clinical trials “for science.” The Children’s Cancer Group and the Groupe Français d’Immunothérapie have shown the way. Clinical trials using placebos should be abolished.

Nell L. Farr

3400 Wagner Heights Road, Stockton, CA 95209, USA

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### Family Planning Programs and National Prosperity

David E. Bloom and David Canning’s Policy Forum “The health and wealth of nations” (18 Feb., p. 1207) does a commendable job of characterizing the feedback loop connecting positive public health outcomes and economic growth. The authors, however, do not include a critical component of this loop that has, all too often, been underfunded or excluded from prima-

ry healthcare clinics: reproductive health services including family planning.

More than half of Bloom and Canning’s Policy Forum is devoted to aspects of productivity growth that researchers have determined to be related to declining fertility and managed birth spacing. Among these reproduction-related economic benefits are the accumulation of savings, improved maternal and child health, and the benefits of elevated ratios of working-age adults to dependent children (the “demographic dividend”). The authors appear to credit antibiotics and improved sanitation for paving the way for the East Asian economic “miracle,” although these were not unusual interventions in developing countries during the second half of the 20th century. Yet they do not mention a more distinctive and relevant intervention: the unparalleled mobilization of and the millions of dollars of investment in voluntary family planning services that occurred in these countries in the late 1960s and 1970s (1, 2). Much of this investment was assisted by foreign aid programs in the United States and other industrialized-country governments.

Few policymakers would object to improving sanitation, water treatment, or vaccination. Reproductive health programs, despite their importance to reducing maternal mortality and slowing both population growth and the onslaught of HIV/AIDS, still face religious and political opposition in many countries, including the United States. During every budget cycle, some members of Congress attempt to eliminate U.S. assistance to international family planning programs. Congress has cut this program’s budget by 35% from 1994 levels, in the face of increasing worldwide demand for such assistance.

The population of women and men of reproductive age is growing rapidly, and higher proportions of this population seek reproductive health services. Scientific evidence of these programs’ contribution to economic development is mounting, but the political will needed to maintain them is fragile and now waning. It is critical that demographers and economists give family planning and reproductive health programs the credit they deserve when discussing the connections between the health and wealth of nations.

Amy Coen\*

Richard P. Cincotta†

Population Action International, 1300 19th Street, NW, Washington, DC 20036, USA

\*President

†To whom correspondence should be addressed. E-mail: cincotta@popact.org

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## SCIENCE'S COMPASS

### Health Risks of GM Foods: Many Opinions but Few Data

#### Response

Coen and Cincotta are right to emphasize the important role of family planning programs in the demographic transition. We are well aware of its importance and noted so in our Policy Forum (indeed, one of us was a principal author of the "Emerging Asia" report Coen and Cincotta cite in support of their argument). But we believe that general health deserves more emphasis than reproductive health and family planning, because it was the trigger mechanism that set off cumulative economic development; family planning entered the picture at a later stage of development, when desired fertility began to decrease. For example, desired and actual fertility in Africa are generally close in magnitude, so the availability of contraceptives is not at present the decisive issue. Later in the development process, however, family planning does become crucial, as it was in the East Asia "miracle" and is now in South Asia.

David Bloom

Department of Population and International Health, School of Public Health, Harvard University, Boston, MA 02115, USA

David Canning

Department of Economics, Queen's University Belfast, University Road, Belfast, BT7 1NN, UK

In the mass media in recent months the debate about genetically modified (GM) foods has increased, and scientific journals have not been an exception. *Science* and other prestigious journals such as *British Medical Journal*, *Lancet*, and *Nature* have contributed to this broad debate, which was vigorous in 1999, particularly as a result of the stir caused by Arpad Pusztai's premature release of information to the popular media (before publication in the scientific press) about adverse effects in rats that ate GM potatoes [see, for example, *Science*, 21 Aug. 1998, p. 1124; 19 Feb. 1999, p. 1094; and 22 Oct. 1999, p. 656]. In the early months of 2000, however, the concern about the health risks of the transgenic foods seems relatively latent.

I reviewed the scientific information on the health risks of GM foods using the Medline database (available at <http://www.ncbi.nlm.nih.gov/pubmed/>). For the first search, I used "toxicity of transgenic foods" as the base phrase for the search, which gave 44 citations. Only one citation corresponded to an experimental study in mice (1), whereas seven were letters to the

editors of various journals, comments, viewpoints, or mere opinions. Although they did not provide a single new experimental result, some of these pieces were written as if the authors were certain about the absence of health risks of GM foods. Finally, 36 of the 44 citations were not directly related to the main topic of the search.

In a second search, I used "adverse effects of transgenic foods" as the search phrase. This search gave 67 citations, of which only two appeared to be directly related to the subject I was interested in: one had been found in the previous search (1), and the other was a 38-day feeding study that evaluated whether standard broiler diets prepared with transgenic Event 176-derived Bt corn had any adverse effects on broiler chickens (2). Of the remaining 65 citations, 16 were comments, opinions, viewpoints, etc., but again without any experimental basis, whereas 49 were not directly related to health issues of GM foods.

For a third search, I used the phrase "genetically modified foods," which gave 101 citations. Only four citations corresponded to experimental studies in which the potential adverse health effects of GM foods were evaluated. Two of them evaluated the

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