

Editors' Notes & Briefs

Healthier People, Sicker Oceans, Electronic Books, etc.

In vitro fertilization has generally been thought of as an option of last resort for would-be parents who have long tried and failed to conceive. IVF parents have therefore tended to be older than the average parent, and to have come to the lab only after years of pursuing other options. This summer, however, the *Wall Street Journal* noted some early signs that this might be changing. There are nearly no hard data on the use of IVF in America—an astonishing fact, in itself, given the importance of the procedure. But the *Journal* noted growing anecdotal evidence, from doctors and patients, that younger couples are beginning to pursue IVF as a means to get pregnant exactly when they desire, rather than simply a way to overcome long-standing infertility. The National Survey of Family Growth conducted by the Centers for Disease Control and Prevention shows that the percentage of female college graduates who had received some kind of fertility treatment before the age of thirty doubled between 1995 and 2002, to 23 percent. And according to the *Journal*, “Doctors say that many of these young women are seeking medical help after trying for only a few months to get pregnant,” and therefore before they actually meet the medical definition of infertility. The trend seems in part a response to the previous generation’s difficulties. “Clearly the twentysomethings watched the

fortysomethings wait too long,” Dr. Iffath Hoskins, of the Lutheran Medical Center in New York, told the paper. IVF, in combination with techniques like pre-implantation genetic diagnosis (PGD), is at the heart of concerns about a new age of high-tech eugenics and reproductive manipulation. But those worries have always been limited by the fact that IVF was an uncommon practice, employed by only a narrow sliver of the public. If that begins to change, if IVF becomes an option of choice for more and younger couples, and if PGD becomes a standard part of IVF, then concerns about the new reprogenetics would only grow more urgent.

~

Speaking of PGD: A recent report from the Genetics and Public Policy Center at Johns Hopkins University chronicles the march of IVF practices toward outright eugenics. The report, released in September, tracked the use of pre-implantation genetic diagnosis in IVF clinics across the country. Specifically, PGD involves the removal of one or two cells from an eight-to-ten-cell embryo, and the testing of those cells for genetic conditions, so that parents may then choose which embryos to implant. The survey, which included nearly all IVF clinics in the United States, found that 74 percent of IVF clinics offer PGD services. The technique is used in most cases to screen for genetic abnormalities

like aneuploidy (an irregular number of chromosomes, leading to conditions like Down syndrome or Turner syndrome) or for single-gene disorders like Tay-Sachs and cystic fibrosis. Embryos found to carry genes for a disease are systematically screened out and destroyed, rather than being implanted to develop to birth.

Increasingly, the study noted, PGD is being used to screen for more than just severe or fatal abnormalities. Forty-two percent of clinics that offer PGD, for instance, provide it for non-medical sex selection, so that couples can have the boy or girl they desire. Twenty-eight percent of clinics provide PGD to screen for adult-onset diseases like Huntington's disease, highly hereditary breast cancers, or even a proclivity for Alzheimer's (a disease whose heritability is not well understood). A quarter of clinics provide the service to find an embryo that, once born, could serve as a match for a relative needing donated bone marrow or other tissue. A few clinics (3 percent in the survey) even provide PGD to allow parents to select for the likelihood of a desired disability, as when deaf parents seek to have a child who is also deaf.

The report also noted a significant rate of misdiagnosis with PGD—when a clinic tells parents their child is free of a given genetic condition but the child turns out to be sick. Twenty-one percent of clinics in the survey reported having made such a misdiagnosis.

There is currently no legal regulation of PGD at the federal level or in any of the states, and surveys like this

one are among the few means available to assess the use of the technique. There are even fewer sources of data on the well-being of children born after the biopsy procedure. One can only hope that this study, and others like it, will wake up policymakers.

~

Sometimes even the most obvious aspects of human progress deserve to be examined and stated plainly: According to a wide range of new research, humans are becoming fundamentally healthier and stronger in both mind and body—we live longer than our recent ancestors, are taller and heavier, have higher IQs, and acquire chronic ailments and dementia much later in life. Such progress is occurring even in the developing world. University of Chicago economist and historian Robert W. Fogel told the *New York Times* that the dramatic changes witnessed over just the last century essentially represent “a form of evolution...unique among the 7,000 or so generations of humans who have ever inhabited the earth.” The evolution is not genetic, however, nor does it seem to be exclusively the consequence of improved medical care; some scientists suggest improved basic conditions—like nutrition—in early, even fetal, life are key to long and healthy lives. All agree that human bodies suffer less and later than they did before—transforming middle and old age for this and future generations.

Meanwhile, as modern medicine increasingly holds back chronic dis-

ease, health problems resulting from behavioral choices that turn into addictions—like smoking, overeating, and drug abuse—have grown comparatively more prominent. In response, researchers are increasingly turning to vaccine techniques, which activate the immune system in situations where it might otherwise remain dormant. In 2006, the U.S. Food and Drug Administration announced that a proposed vaccine against nicotine—NicVAX, produced by Florida-based Nabi Biopharmaceuticals—would be put on the fast track to final trials and approval. The vaccine works by causing the immune system to attack nicotine molecules (which are otherwise normally ignored), cutting the amount of nicotine that reaches the brain and thereby reducing the high that comes with each puff. Over time, this has been shown in trials to help smokers quit—as the *Chicago Tribune* reported, 40 percent of NicVax users had quit after six months, while only 9 percent of those on a placebo had done so. The *Tribune* also reported that similar efforts are underway to address cocaine addiction and even overeating. Researchers in Switzerland are testing a vaccine that would target the appetite-stimulating hormone ghrelin, to reduce cravings in those prone to severe overeating.

~

In the ocean, evolution is running backwards: Thanks to human waste and fishing practices, complex organisms (like fish and coral) are giving way to the more primitive (like algae,

bacteria, and jellyfish). Scientists are witnessing “the rise of slime,” as one marine ecologist recently put it—both a symptom and catalyst of massive changes in the basic chemistry and content of the seas. The dramatic alterations are worldwide: In over 150 “dead zones” in the world’s oceans, bacteria suck so much oxygen from the water that fish and other oxygen-dependent marine life cannot survive, while more primitive life thrives; coral reefs, home to 25 percent of marine life, are endangered by suffocating algae; toxic weeds are sickening Australian fishermen. The slight rise in the temperature of the oceans in the last century has improved conditions for microbial growth, and industrial society has been overdosing the oceans with basic nutrients that help these “low lifes” breed. Meanwhile, due to overfishing and overdevelopment, the natural checks on such overgrowth have diminished.

~

A recent Norwegian study has found a direct link between sugary soft drink consumption and hyperactivity in teens, and suggests a correlation to other mental health and behavioral problems. According to the researchers, “this association remained significant after adjustment for social, behavioral, and food-related disorders.” While most of the more than 5,000 teens surveyed drank between one and six servings of soft drinks per week, the teens displaying the worst symptoms of mental distress were those who drank four or more servings per

day—a subgroup including 10 percent of the boys and 2 percent of the girls. The researchers did not monitor the teens' intake of other sources of sugar, and admit that caffeine may be at least partially to blame.

~

Proclaiming itself “the world’s first human embryo bank,” a San Antonio, Texas company offers to produce human embryos made-to-order. For a fee of \$10,000, the company, called the Abraham Center of Life, claims to allow prospective parents to choose egg and sperm based on donors’ “qualifications” and then unite the egg and sperm through IVF to produce a human embryo for the adoptive mother to carry to term. The company promises better results than so-called embryo adoption, a practice by which parents of one of the many thousands of frozen IVF embryos make their embryo available to another infertile couple willing to offer it a chance at life.

The company vouches for the background of the egg and sperm donors, touting its embryos as a superior choice. The center assures prospective parents that: “In the process of screening donors, we select only those that have clean medical backgrounds. Recipient parents will receive pictures of the donors as infants, and sometimes as adults; full medical background and health reports, and a family history. Our donors are from all different ethnic backgrounds, although we do require that all male donors are college educated (most of them have doctorate degrees), and that most of our female

donors have had some college. All of our donors have been medically tested according to the guidelines enacted by the American Society for Reproductive Medicine. The embryos that are available have all been medically ‘graded,’ so that the recipient family knows the quality of the embryos that they will be implanting. The Abraham Center of Life also has pre-screened surrogate mothers available for those that are unable to carry a child.”

The company’s founder, Jennalee Ryan, would not tell reporters the names of any clinics or doctors she works with, and it remains far from clear if her company is actually capable of doing what it promises. In an interview with the *San Francisco Chronicle*, Ryan came off sounding unhinged. “You know why I did it?” she tells the interviewer. “Because I could.”

~

Neologism watch: The word *publizen* refers to those people who use modern technology to erase the border between the private and the public. As described by the *Washington Post* in a July 2006 article, they are people who “grow up, fall in love, choose a college, drink too much, do good deeds, experiment with drugs and sex and kinky hairstyles, sit for tattoos, create art, enter twelve-step programs, get hitched, give birth, go to work, file for divorce, die and do just about everything else in public. They build websites, produce blogs and star in reality television shows. They use new technologies to live in plain sight and newer technologies—

fancier phones, webcams, digital video programs—are being created so they can do just that.”

Also, *fauxtography*, coined by bloggers writing about the Israel-Lebanon conflict in summer 2006 to describe both the deceptive modification of pictures by newswire photojournalists and the intentional staging of tragic scenes for propagandistic photos in the media.

~

Opera now enters the digital era,” the new general manager of the Metropolitan Opera, Peter Gelb, announced in September. Starting in late 2006, the Met will begin broadcasting a series of live opera performances into specially-equipped movie theaters around the United States, Canada, and Britain. Gelb hopes the simulcasts will attract a new audience to opera generally and to the Met specifically—willfully ignoring H.L. Mencken’s advice: “No one ever went broke underestimating the taste of the American public.”

~

Closed-circuit television cameras (CCTV), already used extensively in the United Kingdom, recently took on an added twist in one English town. A handful of the 158 CCTV cameras in Middlesbrough have had loudspeakers installed on them, allowing control-room operators monitoring public spaces to target offenders with politely-worded warnings. The loudspeakers’ purpose is described in a town press release: “For example, if an operative now sees someone dropping litter, they

can tell them to pick it up, or if they see an incident starting to get out of hand, they can give advice that will hopefully nip it in the bud. I think that it will give people extra confidence as they go about their business and reinforce the message that Middlesbrough is a place that is constantly thinking about community safety.”

~

Around 12:30 a.m. on August 29, 2006, Maryland commuter Daniel G. Ruefly did not blow up a bridge. However, Ruefly, designated winner of the Woodrow Wilson Bridge Project’s “toughest bridge commute” contest for his 28-year, 90-minute morning drive, got to push the ceremonial antique plunger which anticipated the blast (detonated by professionals)—a fittingly impotent end to his traffic frustrations.

~

The death of a beloved elephant in India in September 2006 prompted a national outpouring of sympathy and outrage at the nonexistent state of traffic enforcement. Lakshmi, famous for her bit part in a 2004 Bollywood film, spent most of her time begging on the streets of Mumbai, where she was fatally injured by a truck while wading through nightmarish traffic. Elephants are a relatively common and lucrative begging prop, collecting up to six or seven hundred rupees in their nostrils per day. They can also be rented out for weddings and religious ceremonies.

National coverage of Lakshmi’s condition included dozens of editorials

calling for a clean-up of the vast mess of animals and assorted vehicles that hurtle uncontrolled through India's urban centers. Fortunately, the government is taking some action: state-sponsored billboards encourage drivers to stay in their own lanes.

Traffic accidents are the leading cause of death in India, claiming an estimated 100,000 human lives each year.

~

According to a tablemate at a Washington, D.C. dinner not long ago, Librarian of Congress James Billington apparently once spent an entire weekend reading nothing but electronic books as an experiment. "Never again," Billington said of the unpleasant experience—confirming something he told reporters six years ago: "There is a difference between turning pages and scrolling down... There is something about a book that should inspire a certain presumption of reverence."

~

The "Remember Ring," a concept product from Alaska Jewelry, uses "patent pending" electronic technology to warn the wearer of upcoming anniversaries by warming the finger to a temperature "hot enough to cause discomfort but not hot enough to burn" (incidentally, an adequate approximation of Augustine on marriage).

~

Nielsen Media Research reports that there are now more television sets than there are people in the average American home—inviting the

age-old question: If a TV blares in the den, and no one's there to hear it..

~

Frederick Gridley Kilgour, founder of the Online Computer Library Center (OCLC) and creator of WorldCat, the world's largest bibliographic database, died July 31, 2006, at the age of 92. After serving as an academic librarian at Yale and Harvard, Kilgour was hired in 1967 to lead the Ohio College Library Center, a nonprofit corporation, in developing a computerized, intrastate library system. The shared cataloging system and database he devised quickly became international, exponentially furthering the world's access to information: As of the summer of 2006, the network links some 55,000 institutions in 110 countries. To Kilgour—slayer of the "card catalogue"—librarians everywhere offer their thanks and praise.

~

San Francisco plans to use a clean, green, poop-scooping machine to transform dog waste into energy. In a pilot program begun this year, a methane digester tank breaks down feces—collected at a popular dog park—to create biofuel that can be used to heat homes, cook meals, or generate electricity. (Good boy!) The program is part of the city's larger goal of diverting all its waste from landfills by 2020.

~

The hammer, the sickle, the cell phone? Chinese authorities have found a new tool by which to reach the people: the text message. The government has taken to text messaging its

citizens—over one-third of which own cell phones—to warn them of strong storms, calm fears of bird flu outbreaks, and even deter anti-social behavior: “Obey the Law. Maintain order” went a message sent last year during violent anti-Japanese protests, according to press reports. Meanwhile, those same protesters used text messaging to organize and spread word of rallies.

~

The World Health Organization (WHO) announced in September 2006 that it would support the use of DDT—a pesticide banned or restrict-

ed in much of the world because of its harmful effect on the environment and suspected threat to human and animal health—in order to fight mosquito-borne malaria in the developing world. The new guidelines encourage spraying small amounts of the chemical indoors—a method proven effective in the handful of countries where it’s been used. Officials in South Africa, where indoor spraying has sharply reduced malaria cases, reportedly fear it might curtail agricultural exports to Europe, where DDT has been widely banned for decades.