

Notes & Briefs

Face Transplants, Text-Message Weddings, Aerogel, etc.

Researchers around the globe are attempting to refine the microsurgical techniques necessary to perform face transplant operations. The procedure, which would presumably be used on individuals suffering from burns or tumors, would involve the removal of part or all of the patient's facial skin, and its replacement with tissues from the face of a corpse. Technical questions relating to circulation and tissue rejection have yet to be settled, so the procedure is unlikely to be attempt-

ed except “in a research setting.” And there are of course enormous moral, societal, and psychological issues that have only begun to be considered, according to a preliminary report from the Royal College of Surgeons of England.

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As any American with a pulse knows by now, singer Janet Jackson set off a wave of anger and acrimony when she revealed her breast on live television during the Super Bowl halftime show in February. But shock was not all that she set off. Video of Jackson’s “performance” became the most-searched subject in the history of Internet search engines—easily beating out the previous title-holder, the terrorist attacks of September 11, 2001. And the event was also the most watched and rewatched program in the three-year history of TiVo, the digital video recording service that allows users to pause and rewind live television broadcasts. In fact, TiVo’s announcement of the record-breaking popularity of the halftime peep-show raised some concerns among the device’s users, who may not have been fully aware that their viewing habits are monitored, recorded, and analyzed by the company.

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The X-Prize competition, which seeks to encourage commercial development of space, is expected to be won some time this year, according to an X-Prize spokesman—which is fortunate, since the competition’s \$10 million purse is only guaranteed through January 1, 2005. The prize is to be awarded to the first team to put a craft into space at least 62 miles above the Earth’s surface twice within two weeks. One of the teams competing for the prize—led by renowned aviation innovator Burt Rutan—broke the sound barrier with their rocket craft SpaceShipOne on

December 17, 2003, the centennial of the Wright brothers’ historic flight. It was also revealed that the SpaceShipOne team’s mystery sponsor is Paul Allen, the billionaire who co-founded Microsoft with Bill Gates.

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On November 14, 2003, Ronald Bollen and Ingrid Peeters, a Belgian couple, exchanged their marriage vows using text messaging. The pair chose to marry via phone messages because the technology has been vitally important to their relationship, since Mr. Bollen spends half of the year away from home as a tour bus operator. Even the proposal, popped by Ms. Peeters, was posed via text messaging. To make the proceedings fully legal, however, the couple still had to sign a registry the old-fashioned way, according to the Ananova news agency.

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Early this February, an Israeli woman gave birth to twins produced from embryos that were frozen twelve years earlier. This was the first time healthy babies had been born from IVF embryos frozen for such a long time, and the success of this procedure suggests that the length of time an embryo is frozen may not be as decisive in determining the success of these procedures as fertility experts had believed.

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At some point in 2005, Iran expects to launch the world’s first “Muslim satellite,” according to Iranian Defense Minister Ali Shamkhani. He added that the satellite is being produced in Iran, and that the launch capacity would be Iranian as well—presumably relying upon technology developed for Iran’s missile systems. Shamkhani offered no details about the type of satellite Iran plans to launch, and whether it is intended for civilian or for

military use. Nigeria, however, might quibble over the “first Muslim satellite” claim, as the West African nation, which is majority Muslim, launched a satellite aboard a Russian rocket last September.

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An FDA panel has begun considering claims that a number of widely used anti-depressants (including the brand names Paxil, Zoloft, and Effexor) encourage suicidal tendencies when taken by children. The investigation was sparked by several studies, including a recent one by the American College of Neuropsychopharmacology, which some experts have interpreted as demonstrating that children taking the drugs in question are more than twice as likely to contemplate suicide as children taking placebos. Other experts disagree, however, and much of the panel’s work will involve untangling these competing claims. In December, the British government, responding to the same studies, warned doctors not to prescribe the drugs to children.

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Researchers at the University of Pennsylvania have found that mice produced by in vitro fertilization showed marked differences in behavior and mental function in adult life from mice produced by natural sexual procreation. Apparently, the IVF mice performed worse in memory tests, but showed less signs of anxiety when exposed in open spaces. No studies have so far been done to determine if differences of this or other sorts appear in human children produced by IVF.

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The lightest known solid in the universe is “aerogel,” a man-made substance that has recently received attention for its uses in NASA projects and its potential industrial applications. The semi-elastic material, which is 99.8 percent air,

was used in January by NASA’s Stardust probe to capture samples of comet dust which will be returned to Earth in 2006. NASA also used aerogel on the Spirit and Opportunity rovers presently on Mars, to insulate their electronics. It’s such a good insulator that “you could take a two- or three-bedroom house, insulate it with aerogel, and you could heat the house with a candle. But eventually the house would become too hot,” according to Dr. Peter Tsou of the Jet Propulsion Laboratory.

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Toyota has designed a car that can park with almost no human assistance. The automatic parking system, which uses a video camera and a dashboard computer, is available only in Japan and only as an add-on for the 2004 model of the Prius—Toyota’s gas-electric hybrid. The driver need only operate the brake pedal; the car does the rest on its own.

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In the Summer 2003 issue of *The New Atlantis*, we mentioned Dr. Arthur Robert von Hippel, the M.I.T. professor whose work in molecular design in some ways anticipated the modern field of nanotechnology, and who also played a part in the development of radar. Dr. von Hippel died on January 4, 2004, at the age of 105.

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Police in Johannesburg and northeastern Brazil have made several arrests in connection with a lucrative human organ trafficking operation. The accused (mostly of Israeli descent) are charged with violating South Africa’s Human Tissue Act, which forbids monetary compensation for organ donation. They solicited donors from poor neighborhoods in Brazil who were then flown to South Africa for the operation. The transplants were performed at two of South Africa’s

most prestigious hospitals, where several medical personnel are also under investigation. Though recipients in South Africa were each charged \$120,000 for their new organs, donors were paid only \$10,000.

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A recent exhibit at the Corcoran Gallery of Art in Washington, D.C. called “Atomic Time: Pure Science and Seduction” raises questions about government disclosure of classified scientific information. In the exhibit, sculptor Jim Sanborn recreated the Los Alamos labs during the era of the Manhattan Project, using materials he bought at New Mexico flea markets and from former Los Alamos employees. He used information he found online and in public libraries to aid the re-creation. The exhibit was so accurate that if the president were to view it, “he would probably be quite chilled by just how much information is available” about the production of nuclear weapons, according to Sanborn.

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The average sperm count of men may have fallen by as much as 29 percent over the past 12 years,” reports *The New Scientist*, describing a recent study by the Aberdeen Fertility Center in Scotland. Analyzing samples from nearly 16,000 men, researchers found a decline of “87 million per milliliter to 62 million per milliliter between 1989 and 2002.” As for causes of the decline, researchers have yet to pinpoint a specific culprit, though pesticides, obesity, drinking, smoking, drug use, and even snug trousers have all been suggested.

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Ever wanted to remember what you told your boss last week, or if you sent out a birthday card on time? Well, a new software program called MyLifeBits is here to help. Designed by researchers at Microsoft, the program can be used to create a data-

base containing all the memories of your life—including conversations, phone calls, e-mails, faxes, home movies, websites, and photographs. Most items would be stored automatically as they move through your computer in one form or another, while others would have to be entered manually. The software would then attempt to organize the piles of data into recognizable packages: a trip, a meeting, a call, a new colleague, each containing all the information relating to that person, event, or idea. The data could then be accessed, searched, and organized at any time.

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Veterinarians have discovered a new (and more literal) application for the old adage “killing two birds with one stone.” A drug given to domestic cattle in South Asia to treat fever and lameness has had the undesired effect of pushing three species of vultures closer to extinction. Vultures are exposed to the drug from the cattle carcasses that form a major portion of their diet. The drug, Diclofenac, is an anti-inflammatory that is also sometimes prescribed to humans to treat pain and joint discomfort. Diagnosticians concluded that the drug probably operates the same way in vultures as it does in humans: overdose causes acute kidney failure in both man and bird. Dr. Thomas Lovejoy, president of the Heinz Center for Science, Economics and the Environment, remarked in a *New York Times* article that the deaths do “raise a question of whether we should be looking more closely at the trace chemicals from human use.”

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How do you know if someone is telling the truth? According to recent research, you should believe what you read, not what you hear. A Cornell University study, reported in *The New*

Scientist, found that “people are twice as likely to tell lies in phone conversations as they are in e-mails.” The process of writing down something that is a lie—and one that might be permanently stored on another person’s computer hard drive—evidently exercises a certain deterrent effect. The study found that lies were told in 14 percent of e-mails, 21 percent of instant messages, 27 percent of face-to-face conversations, and 37 percent of phone calls. The author of the study, Jeff Hancock, theorizes that people are more comfortable committing “real time” lies, such as those one might tell on the phone or during an instant message exchange, than fibs that could be stored for future reference—and exposure.

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While most people prefer to spend as little time as possible in cramped airline seats, some serious collectors of frequent-flyer miles have taken to spending days at a time on trips around the globe specifically to accrue mileage points, according to the *Wall Street Journal*. These “mileage runs” are long trips in short periods of time that bring the traveler far from

home but rarely out of an airplane seat or airport concourse. For example, one mileage runner flew round trip between Boston and Tokyo in a period of thirty-six hours, adding 41,000 miles to his account with American Airlines. The principle behind the scheme holds that paying out of pocket for cheap mileage runs yields tremendous rewards in seat upgrades and thousands of free miles to use toward future travel. The equation, if worked correctly, brings significant savings for budget-minded (if admittedly insane) passengers.

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The U.S. Department of State has changed its official diplomatic font from Courier New (at 12 points) to Times New Roman (at 14 points). A State Department memo leaked to the press describes the new font as offering “a crisper, cleaner, more modern look,” while taking up the same amount of space on the page. The new rule, which took effect on February 1, 2004, will not apply to telegrams, treaties prepared by the legal affairs office, and documents to be signed by the president.