



Mindless Entertainment in the Neuroethics Era: A Review of *Eternal Sunshine of the Spotless Mind*

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While moviegoers have long flocked to theaters in search of “mindless entertainment,” films such as *Paycheck*, *The Butterfly Effect*, and, most recently, *Eternal Sunshine of the Spotless Mind* should prompt viewers to think twice about just what sort of mindless diversion they seek. While most of America has yet to hear the term *neuroethics*, Hollywood is fast familiarizing itself with the intricacies and implications of manipulating the human brain.

Neuroethics is a newly coined term for “the study of the ethical, legal, and social questions arising when scientific findings about the brain are carried into medical practice, legal interpretations, and health and social policy.”¹ As neuroscience advances into bold new territory, increasingly complex questions of moral responsibility, human identity, and even the relationship between biology and religious belief will likely emerge. Though still in its infancy, neuroethical inquiry will, I predict, thus prove to be unsurpassed in importance.

The central conundrum pondered in *Eternal Sunshine*, as in *Paycheck* and *The Butterfly Effect*, is that of memory erasure. In *Eternal Sunshine*, the eradication of memories is carried out in a clinic called *Lacuna*, which serves clients who desire “a cutting-edge, non-surgical procedure for the focused erasure of troubling memories.”² After her year-long relationship with Joel Barish dissolves, Clementine Kruczynski chooses to wipe Joel from her memory. Distressed and angered upon learning of Clementine’s action, Joel follows suit, arranging for the *Lacuna* technicians to erase all recollections of Clementine from his mind. While undergoing the deletion process, however, Joel sequentially re-lives his moments with Clementine and finds that he desperately wishes to retain such memories. He is thus prompted to journey to places in his psyche where Clementine may safely reside.

While I found *The Butterfly Effect* (despite its gratuitous violence) to offer a more richly nuanced commentary on memory-related issues, *Eternal Sunshine* does raise both specific and more overarching considerations. First, I found it noteworthy that Joel’s recollections of Clementine were in effect “uploaded” while being siphoned from his memory such that they were accessible to the *Lacuna* technicians. Such a procedure would certainly raise new concerns about individual privacy and even stolen identity. Second, the movie seems to convey that there is a meaning behind human memories that may outlast the person or event remembered and that to tamper with these impressions may result in negative repercussions. Such a notion calls for well-considered reflection as such tampering, once possible, may actually be viewed as salutary in the context of certain more commonplace bioethical dilemmas. It seems, though, that human memory is, at least in some instances, designed as it is for a purpose. To wipe out one’s recollections of the implications of a particular experience—no matter how painful such memories may be—may prove to be terribly unwise. To assert that we know when such manipulation should and should not be permitted may prove to be more foolish still.

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News from the Field

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UK Opens Door to Designer Children

Britain’s Human Fertilisation and Embryology Authority (HFEA) has approved the genetic screening of embryos to enable parents to have tissue-matched children who can help their sick siblings. Previously, embryos could only be screened for serious genetic disorders except by special permission of the Authority.

HFEA was asked to review the case of two-year-old Joshua Fletcher who suffers from Diamond Blackfan anemia. None of his family members were a close enough match to provide the stem cells necessary for treatment. The donor child’s umbilical cord blood will be used to treat Joshua.

The Authority approved the procedure in general whenever doctors can demonstrate that it is “a treatment of last resort.” Previously, such appeals had been denied because the level of risk to the newly-created child could not be quantified. Critics argued that opening the door to “savior siblings” violated the principle that human beings should not be used as means to an end and that the other embryos who are not chosen are being discriminated against precisely because of their genetic makeup.

Terri Schiavo’s Plight Continues

After the Florida Legislature last year approved emergency measures to reinsert Terri Schiavo’s feeding tube when Circuit Court Judge George W. Greer ruled it removed, her future is still unknown as the case continues to be mired in the courts.

At issue is the constitutionality of the statute that gave Governor Jeb Bush the right to intervene and countermand the Judge’s decision. The law was ruled unconstitutional by a Pinellas County judge and went straight to the Florida Supreme Court bypassing lower court review.

The Governor’s attorneys argue that there are nine unresolved issues that argue against husband Michael Schiavo’s ability to remain an adequate guardian, including why Michael never mentioned Terri’s supposed wish to die when in a malpractice trial where they were

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awarded \$700,000. A jury trial has been requested by the Governor to attempt to determine Terri's end-of-life wishes. Michael Schiavo is arguing that the new law violates his wife's right to make personal medical decisions in addition to the argument that it violates the state's constitutional separation of powers.

Stem Cell Research and Cloning Return to Contentious National Debate Status

After the recent death of President Ronald Reagan from Alzheimer's disease and Nancy Reagan's vocal support for the research, federal funding restrictions on embryonic stem cell research and cloning returned to center stage in the national political debates. Ron Reagan, Jr., was even given a prime-time spot at the Democratic National Convention to promote both embryonic stem cell research and cloning as the next cure for a myriad of currently untreatable diseases. He went so far in his speech as to assert that "theology of a few" should not "be allowed to forestall the health and well-being of the many."

Even a routine U.S. Senate hearing in July on the current research on adult stem cell research turned contentious as Senators in favor of full federal funding of destructive human embryo research took the opportunity to promote their views and belittle those who disagreed. At one point, Senator Frank Lautenberg, seeking to find reason to dismiss the scientific testimony of Dr. Jean Peduzzi-Nelson from the University of Alabama at Birmingham, asked, "Are you a member of a pro-life committee?"

To date, there are 45 treatments using adult stem cells and zero treatments using embryonic stem cells. According to current estimates, the federal government is currently spending about \$28 million on embryonic stem cell research. Approximately \$145 million is going toward adult stem cell research though most of the money is currently for standard clinical trials for bone marrow stem cell use in treating various cancers. ■



A Review of the Book

Jesus, M.D.: A Doctor Examines the Great Physician

(by David Stevens with Gregg Lewis; Grand Rapids, MI: Zondervan, 2001; 256 pages)

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Storytelling is a powerful tool for teaching a lesson and a unique method for remembering a message. Ancient cultures told stories to keep their heritage alive. Stories about an enemy's prowess have likely changed the course of history. Storytelling works because it encourages a receptive mind to create an image that has meaning. Such images may be recalled at a moment's notice as a memory trace is activated. Storytelling, it can be said, has a distinct purpose.

Jesus, M.D. is a book of stories that draw parallels between the life-changing teachings of Jesus Christ and the life-touching work of a committed physician. These stories carry meaning, display poignancy, and teach lessons. In addition, these stories offer hope, blessings, and a future. In *Jesus, M.D.*, David Stevens draws on his experiences as medical student, missionary doctor, and director of the Christian Medical & Dental Associations as he relates scriptural teachings of the Great Physician.

Stories are drawn from places such as the bedside of a child needing an antibiotic or the stress of emergency surgery after a machete injury. Other stories, such as that of a missionary plane losing altitude or a car needing to traverse a road where a raging river has washed out the bridge, are from the "bush." These stories are designed to display the compassion of Dr. Jesus and the providence of God in all situations. Furthermore, they are designed to encourage us to witness the handiwork of God and to celebrate the love of Jesus as we, as physicians, engage the world in which we live. According to the author, "Medicine is not a spectator sport. Neither is the Christian life."

In *Jesus, M.D.*, we are encouraged to examine not only our ability to touch others as well as our use of time, but our control of temperament. The author recommends that we make a conscious effort to touch our patients as a sign of compassion and care—the desire to cure must not outweigh the need to care. The doctor may not always be able to cure, but the Physician—as seen through Dr. Jesus—always demonstrates care and compassion.

Stevens also suggests that we invest our time in people—patients, of course, but also medical students, in mentoring relationships. Dr. Jesus trained his disciples, and we should do no less. The content of the teaching is to be both medical and spiritual, and it is to be done with care and compassion. Lastly, (the author) asks us to steward our temperament. In our daily professional lives, we are often rushed and/or delayed. We tend to be guardians of time and creatures of punctuality. We must take care, so the author interjects, not to disregard opportunities afforded by "dreaded" interruptions. Such interruptions may be important teaching moments, and may provide brief, unsolicited opportunities. Instead of falling victim to the unplanned moment, let us be conquerors, and take advantage of the potential blessing.

Does God need our help? No, but a gracious God uses our limitations to provide examples and stories that help spread the Good News as portrayed in *Jesus, M.D.* ■