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Please address all correspondence to:
The *Advocate*
University of San Diego
School of Law
5998 Alcalá Park
San Diego, CA 92110-2492
Phone: (619) 260-4207
E-mail: lawpub@sandiego.edu

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Paterra Design

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THE ETHICS OF ETERNAL SUNSHINE:

Adam Kolber Discusses the Legal and Ethical
Implications of “Memory Dampening”

By Ashley Wood

The notion of erasing memories has long been a subject of fiction. Nearly half a century ago, William Shakespeare wrote a scene in Macbeth where the main character begs a doctor to treat Lady Macbeth and, “pluck from the memory a rooted sorrow, raze out the written troubles of the brain, and with some sweet oblivious antidote cleanse the stuff’d bosom of that perilous stuff which weighs upon the heart.”



In 2004, actors Jim Carrey and Kate Winslet brought memory erasing to the big screen in a romantic comedy titled *Eternal Sunshine of the Spotless Mind*. The movie introduced a fictional, non-surgical procedure called targeted memory erasure that allowed the characters to permanently expunge the painful memories of a failed relationship.

And who could ever forget Agent K's "flashy thing" in *Men in Black*?

complications such as depression, drug abuse and even suicide. But is this a good thing?

Professor Adam Kolber writes and teaches in the areas of neuroethics, bioethics and criminal law at the USD School of Law. In his recently published article "Therapeutic Forgetting: The Legal and Ethical Implications of Memory Dampening," 59 *Vanderbilt Law Review* 1561 (2006), he discusses how these scientific advances may impact legal proceedings.



Erasing memories is not a new concept, but in real life, recalling our past has always been just another part of being human. But what if doctors were able to administer a pill that could wipe away unwanted memories?

Neuroscientists continue to make significant advances in the identification and development of memory-dampening drugs. Nearly five million Americans between the ages of 18 and 54 suffer from post-traumatic stress disorder at any given time. These victims, who are haunted by traumatic events such as terrorism, military conflict and assault, may now have a way to forget the fear and horror—avoiding lasting social and psychological

We sat down to talk with Professor Kolber on his thoughts about the ethics of eternal sunshine:

ADVOCATE: Is it really possible that one day we might be able to pharmaceutically change our memories of traumatic events?

KOLBER: While memory erasure is still the domain of science fiction, less dramatic means of dampening the strength of a memory may well be possible. Some experimental evidence suggests that we can pharmaceutically dull the emotional pain associated with the memory of a recent traumatic event. In principle, drugs of this sort may affect both emotional and informational aspects of memory. Several

studies are underway in humans and animals to try to demonstrate the effects of memory-dampening.

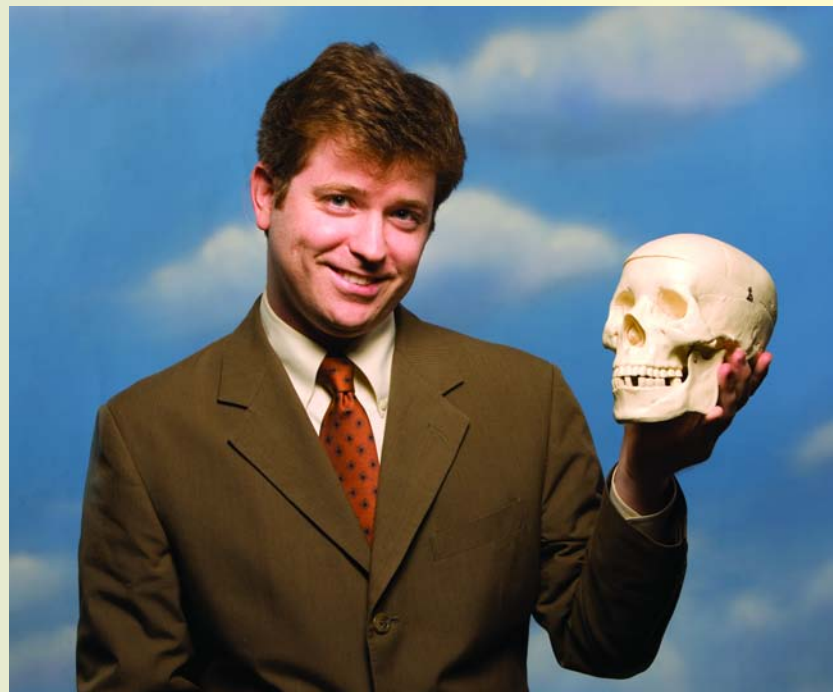
ADVOCATE: Clearly, there are emotional benefits of dampening or erasing traumatic memories. We've all had a relationship or two that we'd rather not remember. But ethically, what is your take on this type of science?

KOLBER: In 2003, the President's Council on Bioethics (a group of doctors, lawyers, scientists,

limited regulation of memory-dampening drugs.

ADVOCATE: Considering the negative psychological impact traumatic events may have on a person, are there any cases where memory dampening might be considered not only legal, but also ethical?

KOLBER: Absolutely. Many traumatic incidents are simply the result of very bad luck. People have memories of awful experiences that can seriously interfere with the quality of their lives. In many



theologians, philosophers and other academics appointed by President Bush) released a report that discussed the ethics of memory dampening. The Council was concerned that future memory-dampening drugs might: (1) prevent us from truly coming to terms with trauma, (2) tamper with our identities, leading us to a false sense of happiness, (3) demean the genuineness of human life and experience, (4) encourage us to forget memories that we are obligated to keep, and (5) numb us to the pain of others. I think that, while a number of these issues are legitimate concerns, the Council is unnecessarily fearful of the technology. Many of these issues could be addressed by

cases, there will be little harm from dampening the emotional intensity (or even the informational aspects) of such memories.

Even if potent memory-dampening drugs are still many years away, the policy questions they raise are very much alive today because drug researchers and manufacturers must decide on a daily basis how they will invest their resources. Fear that the successful fruits of their labor could be blocked or heavily restricted by the government may slow their efforts. I make the case that research into memory dampening should be encouraged, free of the fear that it is generally unethical to dampen memories.

ADVOCATE: Aside from the ethical issues raised, why is memory so important to the law?

KOLBER: Memory is critically important to the law in two distinct ways. First, memory plays an essential role in fact-finding (for example, in depositions, police lineups, trial testimony and so on). We value these memories because of the information they contain. Second, memory is important to the law because of the feelings we attach to them.



Memories can be painful and upsetting. In some cases, distressing memories can form part of the basis for a claim of damages.

ADVOCATE: What are some of the legal issues that could be raised in a world with memory dampening?

KOLBER: A memory-dampening drug that affected factual recall could raise questions about the admissibility of hearsay evidence recorded prior to dampening. It could also raise issues about whether the government can force us to retain unpleasant memories when they are needed for judicial proceedings.

A memory-dampening drug that affected the emotional intensity of a memory could raise many

interesting tort questions. For example, when might it constitute malpractice to dampen a memory? When might it be malpractice not to? How do we calculate damages from dampening a memory that should have been left alone, and how do we calculate damages from continuing to have a memory that should have been dampened? There are also issues related to informed consent, the mitigation of emotional distress damages, and a number of others that I discuss in the article.

ADVOCATE: How would a jury respond to a victim who testified about the facts of a crime without any emotional depth or intensity?

What are some of the legal issues that could be raised in a world with memory dampening?

KOLBER: In its report, the President's Council raises precisely this example. If a crime victim testified about horrific events with a dull, flat affect, the result would indeed be very puzzling to jurors. We expect people to be upset when they describe upsetting memories. Perhaps expert testimony could explain to jurors the effects that a memory-dampening drug has on a person's recall. Alternatively, perhaps this is one of those areas where we would need to regulate memory dampening to avoid some of these scenarios.

ADVOCATE: On the flip side of this coin, do you see any legal or ethical issues related to drugs that might help IMPROVE the memory of a plaintiff, defendant or witness?

KOLBER: There is much debate over the merits of all sorts of methods of enhancing our cognitive abilities. The issues come up a lot in the educa-

tional context, where some bioethicists raise concerns that cognitive enhancement will increase inequality or discourage traditional methods of self-improvement. By and large, I think that safe and effective ways of improving memory would be good to have. I can imagine some interesting issues, however. For example, what if the government wants to force someone to enhance his memories against his will (perhaps to make him a better witness or a better spy)?

ADVOCATE: You mention “freedom of memory.” Can you explain what this means?

KOLBER: As you note, neuroscientists are working to develop methods to not only dampen memories, but also to enhance them. They are also developing improved methods of brain imaging that may someday allow us to make inferences about a person’s memory without asking the person (to determine, for example, whether the subject recognizes the image of a drug kingpin). Given emerging and projected technologies to manipulate memory, we can begin to consider the bundle of rights we should have to control our own memories. For example, we arguably ought to have limited rights to dampen memory, to enhance memory or memory-retention skills, to keep memories private, and to be free of certain invasions into our memories from forced enhancement, forced dampening and forced memory revelation. I label this bundle of rights our “freedom of memory.”

ADVOCATE: You went from business ethics at PricewaterhouseCoopers to neurolaw. How did this transition happen?

KOLBER: I very much enjoyed the time I spent as a business ethics consultant at PricewaterhouseCoopers. However, I always planned to go back to school after college, and I went to law school with the intention of seeking an academic job. Through my research at USD, I quickly realized that advances in neuroscience are raising a number of interesting theoretical and practical issues that lawyers and legal academics should start to consider.

ADVOCATE: Your “Neuroethics & Law Blog”

features a number of fascinating topics—brain-computer interfaces, updates on Dr. Kevorkian and even a line from famed tennis champ Martina Navratilova. What led you to start the blog?

KOLBER: When I started the site in February 2005, there were no blogs that focused specifically on the legal and ethical issues raised by advances in the mind and brain sciences. Because the field is so interdisciplinary, I think the blog helps connect scholars and practitioners, in diverse but related fields, who might not otherwise cross paths in the brick-and-mortar world.

ADVOCATE: What is the most fascinating neuroethics-related story that you’ve come across?

KOLBER: Here’s one that I’ve been writing on lately. Using neuroimaging, we can identify regions of the brain that are more active when a person experiences acute pain. It seems that we can also identify structural changes in the brain that result from long-term chronic pain. Someday, in a slip-and-fall case, lawyers may seek to introduce neuroimaging evidence to support or refute a plaintiff’s pain claims. The same kind of technology may give us insight into the pain experiences of those who are too young or too cognitively impaired to tell us about the pain they experience. The use of neuroimaging as a pain detector raises interesting issues about the privacy of our mental lives and the kinds of evidence that we should make available to jurors.

Professor Kolber was recently awarded a Laurance S. Rockefeller Visiting Fellowship at Princeton University’s Center for Human Values, which supports research and scholarly exchange in law, ethics and public policy. Selected from a highly competitive pool of scholars from around the world, Kolber will visit at Princeton University from September 1, 2007 to July 1, 2008.

To read more about Professor Kolber’s views on memory dampening and a number of other legal and ethical issues related to the brain and cognition, you can access the “Neuroethics & Law Blog” at kolber.typepad.com. 