AAAS

ADVANCING SCIENCE, SERVING SOCIETY

March 31, 2014

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Chief Executive Officer and
Executive Publisher, *Science*

To: Lisa M. Lee, Ph.D.
Executive Director, Presidential Commission
for the Study of Bioethical Issues

Dear Dr. Lee,

The American Association for the Advancement of Science (AAAS) is pleased to comment on the Ethical Considerations of Neuroscience Research and the Application of Neuroscience Research Findings, published in the *Federal Register* on January 31, 2014.

AAAS is the world's largest multidisciplinary science society, representing the interests of ten million scientists worldwide, and publisher of the prestigious peer-reviewed journal *Science*. AAAS has special expertise in legal and human rights issues as they relate to science, particularly within its Scientific Responsibility, Human Rights and Law Program (SRHRL).[1] These topics will be the focus of our comments.

Legal Issues

AAAS has established a strong interest in the issues raised by advances in neuroscience for the legal system, beginning in 2003, when we convened the first U.S. workshop specifically devoted to the legal impact of neuroscience, which resulted in the 2004 publication, *Neuroscience and the Law: Brain, Mind, and the Scales of Justice*. In 2006, we began a series of seminars on emerging issues in neuroscience for federal, state and administrative law judges, which continue to this day. In addition, AAAS has since 1974 convened a joint committee with the American Bar Association to examine issues at the intersection of science and law.

Although there are a number of issues that neuroscience research and technology raise for the law, we focus on two here because of their more imminent and profound impact. The *science of memory* has made it powerfully clear that human recall of all types of information is more like a sieve than a trap. As such, eyewitness testimony is a weak link in any trial by one's peers, and the evidence in support of this is quite compelling.[2] This raises ethical and human rights issues related to social justice and individual fairness in our system of justice. The problem has been acknowledged by the legal system,[3] and AAAS recommends that the Commission give priority to this matter in order to give it greater public visibility and credence.

A second challenge posed by neuroscience for the law is research related to the *maturation of the human brain*. In the last decade, the U.S. Supreme Court has ruled on the death penalty for minors and on the extent of permissible incarceration of minors for certain crimes. In all these cases, scientific findings from behavioral science and, to some extent, neuroscience, revealed that the lack of impulse control and underdeveloped judgment among youth can be traced to brain development. Such research has already influenced the Court's deliberations, and these decisions regarding the death penalty and incarceration both raise core ethical and human rights issues that will undoubtedly continue to surface

[1] http://www.aaas.org/program/scientific-responsibility-human-rights-law
[2] See, for example,
http://www.psychology.iastate.edu/~glwells/The_Justice%20Project_Eyewitness_Identification_%20A_Policy_Review.pdf
[3] http://www.scribd.com/doc/100608855/New-NJ-Instruction-On-eyewitness-identification

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in future court cases. As neuroscience research becomes increasingly more precise, we believe a critical public policy issue in the future will revolve around how our society will weigh new research findings in determining the manner in which its younger citizens are treated by the legal system. The Commission can help us prepare for these future conversations by underscoring this important relationship between the law and neuroscience.

Human Rights Issues

AAAS is committed to advancing the human right to enjoy the benefits of scientific progress and its applications, engaging scientists, engineers and their professional associations in human rights efforts, monitoring and enhancing assessment of emerging human rights issues related to science and technology, and furthering the use of science and technology in support of human rights.[4]

Human rights are universal and the same for everyone, and if humanity has a common moral language, it is reflected in the discourse of human rights. In reviewing the BRAIN Initiative, the Commission should not only consider the ethical dimensions of neuroscience research and applications, but also its human rights implications. This approach is consistent with the Commission's Charter, describing its mission as including an examination of "the intersection of science and human rights," as well as with the UN Commission on Human Rights 1999 resolution on "Human Rights and Bioethics," which states that efforts are needed "to ensure that scientific progress benefits individuals and develops in a manner respectful of fundamental human rights."[5]

At the deepest level, research on the brain will uncover new understandings of the nature of moral reasoning and its biological functions. We must be ready to confront challenges to the *assumptions regarding human nature* that underlie human rights relating to autonomy, agency, intentionality, and free will. In addition, some of the traditional ethical issues associated with neuroscience are also embedded in human rights norms and law, including, for example, the rights to privacy, health, equality, freedom of thought, and non-discrimination.

Integrating a human rights-based approach into existing neuroethics discourse accomplishes two objectives. First, it provides a set of norms that can help clarify some of the ethical concerns associated with neuroscience research and its applications. Second, the universal acceptance of human rights through numerous international treaties and other normative instruments provides a global standard that can contribute to consistent policies among many countries. The neuroethics concerns raised by the BRAIN Initiative, when reinforced by a human rights assessment, become relevant to international policy formulation, implementation and enforcement. Hence, we are proposing that the Commission consider human rights not only as a lens through which advancements in neuroscience can be analyzed, but also as a key intermediary that bridges the gap between scientific innovation and policy.

AAAS has a longstanding interest and expertise in ethical issues surrounding scientific research. Please contact SRHRL Director Mark S. Frankel (mfrankel@aaas.org) with any questions. We stand ready to work with you in addressing this important and complex subject.

Sincerely,

Alan I. Leshner

[4] http://www.aaas.org/page/srhrl-human-rights-activities
[5] http://www.unhchr.ch/Huridocda/Huridoca.nsf/0/d85deea99805ebf68025676600491100