This is a report on the meeting “Neuroscience in European and North American Case Law and judicial Practice” that was held in Pavia, at the European Center for Law, Science and New Technologies, University of Pavia, on September 16th and in Milan on September 17th. The participants were from Italy, Germany, Belgium, The Netherlands, UK, USA, Spain with expertise in law, psychology, psychiatry and philosophy.

The group was partly composed by the participants in the workshop “The Neuroscience of Responsibility”, that took place in at the Technology University of Delft in February 1st - 13th, 2010, and that was the first embryonic meeting of the newborn association. As described in the “Neuroscience of Responsibility-Workshop report” by Nicole Vincent et al (Neuroethics, 2010), the final considerations of the participants, that constituted the basis for the following meeting of September, were as follows:

• Although there is some indication in the current literature of the kind and degree of impact of neuroscience on North American case law and legislation in criminal, civil and medical contexts, surprisingly little is known about the impact of neuroscience on judicial practice beyond North America.
• Such information is needed to make legislative reform recommendations, to keep track of novel uses for neuroscience in legal contexts, and to shed light on the conceptual questions raised at points (I) and (II) above.
• Hurdles that make it especially hard to assess the impact of neuroscience on European law include: (1) language barriers, (2) doctrinal differences between jurisdictions, and (3) lack of international collaboration.
• The proposed research will focus on surveying the actual and current use of neuroscientific, behavioral genetic and neurogenetic techniques before the European Courts and in investigative activities; creating an appropriate case law retrieval and storage system; and training judges in the field of neuroscience and the law.

The aim of the Pavia-Milan meeting was thus to promote a better understanding of the interface between neuroscience and the law at the international level and to foster international collaborative research on this topic. The meeting agenda was divided into two days of debate:

- September 16th:
  - Meeting of the international group at the University of Pavia.
  - Café Scientifique “Neuroscience and Genetics before the Court: the Cases of Mr Dugan and Mr Abdelmalek”: the speaker Dr. Kent Kiehl (University of New Mexico) discussed the quoted cases with prof. Amedeo Santosuosso (University of Pavia), prof. Nita Farahany (Vanderbilt University), Dr. Marina Boccardi (IRCCS Fatebenefratelli, Brescia, Italy) and Daniela Ovadia (Agenzia ZOE).

- September 17th: International Conference “Neuroscience in European and North American Case Law”.
  The program is shown below:
NEUROSCIENCE AND THE LAW

• Amedeo Santosuosso
  *Neuroscience in European and North American Case Law*

• Gabriella Bottini and Alfredo Calcedo Barba
  *Neuroscience: next steps*

• Gilberto Corbellini and Walter Sinnott-Armstrong
  *Neuroethics from the opposite sides of the Atlantic Ocean*

NEUROSCIENCE & LAW DATABASING:

- Nita Farahany
  *The American experience*

- Daniela Tiscornia
  *The challenge of multilingualism in the European Union*

CASE LAW

Federico Pizzetti, William Woodruff, Kevin Lee, Frederic Gilbert.

NEUROTECHNOLOGY AND LEGAL & ETHICAL PROBLEMS: BRAIN-COMPUTER INTERFACES

- Pim Haselager
  *Technical aspects*

- Rafael Capurro
  *Ethical problems*

ROUND TABLE

*Is your legal system neuroscience-friendly?*

Paul Catley, Barbara Bottalico, Lisa Claydon (UK), Walter Sinnott-Armstrong (USA), Nita Farahney (USA), Anne Lise Sibony (BE), Tade Mathias Spranger (Germany), Katy De Kogel (The Netherlands), Henrik Walter (Germany).
The two days meeting was a good opportunity to deepen the mutual knowledge within the group and to discuss how to develop the cooperation. Participants showed particular interest in research that pertains various aspects of the relationship between neuroscientific findings/neuro-techniques and the law:

1. Neuroscience in the courts from a scientific point of view: promoting a case overview looking at the literature to be identified:
   - when and why neurosciences are involved into courts
   - what are the instruments and the standards used by the experts in the published case reports.
   - identifying questions involving the expert in the evaluation of a patient for a legal issue
   - Writing a review for a scientific journal.

2. Developing an experimental branch of translational research aimed to answer the general questions asked by the law, regarding the reciprocal relations between law and neuroscience. More specifically, these questions include:
   - the evaluation and, if possible, the quantification of the added value of different neuroscientific tests, compared to the routine evaluation without advanced neuroscientific examinations, also in consideration of costs;
   - the measurement of sensitivity and specificity of new neuroscientific tests for detecting specific conditions (lying; ability to understand own actions, ability to stand trial…), disease markers (Davatzikos et al, Arch Gen Psychiatry 2005);
   - validation of findings from new neuroscientific tools of investigation for population of interest in the forensic field.

All the participants agreed that there was a need for a more stable organization. This is the reason why the foundation of the European Association for Neuroscience and the Law, with the participation of scholars from Italy, The Netherlands, Spain, Belgium, France, Germany, UK, USA, Canada and Australia was decided.

A provisional group of coordinators was selected: Amedeo Santosuosso, Barbara Bottalico, Paul Catley, Lisa Claydon, Katy De Kogel, Nita Farahany, Tade Mathias Spranger, Nicole A. Vincent, Stephen Morse.

Next steps and planned activities:

- Application to EU 7FP for funds and promotion of the Association;
- Organization of Summer school
- 2011 annual meeting.

The Association has just approved its mission statement as follows:

The **purpose** of the European Association for Neuroscience and Law is to:

- Promote international understanding of the interface between neuroscience and the law;
- Survey the actual and current use of neuroscientific, behavioural genetic and neurogenetic techniques before the European Courts and in investigative activities.
- Evaluate current practice and identify best practice;
• Spread and transmit information to members;
• Disseminate the results to the public and to legal practitioners (judges, lawyers and legal scholars);
• Influence the development of policy.

The main activities of the Association are:

a) Collecting information through questionnaires and direct contacts
b) Creating and implementing an archive of cases and materials on NeuroLaw.
c) Workshops and meetings
d) Summer schools

Membership of the Association is not limited to those living and working in Europe but rather the name reflects the fact that the society is based within Europe. The Association welcomes members from a number of backgrounds including lawyers, members of the legal professions and the judiciary, scientists who research neurotechnologies, in particular those involved in brain imaging and neurogenetics, those who are interested in forensic psychiatry and psychology, policy makers and medical practitioners.