

*Presidenza del Consiglio dei Ministri*



**NEUROSCIENCE AND HUMAN EXPERIMENTATION:  
BIOETHICAL PROBLEMS**

**17<sup>th</sup> December 2010**

**Abstract**

The advancement of neuroscience and neurotechnologies consents to carry out experiments on humans, of low invasivity, aimed at a better understanding of the functioning of the brain and its relationship with thought and behaviour. These experiments have made a significant contribution to the debate in the scientific and cognitive context, and spurred a renewed philosophical debate on free will and attracted the interest of the public.

The NBC - recognizes the importance of such research and studies that will enable a better understanding of the relationship between emotion and rationality in human decisions as well as the correlations between the areas of the brain/thoughts /actions – and highlights the problematic elements related to the reliability of results, the ability to extrapolate generalizations and the interpretation of results. The Committee emphasises the need to take a critical view of these experiments and calls for scientific communication - both by the investigators and the media – which is able to draw attention in a balanced way to the novelties and restrictions of applications, with particular attention to the dangers of neurological reductionism and determinism.

The NBC highlights the need for these tests to be submitted to the attention of ethics committees and to the ethical requirements of each trial (the risk-benefit assessment, where 'risk' is not denoted only as physical but also as psycho-social and 'benefits' can also be construed not only in the directly therapeutic sense); and free and informed consent, preceded by appropriate counselling; the balance between protection of *privacy* and societal needs.

Finally, the Committee calls for amplification of interdisciplinary comparison and proper public debate – as reiterated also in European and International documents - to increase the understanding of citizens, and promote critical scientific information, that is objective and founded.